QUALITY MANAGEMENT IN HUNGARIAN HIGHER EDUCATION

ORGANISATIONAL RESPONSES
TO GOVERNMENTAL POLICY

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ORGANISATIONAL RESPONSES
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PROEFSCHRIFT

ter verkrijging van

de graad van doctor aan de Universiteit Twente,

op gezag van de rector magnificus,

prof.dr. W.H.M. Zijm,

volgens besluit van het College voor Promoties

in het openbaar te verdedigen

op woensdag 11 oktober 2006 om 13.15 uur

door

Tibor Gábor Csizmadia

geboren op 7 augustus 1975

te Sümeg, Hongarije

Dit proefschrift is goedgekeurd door de promotor en assistent-promotor:

prof. dr. J. Enders
dr. D.F. Westerheijden

To my family and parents

Overige leden van de promotiecommissie:

prof. dr. O.A.M. Fisscher
prof. dr. J.-G. Mora Ruiz
prof. dr. W. van Rossum
prof. dr. M.C. van der Wende
dr. Sz. Szentgyörgyi

Preface

Studying quality management in higher education may be a commonplace; however, not much research has focused on quality management implementation at the organisational level and several important issues remain largely unexplored. When an opportunity was given to me to pursue a doctoral study at the Centre for Higher Education Policy Studies (CHEPS) at the University of Twente, the above mentioned topic became the central point of my thesis. Writing this thesis was inspiring, even though it had also been a difficult and challenging experience. One can write a thesis to contribute to knowledge in a particular disciplinary area, to prove oneself capable of doing independent research, to grow into the community of researchers, and not to 'feed the fads'. All these motivations applied during my doctoral process. However, networks and friends are probably an equally important outcome of my PhD journey. I also learned how to simultaneously combine working on a thesis in the Netherlands with condensed working hours at my home university in Hungary and, hopefully, with being a good husband and father in my family.

I owe a lot to many people without whom this research would not have been possible. First of all, I would like to thank my promoters: Jürgen Enders and Don Westerheijden. I would like to acknowledge Don's guidance through the process of conducting the whole research project. His open door, green Skype signal and relentless efforts to discuss my ideas, to thoroughly, critically and instructively comment on all my products have been invaluable and unforgettable. I would also like to thank Jürgen for bringing more structure into my ideas, particularly in the final years of my PhD. All their hours of work spent in being excellent promoters are highly appreciated.

My gratefulness also extends to all other members of CHEPS, who showed me generous hospitality twice a year from 2002 to 2005. During these years I got to know CHEPS and CHEPSonians both professionally and personally, which I really appreciated. Special thanks belong to all who organised an 'unforgettable' bachelor party at the summer school in Barcelona; to Hans, who always found a couple of minutes for me in his busy schedule; to my roommates Liudvika and Marc, who kept an empty computer desk all the time for when I arrived in Enschede and helped in all of my different kinds of problems; and to Aleksandra, Aleš and Wojciech, with whom I went through the experience of being part-time foreign PhD students in the Netherlands, although we were rarely in Enschede at the same time.

Successful completion of my thesis would have been difficult without a few other people outside CHEPS. I will always be indebted to the continuous academic and social support of Zoltán Gaál during the whole project, including his help to get this research scholarship. In addition I would like to thank Lajos

Szabó and Gábor Veress for their experience and advice which they so generously offered in my favour. Furthermore I would like to thank Balázs Szentes for the many hours he spent in front of my computer to find solutions for my sometimes extraordinary problems. Thanks to David Regéczi for helping me to improve the readability of my chapters so that my words expressed my true intent, and for all the many late nights we spent playing snapszer and jass card games. I would also like to thank Hugo Horta for our joking around and playing badminton in the living room at Oldenzaalsestraat. I also appreciate all the people and friends who trusted me and helped in various ways to make this project happen.

Finally, a special word of thanks has to be addressed to my parents and family. I am grateful to my parents who always trusted me to get the most out of this project. The final words go to my wife and daughter. Most importantly, I want to express my infinite gratitude to my wife Heni who tolerated my long-term absences from home and looked after our daughter Zsófi during the many, many hours I locked myself up to complete my PhD. At the same time, with jokes, indulgence, noise, kindness, care and love, they have managed to make the last couple of years the most interesting and exciting in my life. For that I am very grateful.

Tibor Csizmadia
Veszprém, August 2006

Contents

List of Tables

List of Figures

1 Introduction

1.1 On governmental reform and quality in higher education

This study focuses on the question of how higher education institutions respond to governmental reform, and specifically, which organisational characteristics influence quality management implementation within them, and whether it is possible to characterise and explain this relation. Why is this an important and relevant question?

1.1.1 Governmental reform

Broadly speaking, governments since the global economic upheavals of the 1970s have faced three major problems (Pollitt et al., 2001). The first is financial: the ability to tax seems to have diminished, just as the cost of continuing to maintain welfare states has risen. The second problem has been an apparent decline in trust in governmental organisations (see e.g. Norris, 1999). The third has been rising expectations with respect to the quality of public services. Governments are therefore seeking ways to economise, restore trust, and improve the quality of services. Thus a new tendency in state governance of public organisations, including higher education institutions, has come to the fore. In many countries, market-like steering paradigms have been introduced, alongside a change in the style of management. This has often been termed new public management or public management reform, which can be defined as "*deliberate changes to the structure and process of public sector organisations with the objective of getting them (in some sense) to perform better*" (Pollitt & Bouckaert, 2000, p. 17). Amongst the distinctive characteristics of new public management are (Pollitt, 1990; Pollitt, 1993; Pollitt & Bouckaert, 2000) an emphasis on customer choice and on stakeholders, a greater scope for individual and private sector provision, greater competition in markets for public goods, more emphasis on explicit and measurable standards, the separation of the purchaser role from the provider role, and the flexibilisation of the conditions of work and employment. In other words, the public sector, including higher education, is increasingly under pressure to assimilate ways of working which derive from business firms. Similarly, Pollitt and Bouckaert (2000, p. 15) emphasised that

> *[almost] all writers about public management reform … acknowledge that, in many countries, the last twenty years have witnessed extensive borrowing by public sectors of management ideas and techniques which originated in the commercial sector.*

In the wake of this process, greater attention to performance evaluation can be observed, besides performance-based funding, organisational reports and market-driven quality management mechanisms as policy instruments used by governments. Understanding the reasons for reform is important (for more information see e.g. Pollitt, 1990; Pollitt & Bouckaert, 2000); however, this thesis focuses on a specific aspect of reform implementation, namely organisational (higher education institutions) response to governmental reform in terms of quality management. The governmental reform itself, its reasons and operations, are taken more or less as a given.

1.1.2 Quality in higher education

Quality in higher education, how to enhance it and how to evaluate it, has been placed high on the contemporary agenda in higher education. The literature from the late 1980s onward suggests a continuing interest in the higher education sector, and factors explaining this increased political interest in quality are identified. For example, Dill (1992, 1995), Frazer (1997), Brennan and Shah (2000), Newton (2002) and Billing (2004) have shown that public policies for managing and improving quality had objectives linked to:

- informing and providing accountability to stakeholders
- making institutional use of public funds more accountable
- governmental budget reductions ('do more with less')
- the deregulation of higher education systems
- improving the quality of higher education provision
- assisting the mobility of students (within and across national borders)
- demands for tighter linkages between universities and economic development
- emerging international competition among higher education institutions.

However, as stated earlier, the policy initiatives taken to improve the quality of higher education in Europe from the 1990s can also be seen in a wider perspective, as an integrated part of the more ideologically based public sector reforms (Neave 1988; Van Vught 1989; Bleiklie, 1998; Pollitt & Bouckaert 2000). Existing governmental approaches to quality issues, among which assessment, evaluation and monitoring are dominant, are increasingly considered as insufficiently efficient and insufficiently effective. The main elements of governmental reform have been to increase the efficiency (ability to perform), effectiveness (ability to fulfil political objectives), and accountability (ability to legitimate the results) of the public sector. The emphasis on efficiency, effectiveness and accountability has forced higher education institutions to adopt structures, systems, mechanisms and models intended to enhance such objectives. There is evidence from some countries indicating that among the many external measures affecting higher education institutions during the 1990s, quality

management "has proven to be the most potent of change agents" (Kogan & Hanney, 2000, p. 240). Thus quality management was seen as possessing the potential to answer the principal criticisms, and the emphasis was put on issues such as control, and the focus shifted from policy-making to policy implementation, i.e. trying to identify factors that explain why these new policies succeed or fail.

This challenge was the guideline for, and is investigated in this study. In the next sections, this question will be elaborated into a more specific research problem and questions, its relevance and the major concepts of the study will be addressed, and the theoretical challenge will be described. However, this study does not look at quality management implementation in general, but more specifically at quality management implementation in the Hungarian higher education institutional context. Therefore, there follows a brief explanation of why Hungary is an interesting case.

1.2 Hungary as an interesting case

In the post-World War II period, Hungarian higher education institutions were operated through the state apparatus but controlled by the Communist Party. The National Bureau of Planning, and particular ministries with supervisory responsibilities for specialty universities (e.g., agricultural universities were under the supervision of the Ministry of Agriculture) negotiated student admission numbers, curriculum, and work placement consistent with centrally planned manpower needs (Darvas, 1995). The bureaucratic apparatus controlled all important allocation decisions. This basic dynamic of central control over the means of production became weaker in Hungary after 1968, when significant economic reforms were implemented, which resulted in a much more polycentric bureaucracy (Kornai, 1989).

However, substantial institutional autonomy was only given to Hungarian higher education institutions after the political upheaval of 1989. For example, institutions were given the right to define the terms for employment and advancement of faculty, to elect their own rector and other officers, and to enact their policies and regulations for internal governance. In addition, two professional organisations, the Conference of Rectors and the Conference of College Directors for planning and for the funding of teaching and research were established. Furthermore, the World Bank supported the creation of intermediary bodies for accreditation (MAB – the Hungarian Accreditation Committee) and for overall policy, funding allocations and research planning (FTT – the Higher Education and Research Council). The establishment of these bodies was planned starting in 1990, immediately after the collapse of the communist regime. This rapid development indicates, as Kövesi et al. (2004) stated, that quality in higher

education, and particularly concerning education activities, has been placed squarely on the contemporary agenda in the national policy.

Here I can go further and say that there are common elements in the national policies in Europe that were the result of the growing political interest in the quality of teaching and learning since the 1990s (Van Vught & Westerheijden 1994; Van Vught 1996). First and foremost I can point to the establishment by many European countries of national systems for evaluating higher education institutions and their teaching programmes (Frazer, 1997). However, a closer look reveals that the policies related to the quality of teaching and learning vary from country to country (Brennan & Shah 2000; Schwarz & Westerheijden, 2004). The main purposes of external quality assurance for example, most commentators have considered, polarise accountability versus improvement, accreditation versus evaluation, and planning versus self-regulation. In Hungary the purpose of external quality assurance was mostly accreditation and accountability, unlike e.g. in the Netherlands or the United Kingdom, where quality assurance was introduced in the 1980s. Thus quality assurance in Hungary is practically dominated by MAB, which is strongly influenced by academics (Kövesi et al., 2004), or more particularly, by a few elite universities that seem to want to maintain their grip on the system. Therefore, as Kövesi et al. (2004) also stated, the system of self-evaluation and quality evaluation for accreditation of MAB in themselves were not meant in the first instance to improve quality.

The Hungarian policy initiatives in the 2000s concerning quality can be characterised as rather modest. No clear national higher education quality policy or explicit definitions of quality were provided by the Ministry of Education to guide institutional implementation. The government only developed a Protocol, which was provided to higher education institutions as a possible quality management framework to help them in implementing their quality management systems. However, it was not compulsory to follow the Protocol. Thus the processes in which quality management was implemented have been open, leaving much room for organisational discretion and autonomous reactions.

Transformation towards a new conception of quality and a drive towards improvement of quality can be seen in many policy initiatives in Hungary since 1989, which shows that Hungary is an interesting case in that sense. First, the transformation itself shifted the tertiary sector away from the communist paradigm that higher education is there to educate the workforce (Sadlak, 1995). In fact, however, universities and colleges remained ivory towers trying to educate students with a lot of theoretical knowledge but few profession-oriented competences (for more information on the consequences of transformation see Chapter 4). Second, quality management of higher education on the national level was already introduced in Hungary in 1992 (Szántó, 2004), soon after the transformation. The MAB has been operating since the end of 1992, and was originally established for the purpose of supervising the quality of the newly formed doctoral programmes. In the autumn of 1993, however, its tasks were defined more widely to include accreditation of all higher education institutions

and degree programmes. Accreditation is carried out through institutional accreditation, which involves all of the degree programmes of the institution, via preliminary accreditation for institutions applying for a licence to operate, through the approval of degree programmes to be launched for the first time in the country, and via the approval of new degree programmes at a higher education institution. Third, the Bologna process (Bologna Declaration), to which Hungary was a signatory from the beginning in 1999, affects two aspects of Hungarian higher education, namely the introduction of the credit system, and the restructuring of the traditional binary system into a two-cycle system of studies (Rozsnyai, 2004b). The Credit Decree required all higher education institutions in Hungary to have the credit system, as defined by law, in place by the academic year 2003/04 (Rozsnyai, 2004b). At the time of this writing it can be said that the Bologna process will result in the introduction of the two-cycle structure in many study programmes. It appears now that medicine, law and some humanities programmes will continue to be offered only at the master's level (though, of course, there will also be shorter health care and legal studies). While the transformation that took place in higher education after 1989/90 was a step towards a more flexible system than the congealed structure of the previous decades, the Bologna process is providing the impetus for a truly qualitative change (Rozsnyai, 2004b). Fourth, the Hungarian higher education system has addressed problems of fragmentation with highly specialised institutions (a relic of Stalinism) under different ministries, by working to build much larger and more comprehensive higher education institutions. Mergers of these small, specialised higher education institutions into large multi-sectoral higher education institutions resulted in the reduction of the total number of higher education institutions from 163 to 62, which should be better able to act as autonomous institutions in the next social context. Finally, as a continuation of governmental support towards improving quality, the Ministry of Education launched the so-called Human Resource Operative Programme financed by the European Union to support the development of Hungarian higher education institutions in 2004. One of the projects supported by the Programme is concerned with the training and re-training of higher education faculty members and personnel, laying special emphasis on aspects of quality management, and also on the introduction of quality management systems in educational, research and service (administrative) areas of higher education. Support was given to consortiums consisting of several higher education institutions, especially those that are diverse, both from a geographical point of view and also considering their educational portfolio. The projects started in 2005 and should run until mid-2007.

In addition, there are contrasts among Central and Eastern European countries as well. For example, the introduction of quality assurance in Poland was very slow and followed a different model. In Poland, a number of quality assurance or accreditation agencies were established by higher education communities (the

SEM Forum for private business schools, UKA for universities, KAUT for technical universities, KAUM for medical universities, and FPAKE for economic universities), while the State Accreditation Committee has only been in operation since 2002 (Chmielecka & Dabrowsky, 2004). The Czech case is more similar to Hungary (e.g. the accreditation bodies were established with their country's first Higher Education Act after 1989), but there were no private higher education institutions till 1998 (Šebková, 2004). In Romania, the number of private higher education institutions has mushroomed during the last decade. However, only some have been accredited, i.e. authorised to grant state-recognised degrees (Campbell & Rozsnyai, 2002). Furthermore, the degree of independence of quality assurance bodies vis-à-vis the governments of their countries also varies. In some countries, higher education institutions have taken the initiative to establish quality assurance bodies (Macedonia, the Slovenian QAC, Poland), some bodies operate within their ministries (e.g. the Czech Republic, Russia, Ukraine) or are situated, more or less loosely, under ministerial supervision (Hungary, Slovakia, Croatia), or under that of the respective Council of Ministries (Albania, Bulgaria) or the parliament (Romania) (Campbell & Rozsnyai, 2002).

The interesting point here is to what extent this situation has affected the implementation of quality management mechanisms in Hungarian higher education institutions during the 2000s. Thus, in an international perspective, the Hungarian case could provide an interesting contrast to those countries where policy-making concerning quality has been more comprehensive. As such it can be expected to add to the growing body of knowledge on how higher education institutions are reacting in response to contextually different external demands.

However, even if one agrees that quality had also become the central issue in Hungarian higher education, it was still difficult to find agreement on an exact definition of the concept, regardless of its application inside or outside of higher education. Therefore, the following section provides an overview of the two major concepts (quality and quality management).

1.3 Major concepts

The current study uses terminology familiar to researchers and others involved in the study of quality management. However, even among scholars in this area of study, it may not be self-evident how these terms will be used in this study. These phenomena can be defined in a number of different ways. The relevant literature offers a number of analytical or synoptic definitions, and it is worth exploring some of these, if only to get a feeling for the breadth of current thinking on this issue. Therefore, this section provides an overview of the two major concepts used in this study, namely 'quality' and 'quality management'. I will first deal with quality.

1.3.1 Quality

It is common knowledge that quality is a slippery concept. "There are as many definitions of quality in higher education as there are categories of stakeholders … times the number of purposes, or dimensions, these stakeholders distinguish" (Brennan et al., 1992, p. 13). There is no single, absolute, agreed or universally accepted definition of the term, but there exists a range of overlapping interpretations of it. As Pirsig (1974) concluded, the concept of quality is as elusive as it is pervasive. The difficulty of definition thus makes it impossible to obtain universal agreement on the concept. Rather, the definition is a matter of negotiation between the different parties involved (Vroeijenstijn, 1995). Hence, instead of trying to impose a global interpretation on the word, different definitions of quality have been used depending on the circumstances (Garvin, 1988; Reeves & Bednar, 1994). Stensaker (2004, p. 76) formulated the problem similarly: even though

> *quality by the mid 1990s had become the central organisation-level variable in higher education, it was still difficult to find agreement on an exact definition of the concept, regardless of its application inside or outside of higher education.*

Reeves and Bednar (1994, p. 419) have listed various ways in which quality has been perceived. According to them, quality has been defined as value, conformance to specifications, conformance to requirements, fitness for use, loss avoidance, and meeting and/or exceeding customers' expectations. An empirical study revealed the same discrepancy when it comes to how the term quality was perceived by different stakeholders in higher education (Harvey & Green, 1993). They found that stakeholders' views on quality could be categorised according to five broad definitions: quality as exceptional, quality as perfection, quality as fitness for purpose, quality as value for money, and quality as transformation (Harvey & Green, 1993; Harvey, 1997).

Pollitt & Bouckaert (1995, p. 16) argued that in principle there are only two major perspectives on quality, an output-oriented view including definitions such as value for money, stakeholder satisfaction and zero errors, and a process-oriented view embracing only quality as transformative. The output-oriented definition of quality can be linked to the political movement in Hungary in the 1990s and early 2000s, with its emphasis on deregulation of public services, greater managerial discretion, the introduction of market mechanisms and its focus on stakeholders' needs[1] and satisfaction. In this situation:

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[1] To be really precise I should mention that stakeholders' needs belong to the input part of an institution.

> *Quality itself becomes an icon, a selling point for an increasing number of goods and services. The customer becomes deified, surveyed to find their demand and wishes. Meeting customers requirements is the definition of quality offered and employed (Tuckman, 1994, p. 742).*

Those who see quality as transformative have opposed this view, and argued that emphasis should be taken away from a mere stakeholder or product role and placed towards an improvement-oriented approach, focusing more on those who can actually make a difference – teachers, students and internal processes of a higher education institution (see e.g. Dill, 1995). In the context of the present study, the application of a holistic and balanced approach including both outcome and process-oriented views suits well. The two approaches may seem contradictory, yet it is evident that an attempt to improve processes cannot be undertaken without focusing on e.g. stakeholders' needs and satisfaction.

In sum, it seems very hard to give a definition of quality that all experts or stakeholders can agree on. And in fact I do not need to add another definition of quality, as in this study I can take for granted the definitions or implicit understandings of quality that are actually used by the different parties in the Hungarian higher education system: whatever they understand by 'quality' is what is the subject of my study.

1.3.2 Quality management

I can now turn to the other term in my concept—quality management. Quality, long considered an ineffable abstraction in academe, is now discussed as something that can be managed and improved (Seymour, 1992; Dill, 1992; Massy, 1997). As a starting point here, generic management studies tend to be fairly functional or instrumental in orientation: management is about getting things done as quickly, cheaply and effectively as possible – and usually about getting things done through other people. The research of quality management also shares these concerns.

The term quality management refers to the policies, systems and processes designed to ensure the maintenance and enhancement of quality within an institution. As ISO 8402 defined, quality management is "that aspect of overall management function that determines and implements the quality policy (i.e. intentions and direction of the organisation)". Thus quality management may be described by concepts, instruments and techniques used in this field. Quality management is usually thought of, however, as a means to an end, not an end in itself. To be more precise I should perhaps say that it is potentially a means to multiple ends. These include improving the quality of institutional services, making the operations of organisations more transparent and accountable and improving their performance. This is, however, only one possible operationalisation of the concept of quality management because if people do not

agree on one definition of quality, this has consequences on what they think quality management should do.

Quality management, in the higher education context, also covers the quality terminology: control, assurance and improvement. It encompasses those processes, "by which an institution discharges its corporate responsibility for articulating, maintaining and enhancing the academic standards of those activities for which it is responsible" (HEQC, 1995, p. 3) and ensures that these processes are performed efficiently and effectively. Quality management has made issues about academic standards explicit. Academic standards are those expectations which have been established for students to meet, and institutional quality assurance procedures are the means by which institutions can demonstrate to those with an interest in higher education (e.g. students, employers of graduates and government) whether or not they are meeting those standards and expectations. Quality management also encompasses those external processes which have been developed to account for the public funds they receive. These include the processes operated by the government and its agencies.

In addition, a higher education institution needs quality management (principles) to make it more efficient and to improve quality (Trow, 1994), and to ensure that it provides a skilled, knowledgeable workforce. Van Vught (1996) also maintained that what is needed in higher education is adequate quality management; the processes and mechanisms are instruments to help higher education institutions to perform their quality management functions. Therefore, one of the contributions to the scientific field and particularly to quality management in this study is to develop a comprehensive quality management framework well suited to and grounded in the context of academic organisations (see more about the object of the study in section 1.6). This was only a short introduction of the concept of quality management in higher education; I will come back to the phenomenon in more detail in Chapter 3.

1.4 Research problem and questions

Seeing that the Hungarian policy interest in quality management was an attempt to improve the quality of the core functions of higher education institutions, while at the same time the higher education institutions were autonomous in introducing quality management mechanisms, the crucial issue subsequently becomes how this issue was interpreted and implemented at the organisational level. Gornitzka et al. (2002) emphasise that when a decision on reform policy and instruments is reached, a large part of the work still needs to be done. Decisions can be reversed or ignored and even if not reversed or ignored, decisions still have to be implemented, a process in which much 'slippage' is possible (Allison & Zelikow, 1999). As Newton (2002, p. 207) emphasised:

> *there is a difference between the planned outcomes of policy and those which emerge through implementation. This means that … any quality management system or change initiative will always be impacted upon by [displacement].*

The organisational context is thus particularly important in organisational response to governmental reform. However, the publications on new public management, for example, "say little or nothing of [the] contextual differences … [they] concentrate entirely on the characteristics of the reform instruments themselves" (Pollitt & Bouckaert, 2000, p. 39). In my view, this is incomplete and inadequate. The attention of new public management is, in effect, confined to a quality management mechanism alone, with minimal analysis of variations in the organisational characteristics taking place. It is obvious, however, that different organisations display different features and therefore different challenges in carrying through the implementation of new management instruments. Thus the overall research problem can be formulated as follows:

> *Did higher education institutions implement quality management mechanisms for their education and, if so, how, and what was the role of organisational characteristics in this respect?*

This shows that my central object of research is the higher education institutions and their response to governmental reform. Knowing how governmental resources are being used, for example, and their effects within higher education institutions, is of great interest to the society in general and stakeholders in higher education in particular. Governments are frequently keen to announce particular policies but less energetic in evaluating how things are going. Thus this research can help stakeholders to attain the goals of programmes and reforms by focusing on how quality management implementation occurred within Hungarian higher education institutions. In other words, how and why higher education institutions handle particular quality management mechanisms is an empirical issue, which will be investigated on the basis of the following research questions:

1) *Did higher education institutions implement quality management mechanisms and, if so, to what extent and in what way (e.g. different quality management mechanisms)?*
2) *Are there differences between higher education institutions in quality management implementation?*
3) *How can we explain these differences or, in other words, which organisational characteristics influenced the quality management implementation?*

This implies that this study investigates quality management mechanisms implemented as well as organisational actors and factors, including external demands that influenced the quality management implementation. Quality

management mechanisms and their implementation are expressed by the following variables: the pace and scope of introducing quality management systems, their adequacy, and the question whether they follow the 'Protocol' that the government proposed for internal quality management in higher education institutions (see Chapter 3 for more information).

1.5 Theoretical challenge

The question arises here in which way theories can help explain organisational responses to current demands. From a theoretical point of view, it is often argued that there is a trade-off between explanatory richness (ability to explain one case well) and theoretical generalisability (ability to explain many cases well). As McLendon (2003, p. 97) pointed out:

> *Theory, a coherent and logically interconnected set of propositions that attempts generalized explanation, is useful to the extent that it clarifies and organizes our thinking and identifies significant relationships. Theory development is a crucial step in the process of building a body of social scientific understanding about a focal interest. … [Furthermore, it] has as its objective the identification of propositions whose generalizability across multiple contexts and conditions might be systematically assessed.*

Sabatier (1999) identifies two 'scenarios' of theory development (the inductive and deductive approach) that scholars traditionally have followed. He then advances a third strategy, which I also advocate, for use in studying my phenomena. Following his logic, dissatisfied with the existing conceptual framework, I will develop an alternative one to address the limitations of the existing framework, and then progressively elaborate that framework until it becomes more fully developed. However, instead of developing my own theories out of whatever accumulated observations might already exist, I would be better served by borrowing theories, approaches or frameworks developed in the study of various areas and examining the extent to which those ones adequately explain my focal interest. Thus I am not the slave of any single theory or approach on the one hand, but, on the other hand, it would be absurd to claim that I am somehow totally 'theory free'. I hold to the importance of the empirical testing of theories, although I accept that arguments concerning whether the appropriate conditions for falsification have been met will never cease.

Recent studies seem to follow the logic of this development. As Lane (1990) argued, if one is to understand organisational response to external demands and the implementation of new mechanisms, a general model is not sufficient. Instead, he suggested using different theories and concepts that relate to the specific problem to be solved. Similarly Gornitzka et al. (2002, p. 416) suggested

that the theoretical framework "is clearly going from a single theoretical framework towards applying a multi-theoretical framework".

As mentioned earlier, the literature on public management reform pointed to the fact that governmental reforms may face the problems that are addressed in the organisational studies. To tackle these problems, I will first turn to the approaches of resource dependency and neo-institutional theories. Recent works by Greening and Gray (1994), Oliver (1991), Oliver (1997), Gornitzka (1999), and Sherer and Lee (2002) point to the complementarity of these two theories as explanations of organisational response to environmental pressures. The essence of using both perspectives is that organisations exercise strategic choice, but do so within the constraints imposed by their institutional environments (Hrebeniak & Joyce, 1985; Pfeffer & Salancik, 1978). However, at this point, the framework requires additional elements not central to organisational literature. By far one of the most important of these is individuals and their decision-making rules and habits (Sabatier, 2005). To understand the organisational adaptations that respond to governmental reform more fully, I will use a model that attempts to couple actor and structure (and institutional procedure) relationships, establishing this 'missing link' from organisational theories. Allison's models will fill this gap, focusing on organisational decision-making processes, taking into account the political and organisational aspects of a particular organisation. The different organisational character in different fields is underplayed, however, by the above-mentioned approaches. Therefore the theoretical framework of this study incorporates some characteristics of higher education institutions, which were found important by the literature in explaining organisational response to governmental reform (see more in Chapter 2). Finally, in this study, the organisational response to governmental reform is examined in the context of quality management implementation. Therefore, there is an additional need to shed light on characteristics of quality management mechanisms complementary to the theories outlined above.

Consequently, I will follow the suggestion of one of my professors concerning the paradigm change in theory construction: "do not try to force the particular problem into the frame of one single theory, but solve it" (interview with Gaál, 2004). My attempts concerning particularly my theoretical framework can be summarily seen as an answer to what as Gornitzka et al. (2002, p. 418-419) pointed out, was an important challenge for the current research in higher education:

> *Serious efforts along [this research] require a firm theoretical underpinning … coupled with an empirically solid investigation into "real-life" processes in higher education. More specifically, it calls out for using [also] "softer" models of … analysis where attention is not so much on casual models. … Instead, there is a need for an approach that identifies how power and influence can be studied in processes when … persuasion [is the] central variable. [And so,] should we give a more holistic … approach a chance?*

1.6 Objectives of the study

Studying how to assure quality in higher education is not a novel thing to do. Over the years, a growing body of knowledge has been established in this area. However, it could be argued that not much research has focused on quality management implementation at the organisational level and several important issues remain largely unexplored. For example, one direction of quality management research in the 1990s was to investigate whether the external quality assessments that were implemented in various countries have had any direct consequences and effects at the study programme level (e.g. Frederiks et al., 1994; Brennan et al., 1997; Henkel, 2000). Another empirical research interest has been whether the increasing number of evaluations has contributed to the quality of education. However, Deming (1986) and Dill (1992) emphasised that the improvement of quality did not come from assessment and evaluation. In another perspective, Birnbaum (2000) stated that management fads including Total Quality Management (TQM) were eventually abandoned in higher education institutions and Vazzana et al. (2000) also confirmed that TQM is not focused on core teaching and learning processes. Thus the debate on how to assure the quality, in particular of the core academic processes of teaching and research, at the organisational level is one of the basic points for this study. Unfortunately in this debate, an overall critical analysis has been missing until now. Therefore, the study focuses on filling in this gap, however, not by simply applying one quality management model; building upon existing quality models, it aims to develop a comprehensive quality management framework for higher education institutions. One of the weaknesses of the existing quality management models is their sole focus on a particular area, neglecting to a large extent the importance of the whole institutional area and its environment. *The first objective is therefore to develop a comprehensive quality management framework that includes the particular higher education characteristics.* It could be claimed that such a framework has been overlooked, or too narrowly specified, in many of the studies conducted previously.

In addition, I hope to integrate different strands of theorising. By drawing from resource dependency, neo-institutional, decision-making approaches, and particular characteristics of organisations and quality management mechanisms, I would like to develop fruitful conceptualisations and explanations of quality management implementation. This combined perspective has gained sophistication and forms a valuable starting point for this investigation. *The theoretical objective of this dissertation is therefore to develop a viable explanation of implementing quality management mechanisms at the organisational level that is also suitable for empirical research.* It shows how the interplay of various theoretical perspectives may be crucial for explaining quality management implementation.

Whereas the theoretical objective concerns the advancement of understanding, the practical objective relates to outcomes of this study that may possibly

contribute to the professional world. Instead of analyses of how higher education institutions have implemented quality management mechanisms, the analyses have often emphasised the broad consequences for the higher education sector. In this way, however, the possibilities for variation at the organisational level have been underestimated. Such variation could be of great interest to study in an area where more competition between the higher education institutions is emphasised, and where there is much interest in how higher education institutions may respond to this situation (Clark, 1998). However, there is currently a lack of evidence on how organisational characteristics influence quality management implementation. Thus the third objective relates to the empirical investigation of quality management implementation at the institutional level. Although all Hungarian higher education institutions were facing similar problems and responded in a broadly similar way, there were also differences among them. These differences between higher education institutions within one national sector open up the opportunity to study the influential features of quality management implementation and shed light on this issue. Therefore, *the practical objective of this study is to explore the differences in quality management implementation in various higher education institutions and aims to answer the question: 'what explains these differences?'*

1.7 Plan of the book

The rest of the book is divided into three parts: theoretical, empirical and reflective. The first part of the book is theoretical. It begins with a theoretical chapter (Chapter 2) that elaborates the theoretical concepts touched upon in this introduction. The chapter describes the theories about these concepts and explores their interactions. The theoretical part continues with Chapter 3, which gives a general overview of the main models of quality management. This chapter concludes with a comprehensive quality management framework for higher education institutions. Chapter 4 focuses on the localisation and operationalisation of the theoretical framework. This chapter addresses the main features of the crucial Hungarian actors that influence higher education institutions and quality management implementation; it provides the research model and hypothesises the expected outcomes; and it devises ways in which the variables in the hypothesis and research propositions can be operationalised. The methodology is related to the implications of the perspective of comparative research design concerning how data have been analysed.

The second part of the study is empirical and consists of three chapters. Chapter 5 concentrates on the statistical approach and the population description, but is especially about testing whether the hypotheses developed in Chapter 4 are confirmed or falsified. In Chapter 6, the summaries of the results of six case studies of quality management implementation in Hungarian higher education institutions are presented. (The six case studies appear in Appendix I.) The

chapter ends with a comparison of the empirical results of the individual cases and explores the unexpected results. The empirical part concludes with Chapter 7, in which an overall analysis of the study will be provided.

The final part of the study, consisting of Chapter 8, contains a summary of the study and presents some reflections on the theoretical framework, research design and further applications.

Part I Theory

2 Theoretical framework

In this chapter the theoretical framework is discussed. The chapter provides an overview of the theories that will be used in this study. In section 2.1, the issue of organisational response to governmental reform will be addressed from a resource dependency and a neo-institutional perspective. In section 2.2, a theoretical perspective is offered in order to explain the role and influence of decision making processes on implementing new mechanisms. Section 2.3 discusses what makes higher education institutions special organisations including issues of complexity, disciplinary characteristics and reputation.

2.1 Organisational response to governmental reform

The point of departure for discussion is to understand the way organisations respond to environmental pressures at the organisational level. In the field of organisation studies, various theories have been developed and applied over the years to examine and understand this aspect of organisations. This chapter starts with two main theoretical perspectives on organisational response: resource dependence theory and neo-institutional perspectives. A growing number of studies have suggested that these theories offer distinct but complementary explanations why and how organisations respond to institutional change (Oliver, 1991; Greening & Gray, 1994). Neo-institutional theory focuses amongst other things on the role of myths, beliefs and norms in organisational structure and behaviour. Resource dependence theory emphasises organisational responses in the face of dependencies on external organisations. The common essence of their complementary perspectives is that organisations exercise strategic choices but do so within constraints imposed by their institutional environment (Hrebeniak & Joyce, 1985; Pfeffer & Salancik, 1978). In the following I will go through these perspectives and point to their basic concepts and assumptions, while also discussing some of their particular elements to be used in this study.

2.1.1 Resource dependency theory

The resource dependency approach explains how an organisation manages to survive through its ability to acquire critical resources. The theoretical framework developed by Pfeffer and Salancik (1978) serves this purpose emphasising that to understand organisations one must understand how they relate to other actors in their environment. This approach is constructed on the basis of the fundamental assumption that all organisational action is ultimately directed at securing its survival. Organisations can have basic goals and objectives, but if they do not

exist, these cannot be attained. Thus, survival is the core objective of each organisation and for survival it needs resources.

No organisation, however, is able to generate all of the distinctive resources that it needs. Therefore, to guarantee the flow of resources, an organisation must interact with other organisations that control these resources, and thus it depends on them. Dependency by definition creates uncertainty, as uncertainty stems from actions that an organisation cannot control. Organisations favour a predictable, stable existence, therefore they will attempt to minimise the uncertainty and their dependencies on externals in order to acquire more stability and autonomy (Oliver, 1991). The fact that resources are obtained from other organisations means that the resource dependence model can among other things be thought of as an inter-organisational resource dependence model.

> *The potential for one organization influencing another, derives from its discretionary control over resources needed by the other and the other's dependence on the resources and lack of countervailing resources and access to alternative sources (Pfeffer & Salancik, 1978, p. 53).*

Some organisations thus might be more important to an organisation than others with respect to resource acquisition. An organisation will be more likely to follow the requirements of the supplier of resources when it depends on its sources. When the dependency is low, resistance represents minimal risk to organisational interests because it "is no longer held captive by a single or limited number of sources of social support, resources or legitimacy" (Oliver, 1991, p. 164). Thus, in sum, the resource dependence theory implies that an organisation's responses to external requirements can to some extent be predicted from the situation of resource dependencies confronting it.

In addition, organisational response to demands does not necessarily mean passive adaptation, but rather a strategic choice to cope with external pressures (Rhoades, 1992); dependency is not a simple one-way concept, it involves more. It gives the strategic repertory a focus (Pfeffer & Salancik, 1978). It excludes the possibility that organisations contribute consciously to their own demise. The action or strategy chosen depends on the motivations and preferences of organisational actors, the characteristics of the exchange relation and the structure of the network. In addition, organisations also focus on "altering the system of constraints and dependencies confronting the organisation" (Pfeffer & Salancik, 1978, p. 267). Thus they retain the ability to have some flexibility in the responses to deal with particular issues.

Another basic premise of the resource dependence perspective is that decisions are made within organisations. The decisions deal with environmental conditions faced by organisations. The approach emphasises the importance of sub-units and their role in the organisational change process to understand how organisations react and interact with their environments:

> *[T]he contest of control within the organization intervenes to affect the enactment of organizational environments. Since coping with critical contingencies is an important determinant of influence, sub-units will seek to enact environments to favor their position (Pfeffer & Salancik, 1978, p. 261).*

Resource dependency in higher education studies

Several studies have highlighted the usefulness of the resource dependency perspective in the study of higher education organisations (Goedegebuure, 1992; Huisman, 1995; Gornitzka, 1999). First, focusing on public higher education institutions in European (state-dominated) contexts, these studies have highlighted the resource dependence of higher education institutions on the central state, including different governmental actors, as a funding source (Huisman, 1995; Gornitzka, 1999), since universities and colleges cannot generate most of the resources they need. The government decides on e.g. the budget for higher education and what is expected from the higher education institutions (Huisman, 1995). Thus dependency is determined by the importance of the needed governmental resources. Second, governmental resources are not equally important to each higher education institution for its survival. The importance of governmental resources diminishes if there are other (alternative) sources (e.g. private and tuition fees) from which this resource could be obtained. Although these alternative sources have become increasingly important, government remains the dominant actor in this respect (Huisman, 1995). In sum, the level of dependency of a higher education institution on the government is determined by the relative importance of governmental resources and the availability of potential alternative resources.

Looking at the dependency relation from the governmental point of view, this opens the possibility of influencing higher education institutions to change in accordance with government priorities. As the aim of this study is to explain to what extent higher education institutions indeed respond to governmental change 'demands', the resource dependency is a crucial approach. Higher education institutions implement governmental initiatives in order to appear legitimate in the eyes of government agencies, which control vital resources (Maassen & Gornitzka, 1999, p. 313).

To understand the organisational response to external demands, however, it is not enough to examine the 'objective' resource dependencies (Maassen & Gornitzka, 1999; Gornitzka, 1999). It is also necessary to investigate the way higher education institutions perceive their environment and how they act to control and avoid dependencies in order to maintain organisational discretion and autonomy of action. It is here that neo-institutional theory provides an important contribution. Thus in the section that follows some of the basic concepts that may shed additional light on the dependency issue of neo-institutional theory will be sketched briefly to frame the current study further.

2.1.2 Neo-institutional theory

From an institutional perspective[2], organisations operate in an environment dominated by rules, taken-for-granted assumptions, myths, and routines about what constitutes appropriate or acceptable organisational forms and behaviour (DiMaggio & Powell, 1991; Meyer & Rowan, 1977). Many policies, programmes and procedures of organisations are enforced by public opinion, by stakeholders and by laws. Such elements of organisations are manifestations of institutional rules which function as rationalised myths (Meyer & Rowan, 1977). The impact of the rationalised institutional elements on organisations and organising situations is summarised by Meyer and Rowan (1991, p. 45) as follows: "rationalized institutional rules arise in given domains of work activity, formal organisations form and expand by incorporating these rules as structural elements". In general, this perspective assumes that the institutional environment constrains the organisation and determines its internal structure and, consequently, the behaviour of the actors in the organisation (DiMaggio & Powell, 1983). A central notion is that because of the pressures of the institutional environment, organisations show a trend towards conformity (denoted by the term *isomorphism*). The image of an organisation is that the deviation from the expectations of the institutional environment threatens the *legitimacy* (and therefore the chances of survival) of the organisation. Furthermore, conformity is often of a ritualistic nature where organisations construct symbols of compliance to environmental change (DiMaggio & Powell, 1983; Edelman, 1992; Meyer & Rowan, 1977). In the remainder of this section, my focus will be on these core themes of neo-institutionalism, which are connected to this study[3].

The neo-institutional perspective highlights the survival value of conformity to institutional environments. Isomorphic institutions incorporate elements from their environment that are regularised externally to gain legitimacy, rather than to maximise efficacy. DiMaggio and Powell (1991) argue that coercive, mimetic and normative forces produce homogeneity within a certain organisational field. Coercive isomorphism results from external pressures exerted on organisations by other organisations upon which they depend and by cultural expectations in the society within which they function. Mimetic isomorphism functions under ambiguous goals or an uncertain environment, and organisations may imitate other organisations. The third source of isomorphic organisational change is normative and stems primarily from professionalisation (DiMaggio & Powell,

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[2] It is commonly accepted that institutional theory has many facets, created, inter alia, by contributions from different disciplines such as economics, sociology and political science (Scott, 1987; DiMaggio & Powell, 1991). The institutional theory presented here is often labelled as the sociological version of neo-institutionalism (DiMaggio & Powell, 1991). It suggests that organisations over time, and in a socialisation process, are turned into institutions. They develop their own distinct character when they are infused with values and myths (for more information see e.g. Meyer & Rowan, 1977; DiMaggio & Powell, 1991).

[3] There have been many excellent reviews of institutional theory and neo-institutionalisms, see e.g. Scott (2001).

1991, p. 67). Together, coercive, mimetic and normative institutional processes can contribute to an emergent norm regarding organisational structures and procedures and the implementation of reform such as in this study quality management mechanisms and their implementation. However, DiMaggio and Powell (1983) pointed out that it may not always be possible to distinguish between the three forms of isomorphic pressure, and in fact, two or more of these may be operating simultaneously making it nearly impossible to determine which of them was potent in all cases.

Further, in neo-institutionalism, legitimacy is seen as the dominant factor securing stability and survival. In order to gain legitimacy, internal and external parties must show "confidence and good faith" (Meyer & Rowan, 1991, p. 58). Institutional theorists have contended that organisations facing conflicting, inconsistent demands about what practices they ought to use can maintain legitimacy by adopting designs that mask or distract attention from controversial core activities that may be unacceptable to some key constituents. As Meyer and Rowan (1977) stated, organisations are prompted to engage in various ceremonies or rituals to appease powerful constituencies or public attitudes. The term 'institutional decoupling' is understood as a formal mechanism that is adopted in response to external demands while actual practices are tailored to the needs of internal staff members (Scott, 1995). Decoupling mechanisms are adopted primarily for external legitimisation purposes and are kept separate from core organisational activities. Oliver (1991, p. 155) noted, "from an institutional perspective … the appearance rather than the fact of conformity is often presumed to be sufficient for the attainment of legitimacy". Similarly, Meyer and Rowan (1977, p. 349) suggested that through formal and symbolic steps "an organisation demonstrates that it is acting on collectively valued purposes in a proper and adequate manner".

As a special issue in legitimacy, external evaluation can undermine legitimacy by exposing inconsistency. For this reason, organisations will seek to minimise, or avoid, external evaluation. External evaluators, from their perspective, can maintain stability and public confidence by disclosing inconsistencies. The withdrawal of 'good faith' by the external constituents may render the implemented mechanism irrelevant as a symbol of a good organisation. As a further consequence, organisations that adopted a new model for purely symbolic purposes, with a view to gaining legitimacy, may stop using it or may not progress beyond a very superficial use if through withdrawal of 'good faith' the mechanism has lost its symbolic value.

Neo-institutionalism in higher education studies

Several studies have shown that neo-institutional theory can be a useful framework for studying higher education institutions' response to external demands (Jenniskens & Morphew, 1999). For studying change in higher

education organisations, Maassen and Gornitzka (1999) and Gornitzka (1999) found that changes occurred in the context of taken-for-granted values, norms and beliefs. In addition, Larsen & Gornitzka (1995) studied the planning system in Norwegian higher education and suggested that there was evidence that one could trace mainly symbolic effects of the planning system within the institutions. Stensaker (2004), studying the policies concerning the quality of teaching and learning in Norwegian higher education, found that symbolic adaptation can be the first step in the adaptation process. Thus, even if the work reviewed here only represents a small number of studies carried out under the neo-institutionalist umbrella, they do signal that symbolic compliance may be sufficient for the attainment of legitimacy and survival. Therefore, management techniques implemented, i.e. quality improvement programmes, may help higher education institutions to manage the impression that outsiders have about them, even if they exist more on paper than in practice. Thus, a higher education institution can satisfy external demands for increased accountability to stakeholders by apparently adopting but not genuinely implementing programmes that address their interests. If that is the case, the implementation of quality management mechanisms can be seen as "symbolically mediated change processes which can be understood only if we uncover the action-motivation reasons that guide efforts to alleviate practical problems" (Dunn, 1993, p. 259). I will return to such reasons, which may indicate whether the adoption process remains decoupled from internal practices, when deriving independent variables, in particular external consultancy, later in this study.

As we have seen, there is quite some empirical evidence on the role of symbolic compliance, while the impact of isomorphic forces is empirically more contested. For example, Morphew (1996), studying programme duplication in a sample of American public higher education institutions in the period 1971-1993, found that even if external legitimacy did account as an explanation for why some advanced degree programmes were developed, the universities studied did not become more similar during the period of study (see also Huisman & Morphew, 1998; Huisman & Beerkens, 2000). In their longitudinal study of curriculum development in several hundred American private colleges in the period from 1971 to 1986, Kraatz and Zajak (1996) found, however, that the propositions from neo-institutionalism attracted surprisingly little support from their empirical analysis in which diversity instead of convergence in curriculum development was a major result. Therefore, the conflicting evidence on isomorphism in higher education suggests that isomorphism does not have a firm enough empirical basis to be included in research propositions in this study.

2.1.3 Consequences for organisational response

The discussion above emphasised that both neo-institutional and resource dependency perspectives can be useful in explaining organisational response to external expectations. The resource dependency perspective emphasises how

organisations are externally controlled and how organisational action is to a large extent determined by the dependence on external resources and the exchange relationships in which an organisation is involved. Organisations are, however, not necessarily powerless entities totally malleable by external demands. Organisations will make strategic decisions about adapting to the environment and respond in different ways to environmental demands. External control is not absolute and organisational constraints always leave space for autonomous decision. Thus organisational responses can also be understood by looking at how organisations perceive their environments, and how they try to show 'good faith' in order to gain legitimacy. Neo-institutional theory thus emphasises that organisations may respond to environmental pressures through formal and symbolic steps. So, resource dependency theory explains the reasons why external organisations might exercise coercive pressure, which is underestimated in neo-institutional theory. Nonetheless, neo-institutional theory explains how organisations perceive their environment and respond through symbolic ways, while external forces are mostly overlooked in neo-institutionalism. Both forces thus complement one another, suggesting what motivates implementation and what enables it to occur.

In sum, this section discussed that resource dependency from government will be a major trigger to satisfy governmental demands for organisational change (i.e. quality management implementation). This change may, however, be real or symbolic with varying degrees in between and over time. This is where neo-institutional theory makes a contribution, which I will include in my empirical analyses as well (see section 4.3.1).

2.2 Decision making process

2.2.1 Introduction

Institutional actions, however, are not disembodied, as they might appear from the organisation-level approaches treated in the previous section. They come from organisational actors who have positions, interests, stakes and powers that are primarily based in the groups of which they are members. Turning to the issue at hand, Stensaker (2004) emphasised that internal power and interests are vital in understanding how a higher education institution responds to external pressures. Similarly, Covalski and Dirsmith (1988) studied university budgeting processes and concluded that self-interest and power relations infused the whole process, where powerful groups within the organisation used their power to enforce institutional compliance when their interests were at stake. Larsen and Gornitzka (1995), studying the implementation of a new government initiated planning system in Norwegian higher education, also pointed out the importance of powerful organisational actors and interests. However, power and conflict

within organisations or contending social groups receive little attention in neo-institutionalism. For example, neo-institutional theory explains the recent spread of new programmes as a result of imitation and evolving norms rather than as a means to control labour (Handel, 2003). Thus, in neo-institutionalism, conflict of interest is a rather peripheral theme (Stensaker, 2004). Elsbach and Sutton (1992, p. 732) also highlighted that "institutional theorists have commonly de-emphasised the role of self-interest and instead emphasised the role of social norms and institutionally defined structures". Similarly, Slaughter (2001, p. 397) pointed out that neo-institutional theories "do not consider partisan politics", which so heavily influences decisions in organisations. As a consequence, neo-institutional theory is weak in analysing the internal dynamics of organisational change and thus is silent on why some organisations implement new mechanisms whereas others do not, despite experiencing the same institutional pressure. Further, the resource dependency perspective focuses attention mainly on the external factors in understanding organisational decision making. Thus what receives little attention in resource dependence and neo-institutional theory is the internal decision making process.

Researchers' views of organisational decision making have moved from models of perfect rationality to intended rationality, and to models that include politics. March and Simon (1958) as pioneers of the study of organisational decision making noted that individuals are not omniscient. Actors are only capable of limited or bounded rationality, which may create pressure on them to choose the first satisfactory option rather than the best possible one. Lacking perfect information, individuals, but also organisations, try to simplify problems. When problems are familiar, they develop fixed routines and people do not really make decisions, they simply follow existing rules. However, according to this view individuals and organisations will continue to use existing routines even when changed circumstances mean they are no longer rational or appropriate and produce sloppy decisions.

Research on decision making lends much support to the previous view. Mintzberg (1983) emphasises that organisational behaviour is a power game in which various players seek to control the organisation's decisions and actions. Different players try to use their own levels of power to control decisions and actions. According to this model, to understand the behaviour of the organisation, it is necessary to understand which players or influencers are present, what needs each seeks to fulfil in the organisation, and how each is able to exercise power to fulfil them[4].

Building on such insights, Allison (1971) developed conceptual models, here labelled the Organisational Process Model (OPM) and the Bureaucratic Politics

[4] Moving even further away from rationality-based models, in the garbage can model of decision making various kinds of problems and solutions are dumped by participants as they are generated (Cohen et al., 1972). However, Hall and Tolbert (2005) suggested that although the garbage can metaphor is an apt description of some decisions, it is not a general model of decision making, not even in loosely coupled organisations such as higher education institutions.

Model (BPM), which together provide a basis for an improved explanation and prediction of organisational decision making[5]. According to OPM the outputs of large organisations function according to certain regular patterns of behaviour from which actions emerge. BPM focuses on the internal politics of an organisation. Here the outcomes can be characterised as various overlapping bargaining games among organisational staff members. Thus both models (OPM and BPM) focus upon the 'large' organisation and on the political actors involved in the decision making processes. The advantages of adding these models to my theoretical framework are several. First, Allison's two models allow me to have a closer look at the impact of organisational decision making on implementation. Second, Allison's models let us look at multiple sources of reasons why and how a particular organisational response emerged. Third, Allison's frameworks let me focus on concrete indicators of e.g. organisational routines, standard operating procedures or bargaining games as an important component of a particular decision in an organisation. Fourth, the two models let us look at the multi-faceted nature of an organisational decision making process and thus the low probability of successful implementation (i.e. its being optimised to respond to a single facet). Thus in this study, these models are well suited to look at decisions on implementing quality management in higher education institutions, the more so as these organisations are loosely coupled and have large numbers of units, various and often unclear goals, and power dispersed to the lower levels of the organisation (Clark, 1983). In Allison's words, there is much leeway in the implementation stage.

It should also be mentioned that some authors criticised these models emphasising that OPM and BPM (Allison, 1971), which have different intellectual pedigrees and which Allison intended to be distinct, apparently share much of the same analytical turf (Art, 1973; Wagner, 1974). However, as Cornford (1974), Bendor and Hammond (1992) and Allison and Zelikow (1999) suggested, there is room for "different classes of models, and it is an essential enterprise to assess the relative explanatory and interpretative power of models in each of these different classes" (Bendor & Hammond, 1992, p. 304). These perspectives offer insights, concepts and explanations that might speak to key gaps in the prevailing neo-institutional and resource dependence literature, and that point to new possibilities for such research. The sections that follow sketch each conceptual model and articulate them as an analytical paradigm.

2.2.2 Organisational Process Model

OPM starts with the assumption that an organisation consists of a conglomerate of loosely coupled units, each with a substantial life of its own, rather than

[5] Organisational Process Model is referred sometimes as bureaucratic, while Bureaucratic Politics Model is referred as political decision making process.

completely informed, unitary, rational decision makers (Allison & Zelikow, 1999). Organisations adapt through developing complex internal structures and boundary spanning units. Higher education institutions are a paradigmatic example in that sense (Enders, 2002). The behaviour of an organisation can therefore be understood as outputs of large constituent parts functioning according to standard patterns of behaviour. Thus organisational behaviour relevant to any important issue reflects the independent output of several organisational units, coordinated by leaders.

To carry out complex actions and projects reliably, the behaviour of large numbers of members must be coordinated. This requires standard operating procedures[6]: "rules according to which things are done" (Allison & Zelikow, 1999, p. 143) and established programmes. Organisations develop routines where the procedures reflect stable values, interests and expectations and these routine responses relate organisations to their environment. Similarly to the neo-institutional perspective this also emphasises the stability of an organisation, the barriers to change that exist within organisations (Zucker, 1991), and the reduction of turbulence. Organisations are used to handling external pressure through standard operating procedures so that it is disturbed minimally. Organisational inertia is emphasised, although this does not completely exclude change. The behaviour of an organisation "relevant to an issue in any particular instance is, therefore, determined primarily by routines established prior to that instance" (Allison & Zelikow, 1999, p. 144).

Organisations adapt to changes in their environments, but this happens according to standard operating procedures. Since procedures are standard, they do not change quickly or easily and they lead decision makers to resist new evidence. However, without standard operating procedures:

> *it would not be possible to perform certain concrete tasks. … The more complex the action and the greater the number of individuals involved, the more important are programs and repertoires as determinants of organizational behaviour (Allison & Zelikow, 1999, p. 169, 170).*

The characteristics of an organisational action in any instance follows from the established routines, and from the choice of leaders—on the basis of information and estimates provided by existing routines—among existing programmes. Thus the explanatory power of this model is achieved by uncovering the organisational routines and repertoires that "produced the outputs that comprise the puzzling

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[6] Standard operating procedures are the systematic processes guided by rules and regulations through which reports are prepared, forms are processed, budgets are developed, and the other work of institutions get done. For example in higher education, the process of class selection by students, the determination of academics' and students' academic eligibility, and the preparation of annual self-evaluation of each academic are all incorporated into separate standard operating procedures at institutions that permit each process to run smoothly and allow other parts of higher education institutions to predict those processes (Birnbaum, 1988).

occurrence" of organisational actions, programmes and processes (Allison & Zelikow, 1999, p. 175). But rules can cause ineffectiveness as well (Birnbaum, 1988). Because actions and tasks are concerted and complex, and programmes available for dealing with them are often ill-suited to them, organisational behaviour in particular instances appears too formalised and slow. Similarly, the approval route for new programmes is well mapped out but it runs the length of the hierarchy (Hardy, 1990). Most important standard operating procedures are grounded in the incentive structure of an organisation or even in its norms or "the basic attitudes, professional culture, and operating style of its members. The deeper the grounding, the more resistant standard operating procedures are to change" (Allison & Zelikow, 1999, p. 170). The deeper the grounding and the more organisational forums and stages are involved in the process, including which issues should be accepted, permitted and implemented, the more bureaucratic the decision making process. The very standard operating procedures created by organisations ironically may inhibit their perception and problem solving procedures of new phenomena, and may prove to be the greatest barriers to organisational effectiveness, particularly during times of rapid environmental change (Birnbaum, 1988).

Standard operating procedures thus constitute routines for dealing with standard situations, but do not constitute far-sighted, flexible adaptation to particular unique issues. Routines allow staff members to deal with numerous average instances without much thought. But specific instances or situations, particularly critical ones that typically do not have 'standard' characteristics, "are often handled sluggishly" (Allison & Zelikow, 1999, p. 178). And a programme chosen from a short list of programmes in a repertoire is rarely tailored to the specific situation in which it is executed. Rather, the programme is the most appropriate of the programmes in a previously developed repertoire. Primary responsibility for a narrow set of problems or new projects also encourages organisational parochialism. Thus organisations "develop relatively stable propensities concerning priorities, operational objectives, perceptions and issues" (Allison & Zelikow, 1999, p. 168).

As a consequence, the ability of decision makers to engage in strategic decision making like e.g. in the case of quality management implementation is severely circumscribed, and bureaucracies often go on doing what they have always done and paying relatively little attention to what their participants (and even their key stakeholders) want them to do. First, if an issue arises, organisational members can see the situation as a 'routine' event. However, specific situations are often handled slowly. An organisation has an inflexible structure, "well suited to producing its standard outputs but ill-suited to adapting to the production of new ones" (Mintzberg, 1979, p. 375). Changes do not sweep through the organisations but seep in mainly by standard operating procedures. These procedures are regulated by the profession, nevertheless they remain standardised, sometimes 'over-applied', and difficult to change—in other

words, bureaucratic[7]. Procedures can be 'over-applied' in terms of new policies because this external input into organisations comes through leaders and it transmitted to a lower part of organisational bureaucracy and since non-routine tasks are difficult to bureaucratise they are hard to cope with. This may cause uncertainty and actors should run more cycles[8] according to/because of standard operating procedures than without them.

As a second core of this model, organisations develop standard operating procedures and routines for implementing decisions. However, a considerable gap separates what is chosen and what is implemented (Allison & Zelikow, 1999). First, new actions and mechanisms that demand that existing organisational units depart from their accustomed functions and perform previously unprogrammed tasks are rarely accomplished in their designed form, because organisation members will be inclined to bend new situations towards 'known' ones in which they can apply existing standard operating procedures. Second, each unit may be expected to possess incomplete and distorted information concerning its part of the problem. Finally, where an assigned piece of a process is contrary to the existing goals of a unit, resistance to implementation of that piece will be encountered. Thus careful attention to these organisational components offers potential improvements in explanation.

In sum, OPM's main lesson concerns the rigidifying, maladaptive effects of bureaucracy. Organisational routines and standardised scenarios constrain organisational behaviour mainly in situations which have no standard characteristics. The discussion above rejects the view of organisational behaviour as merely the sum of individual actions but stresses the routine, taken-for-granted nature of most individual behaviour and views actors as constituted by organisations (Jepperson, 1991). However, more than organisational routines and standard operating procedures determine what and why an organisation does and what influences the organisational decision making process. Therefore, it seems fruitful to turn to BPM (Allison & Zelikow, 1999), which explains organisational behaviour as the results of bargaining games and provides a more complete picture of how the decisions of organisations emerge.

2.2.3 Bureaucratic Politics Model

Organisational staff members do not constitute a monolithic group. Rather, all persons are, in their own right, players in a competitive game (Allison & Zelikow, 1999). The name of the game is bureaucratic politics: bargaining along regularised channels among staff members positioned hierarchically within an organisation.

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[7] I will consider a bureaucratic decision making process to refer to the type of institutional decision making process designed to accomplish large-scale administrative and academic tasks by systematically coordinating the work of many institutional actors.

[8] The observance of the existing procedures can imply extra effort from institutional members mainly in terms of time.

Thus organisational behaviour can be understood according to this model as the outcomes of bargaining games among individuals.

Individuals become players in an organisation by occupying a position for producing decisions on organisational issues. The positions define "what players both may and must do" (Allison & Zelikow, 1999, p. 297). However, the decisions depend not only upon the position, but also upon the player who occupies it. As Allison and Zelikow (1999, p. 298) accentuated, personality, "each player's basic operating style, and the complementarity or contradiction among personalities and styles in the inner circles are irreducible pieces of the policy blend". Then, too, individuals bring their own mind-sets to their job in determining sensitivities and debts to certain issues, personal standing with and commitments to various issues.

Games are played to determine organisational decisions and actions but they advance and impede the players' conception of the organisation's interest, operational objectives, specific programmes to which they are committed, and other personal concerns. These overlapping interests constitute the stakes for which, to what extent, how, and with which means games are played. As Allison and Zelikow (1999, p. 299) noticed, "stakes are the mix of individual interests shaped by the issue at hand. In the light of these stakes, a player decides on a stand on the issue". Turning to my case, the quality management literature emphasises the role of leaders, especially that their commitment[9] is essential for organisational success in implementing quality management mechanisms. Leaders can support and legitimise the implementation because they have authority to allocate resources. Cerych and Sabatier (1986) also stressed the importance of leaders being committed to the implementation. Further, Dill (1995) noted that quality must become the responsibility of all academics, but he too noted the need for strong and committed leadership to make that happen.

In addition, Allison (1971) and Oliver (1997) stated that organisations make non-rational choices bounded by e.g. social judgement, historical limitations and the inertial force of organisational habit. Hence, the implementation of new mechanisms may have to be supported by external advocates (often, paid consultants, who can be firms or individual experts) whose work is to create and implement these new quality management mechanisms. DiMaggio and Powell (1983) also pointed out that organisations seek out blueprints or recipes by using outside consultants to develop their expertise. Specifically to higher education, Birnbaum (2000) emphasised that leaders in higher education institutions are often unable to decide independently how to adopt or develop a quality management mechanism. Although little is known about the effects of consulting in higher education, and although these quality management experts may have less experience in the area of higher education, they may still be able to help

[9] Commitment is an agreement or pledge to do something in the future (Merriam-Webster, online, 17.12.2005)

avoid pitfalls based on their experiences with quality management outside higher education and in this way to increase the pace, scope and adequacy of quality management implementation (which were introduced in Chapter 3 as crucial dependent variables).

In sum, quality management implementation usually requires leaders who are committed to the issue and provide the necessary resources and negotiate between the various interests inside an organisation, and between the organisation and its environment. External experts can help to increase effectiveness and efficiency in this process.

The players' ability to play successfully depends also upon their power. The power of decision makers is an "elusive blend of at least three elements": bargaining advantages (drawn from formal authority and obligations, internal or external backing, constituents, information, expertise and status), skill and will in using bargaining advantages, and other players' perceptions of the first two components (Allison & Zelikow, 1999, p. 301). Power wisely invested yields an enhanced reputation, which can be depleted by unsuccessful investment. Thus each player "must pick the issues on which he can play with a high probability of success" (Allison & Zelikow, 1999, p. 300). However, no player's power is sufficient to guarantee satisfactory outcomes. Shared power confirms all players' feeling that other players do not see the first player's problem—surely not from that player's point of view—and, as Allison and Zelikow (1999, p. 303) stated, "others must be persuaded to look at the issue from a less parochial perspective". Organisational decisions thus are made in the context of shared power, with separate judgments concerning important choices. This determines that politics is the mechanism of choice. The decisions and actions are intra-organisational political resultants:

> *resultants in the sense that what happens is not chosen as a solution to a problem but rather results from compromise, conflict, and confusion of [staff members] with diverse interests and unequal influence; political in the sense that the activity from which decisions and actions emerge is best characterised as bargaining along regularised channels among individual members (Allison & Zelikow, 1999, p. 294-295).*

Thus actions rarely follow from an agreed doctrine in which all players concur. Instead agreement reflects the momentary operational convergence of a mix of motives. All players pull and haul with the power at their discretion for outcomes that advance their conception (Allison & Zelikow, 1999) of organisational interests. Organisational behaviour can be considered in several situations as something that emerges from subtle, overlapping bargaining games among organisational members.

Bargaining games are neither accident nor occasional—this distinguishes the BPM from the garbage can model. Individuals get into action-channels according to the importance of their stakes. An action channel is a regularised means of

taking organisational action on a specific kind of issue (Allison & Zelikow, 1999). For example in my case, one action channel for implementing a quality mechanism in a higher education institution is to go the way of organisation-wide council decision making. Another action-channel would be to make it a rectoral decision. A third action-channel could be to develop quality management at the faculty level.

Action channels structure the game by selecting the major players, determining their regular entrance points into the game, and distributing particular advantages and disadvantages for present decision and action. Most critically, as Allison and Zelikow (1999, p. 301) accentuated, "channels determine who's got the action. … Typically, issues are recognised and determined within an established channel for producing action." Reference is made in BPM to 'action channels', 'the rules of the games' (see later), and 'players in positions', explaining how the general hierarchy affects the politics of this particular game. I can point out that the hierarchy's particular configuration influences, for example, information processing or particular policy proposals, thereby structuring the entire game of bureaucratic politics. As Bendor and Hammond (1992, p. 317) stated

> *policymaking involves making comparisons (of pieces of information, of policy options, or of proposals for implementation), and that an organisation's structure affects who compares what with what, so that different structures can produce different policy outcomes.*

Furthermore, the BPM focuses on the environment in which the game is played: uncertainty about what must be implemented, the necessity that something be implemented, and the consequences of whatever is introduced. These features force staff members to become active players (Allison & Zelikow, 1999). Deadlines, which in my case come specifically from the Ministry of Education and the Hungarian Accreditation Committee (commonly referred to by its Hungarian acronym, the MAB), events and expectations put issues on the agenda and force players to take stands. The pace at which the multiple games are played, however, allows only limited attention to each decision and demands concentration on priority games. Players are forced to jump from issue to issue to respond to the needs of the moment in bursts of brief and discontinuous activity. Thus players frequently lack information about alternative possible solutions or about the consequences of different alternatives. In addition, a decision can leave considerable leeway in implementation:

> *Players who support the decision maneuver to see it implemented, often going beyond the spirit and sometimes even the letter of the decision. Those who oppose the decision, or oppose the action, maneuver to delay implementation, to limit*

> *implementation, to raise the issue again with a different face or in another channel (Allison & Zelikow, 1999, p. 304).*

Thus when an issue comes up, staff members may also "come to see quite different *faces of the issue*" (Allison & Zelikow, 1999, p. 299). Most resultants in the BPM emerge from games among players who perceive quite different faces of an issue and who differ in the action they prefer. Given different definitions of the problem, different solutions arise that may or may not be relevant or consistent, once the participants come to share a more common understanding of the decision situation. Thompson and Tuden (1959) suggested that where there is agreement on beliefs on causation but disagreement on goals, then bargaining will be observed. But where there is agreement on goals but disagreement on beliefs, they suggest that convincing[10] will prevail. However, the face of an issue that all players see is not determined by their goals and interests alone. Rather, as mentioned above, "[t]he channel in which an issue is raised and the deadline for decision also affect the face an issue wears" (Allison & Zelikow, 1999, p. 300).

Furthermore, the game is defined by a system of rules. First, rules establish the positions (who has voting rights, who has judgemental rights), the paths by which, e.g. in the case of this study, academics and students gain access to positions, the power of each position, and the action-channels (Allison & Zelikow, 1999). Second, rules—and also resources—limit the range of acceptable decisions and actions. Third, "rules sanction moves of some kinds—bargaining, coalitions, persuasion, deceit, bluff, and threat—while making other moves illegal, immoral, dishonorable, or inappropriate" (Allison & Zelikow, 1999, p. 302).

In sum, the explanatory power of this model is achieved by revealing the pulling and hauling of various players with different positions, perceptions, priorities and separate and unequal power, focusing on different problems, which yield the outcomes that constitute the action in question. Thus the character of emerging issues and the pace at which the game is played converge to yield organisational decisions as collages. Choices by one player, outcomes of different games—these pieces, when stuck to the same canvas, constitute organisational behaviour relevant to an issue. In addition, the importance of the committed leaders and external consultants in quality management implementation are also emphasised.

2.3 Higher Education Institutions as a Special Type of Organisation

It also seems fruitful to incorporate an understanding of the 'microfoundations' of organisational response (Gornitzka, 1999). Although the perspectives outlined above facilitate the understanding of inter- and intra-organisation relations and

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[10] Convincing problem-solving involves efforts to ascertain the justification for differing beliefs and to change the beliefs of other actors. If agreement on beliefs remains elusive, political activities might occur only as a last resort.

interaction, still, the organisational character is underplayed by the above discussed approaches. I can also go beyond the generalities of the OPM, which is valid for all organisations, if I look at the specific characteristics of higher education institutions. This is of particular importance when I take into consideration how a higher education institution is structured and what the nature of such organisations is. Gornitzka (1999) following Clark (1983) particularly emphasised first of all the high degree of structural differentiation and complexity, which affects the capacity and capability for collective action within universities and colleges. Secondly, the cultural features in higher education institutions should be seen as important factors in the context of organisational change and adaptation. In addition, Corley and Gioia (2000) emphasised the importance of how the reputation of higher education institutions enabled and constrained organisational operation and performance.

Understanding these features can be of vital importance for understanding why and how universities and colleges respond to environmental pressures, and how and why policies fail or are implemented successfully. In this section the characteristics of higher education institutions that are essential for my research problem, namely complexity, reputation, and disciplinary differences, will be discussed. I begin with the two most general aspects of social systems: structure and culture.

First, there are certain structural features that make higher education organisations 'hard to move'. The characteristic usually attributed to higher education institutions is a high degree of structural differentiation. The distribution and degree of organisational fragmentation are important factors conditioning the extent to which co-ordinated change in as well as to higher education institutions are possible or likely. Similarly, Blau and Schoenherr (1971), Mintzberg (1983), Damanpour, (1991) and Greening and Gray (1994) have pointed to the primary importance of specific structural characteristics of organisations—in particular horizontal differentiation—as determinants of implementation. I would expect such differences in organisational complexity to be reflected in quality management implementation.

Second, following the (re)discovery of the concept of culture in the social sciences, over the last ten to fifteen years in the field of higher education research a growing interest in cultural aspects of university and college life can also be observed (Maassen, 1996, p. 38). As Clark reasoned (1983, p. 72), the disciplinary entities within higher education institutions have a "culture as well as a social structure, some shared accounts and common beliefs that define for the participants who they are, what they are doing, why they are doing it, and whether they have been blessed or cursed." The majority of the studies on culture in higher education focus on one specific source of cultural variation, in particular the discipline (Becher, 1989a). One of the most outstanding characteristics of higher education institutions is that the discipline is almost always the main principle of organisation. Higher education institutions often are organised in

faculties of schools that cluster one or more related disciplines (e.g. natural sciences). Disciplines have very different cultures, ranging from the sciences to the humanities. Higher education institutions, for example, for performing arts may have a different way of reacting than engineering schools or medical schools. Therefore, I want to regard organisational response to quality management expectations in different disciplinary contexts.

Finally, the stratification among higher education institutions is not only expressed by structural characteristics such as vertical differentiation in the higher education system (i.e. universities versus non-university institutions, which are often called colleges or polytechnics), but also by their reputation, which is especially important in comparing higher education institutions within the same stratus (one university against another). Studies have showed that reputation and organisational performance (such as implementing quality management mechanisms) can be connected in different ways. On the one hand, researchers have found positive correlations between reputation and organisational performance (see e.g. Fombrun, 1996; Deephouse, 1997; Hall, 1992; Boyd et al., 1996). On the other hand, Fombrun and Shanley (1990) found that through a high reputation organisations only signal their performance in order to maximise their social status. With such contradictory empirical results I cannot make an unequivocal decision on the direction of this relationship. For this reason, this study will seek to evaluate empirically which of the two paths prevails in the context of Hungarian higher education institutions.

Consequently, the extent to which a higher education institution implements quality management mechanisms is also expected to depend on these three organisational factors: complexity, disciplinary differences and reputation. These organisational features embedded in a particular higher education institution may unequally influence the implementation of quality management mechanisms. In the following I shall go through these characteristics.

2.3.1 Complexity

Organisations are structurally differentiated and organisational research has highlighted that complexity "has major effects on … structural conditions, on processes within the organisation, and on relationships between the organisation and its environment" (Hall & Tolbert, 2005, p. 50). Complexity is thus expected to influence the possibilities for implementing management mechanisms and for the ways in which these mechanisms are implemented. Similarly Hall and Tolbert (2005) pointed out that complexity was more strongly related to implementation in organisations than other factors. This does not negate other features but suggests that "complexity is crucial in understanding how and why processes such as [implementation] occur" (Hall & Tolbert, 2005, p. 62). Other research suggests that complexity affects the speed and nature of the diffusion of reforms (Pollitt et al., 1998, p. 174–175). Complexity is a multidimensional phenomenon applying both to "organisational units and up and down the hierarchy" (Hall &

Tolbert, 2005, p. 49). In focusing on constituent units of organisations, a three-way analysis can help to clarify the components of organisational complexity. The three elements of complexity most commonly identified are: horizontal differentiation, vertical or hierarchical differentiation and geographical dispersion (Hall & Tolbert, 2005).

First, horizontal differentiation refers to the ways the tasks performed by an organisation are subdivided (Hall, 1982). There are different ways in which such tasks can be subdivided and complexity can be measured. According to Blau and Schoenherr (1971) and Hall et al. (1967) organisations spread out horizontally as work is subdivided for task accomplishment. A different approach can be seen in the work of Dewar and Hage (1978). They emphasise the importance of the scope of the tasks of the organisation. Beyer and Trice (1979) suggest that the technological factor is crucial, with personnel specialisation or professionalisation as the key to horizontal differentiation, while Pollitt et al. (2001) and Scott (1998) reaffirm the importance of the factor of an organisation's horizontal spread affecting the speed of reforms. Larger organisations are more likely to be constrained by their constituencies (Scott, 1998) and also tend to have more internal and external conflicts (Corwin, 1969). This differentiation appears in various forms and combinations in different organisations, affecting a host of crucial matters.

Second, vertical differentiation is a less complicated matter than horizontal differentiation (Hall & Tolbert, 2005). Research into the vertical dimension has used the depth of the hierarchy. For example, Hall et al. (1967, p. 906) used the "number of levels in the deepest single division" and the "mean number of levels for the organisation as a whole" (total number of levels in all divisions/number of divisions) as their indicators. Most analyses of the sources of vertical differentiation also focus on the issues of size and technology (e.g. ICT tools, kinds and numbers of laboratories, etc.), which are related to vertical differentiation. In a higher education system, the hierarchy of the study programmes system seems to be relevant for describing the vertical differentiation because there would probably be little variation across higher education institutions in 'official' organisational hierarchies. The number of levels of educational programmes in a higher education institution is a proxy variable correlated with education-only or education-and-research institutions, with a more complicated hierarchy of personnel (with or without full professors), etc.

Finally, activities and actors can be geographically dispersed by the separation of tasks. Geographical dispersion becomes a separate element in the complexity concept when one realises that an organisation can perform its functions in multiple locations (Hall, 1982). Turning to my study, in Hungarian higher education institutions, after different higher education organisations—sometimes located in different cities—merged to become legally one establishment, this function may also play an important role in implementing new mechanisms.

In sum, Hall and Tolbert (2005) suggest that organisations that are more complex (horizontally, vertically or geographically) face the problem of integrating the diverse occupations and ideas deriving from the different organisational members, and information in the system can contain diverse proposals and concepts. Thus implementation processes would be expected to occur slower or with narrower scope in a more complex organisation.

2.3.2 Disciplinary differences

This characteristic is a specific feature of higher education. Disciplines have a significant feature: they have decidedly different contents with which to work including also the teaching function. Disciplines may have well-developed and relatively clear structures of knowledge, but there also exist less integrated and more ambiguous sections. In this section a theoretical interpretation will be made about how features of diverse disciplinary cultures affect the suitability of diverse quality management mechanisms in higher education institutions.

As I explained earlier, it is common knowledge that quality is a slippery concept. It will be shown here how academics in different disciplines identify the term quality. As Kekäle (2002, p. 71-73) reported:

> *physicists concentrated on methods of quality and tended to avoid 'speculative' verbal definitions of quality. … Sociologists tried to define quality in general terms such as 'interesting' and 'fruitful' research; they maintained that many rising trends in society are difficult to discuss in exact terms. … In history criteria like trustworthiness and accuracy were made explicit.*

Thus it is stressed that the criteria for what is considered as quality may change when looking at different disciplines and "different schools of thought tend to have their own points of view and perspectives" Kekäle (2002, p. 75). These distinctive academic viewpoints, values and definitions of quality are bound to have an impact on quality management.

In addition, as pointed out above, quality management can be described by concepts, instruments and techniques used in this field. The requirements for successfully implementing such comprehensive management changes are so demanding and numerous that basic rules and techniques should be taken into account for doing it successfully. For example, quality management ought to be driven from clearly defined goals and strategic plans and ought to be planned and managed with appropriate thoroughness. Teamwork at all levels is also required to overcome the challenges to implementation. Seymour and Collett (1991), in a study of quality management implementation in higher education institutions, reported the following implementation problems: time, real teamwork versus turfmanship, and tangible results. If these basic techniques and rules are not taken into account the implementation process may result in

dissatisfaction. Therefore, the success of implementation seems to depend on how the different disciplines are familiar with the rules and techniques mentioned.

Various frameworks and classifications have been produced to categorise disciplines and disciplinary differences. Storer (1967, 1972) was one of the first to argue that much of the previously observed disciplinary variation could be explained in terms of two underlying dimensions, which he labelled the hard-soft dimension and the pure-applied dimension. Biglan (1973a, 1973b) has produced an influential classification based on the work by Storer and on the assumption that disciplinary differences can be traced back to three dimensions: hard—soft, pure—applied and life—nonlife. The first refers to the extent of consensus concerning the disciplinary body of theory, the second has to do with the measure of interest in a discipline in practical problems, and the last is related to whether the activities in a discipline are focused on living systems or not. Whitley (1984) developed a sixteenfold categorisation of disciplines based on two dichotomous subdimensions, i.e. technical vs. strategic task uncertainty and functional vs. strategic mutual dependence. Huisman (1995, p. 49) suggests, however, that Whitley's approach "is difficult to apply to fields other than those he studied". This might explain why his work did not inspire many empirical analyses (Braxton & Hargens, 1996).

These and other classifications have been referred to by Becher and Trowler (2001) in their attempts to explain cultural differences between disciplines. They divided disciplines into different categories by separating the cognitive dimension representing the epistemological aspects (the 'intellectual territory') of the discipline, and the social dimension of the discipline (social features of academic 'tribes').

The cognitive dimension includes a continuum from hard to soft sciences as well as a continuum from the pure to the applied sciences. Hard fields tend to have a well-developed theoretical structure embracing universal laws, cumulative knowledge, causal propositions, and generalisable findings. They depend on quantitative issues and measurements. Soft knowledge has unclear boundaries, a relatively unspecific theoretical structure and focuses on qualitative issues and broad, loosely defined problems. Although the distinction is not always sharp, pure knowledge is essentially self-regulating whereas the means of applied knowledge are basically open to external influence (Becher & Trowler, 2001, p. 181-186). The social dimension includes the following continua: convergent-divergent and urban-rural fields of inquiry. Convergent fields maintain a relatively stable elite and reasonably uniform standard operating procedures. Divergent fields lack these features; researchers tolerate "a greater measure of intellectual deviance" (Becher & Trowler, 2001, p. 185). Urban researchers occupy a narrow section of intellectual territory while rural researchers span a broader territory. These properties are relative rather than absolute and the attributes may change in time and place, or according to specialisms (Becher & Trowler, 2001).

In the following I discuss the impact of disciplinary characteristics on quality management implementation, which is based on the study of Becher and Trowler (2001) and the concepts of quality and quality management in higher education. A crucial point in quality management is first to clearly define the aims and goals (Kells, 1992). However, clarity on aims and goals may be difficult to achieve in some disciplines, namely those in which there is little agreement on the research paradigm. Thus, for instance, historians maintained that the individualistic tradition of their discipline made it problematic to define common goals precisely (Becher, 1989b). Sociologists stressed similar points, and their discipline was described as a multi-paradigmatic field (Becher & Trowler, 2001, p. 188) with fundamentally different paradigms and orientations. In soft or divergent fields, in other words, there are plenty of relevant topics to choose from and ways to study them. Consequently, common aims of the faculty, if discussed at all, have tended to be broad and loose. In contrast, in disciplines with a single dominant paradigm (e.g. physics), the so-called hard and convergent nature of the discipline allows setting common aims and making long range plans. In contrast to soft or divergent areas, experiments solve many disagreements; it is therefore easier to agree on quality goals and methods and on future aims. In hard and convergent areas, rules, theories and research methods (standard operating procedures) are relatively clear. Thus, problems in planning and setting common goals and aims seem to be more prevalent in soft or divergent areas than in hard and convergent fields.

Along similar lines, teamwork was seen to play a crucial role in quality management implementation as commonly presented (one can think of project groups, quality circles, etc.). Empirical research in experimental sciences is mainly teamwork. Sometimes the teams are multidisciplinary such as in many areas of biology. In contrast, historians stressed that their research is mostly individualistic; "[h]istory has no tradition of teamwork" (Becher, 1989b, p. 271). This attitude may also apply to other soft and divergent disciplines. For instance in sociology, Kleinman (1983) found that a crucial lesson learned by students of sociology is that "individuation is important". My point here is that since teamwork is more common and natural in hard and convergent fields than in soft and divergent ones, quality management implementation as commonly presented achieves a good fit more simply with the hard and convergent fields.

In this section I have sought to show how basic disciplinary features have an impact on quality management implementation. The emphasis on teamwork and the emphasis on clear and measurable aims in quality management are well in line with the cultural features of hard and convergent disciplines, but such emphases in quality management tend to dismiss the difficult-to-measure, individualised quality that is more prevalent in the areas of the soft or divergent sciences (Kekäle, 2002). Of course, this does not imply that quality management implementation is not possible at all in soft or divergent ones, but in these fields it must be expected to be slower and less focused than in hard and convergent fields.

2.3.3 *Organisational reputation*

The final characteristic in this section that is expected to influence quality management implementation is the organisational reputation. As Dill (2003, p. 692) emphasised, specifically concerning higher education, reputation plays "an especially important signalling function". Although reputations are ubiquitous, they remain relatively understudied (Fombrun, 1996) and for instance, the theories outlined above do not provide guidance on the general effects of reputation in implementing management mechanisms. In part, it is surely because reputations are seldom noticed until they are threatened. In part, however, it is also a problem of definition. According to the American Heritage Dictionary (1970, p. 600) reputation is "the general estimation in which one is held by the public". Yet how does such a definition apply to higher education institutions? Who constitutes, especially in my case, the public of a university or college and what is being estimated by that public? The lack of systematic attention to organisational reputation can be traced to the diversity of relevant academic literature that explores various facets of the construct (Fombrun & Rindova, 1996). I point here to five distinct categories of literature—based partly on Fombrun and Van Riel (1997)—that are currently converging in their emphasis on organisational reputation, namely the economic, strategic, marketing, organisational and sociological view.

First, economists view reputations as either traits or signals. Game theorists describe reputations as character traits that distinguish among types of organisations and can explain their strategic behaviour. For game theorists, in turning to my case, reputations are functional: they generate perceptions among academics, students, employers, the government, and the society about what a higher education institution is and what it does. Signalling theorists call attention to the informational content of reputations and to the fact that the information stored in a reputation influence evaluations by investors (Stigler, 1961). Since many features of an organisation and its services are hidden from view, reputations are information signals that increase an observer's confidence in the organisational outcomes. Both game and signalling theorists acknowledge that reputations are actually perceptions of organisations held by external observers.

Second, to strategists, reputations are both assets and mobility barriers (Caves & Porter, 1977). Established reputations impede mobility and are difficult to imitate because they derive from unique internal features. By accumulating the history of an organisation's interaction with its stakeholders they suggest to observers what organisations stand for (Freeman, 1984; Dutton & Dukerich, 1991). Empirical studies show that even when confronted with negative information, observers resist changing their reputation assessments (Wartick, 1992). Therefore, reputations are valuable intangible assets because they are inertial and provide a sustainable positional advantage for the organisations (Cramer & Ruefli, 1994; Hall, 1993). Like economists, then, strategists call

attention to the competitive benefits of acquiring favourable reputations (Rindova & Fombrun, 1999).

Third, to organisational scholars, organisational reputations are rooted in the sense-making experiences of staff members. An organisation's culture and identity shape the organisational practises, as well as the kinds of relationships that organisations establish with key stakeholders. Organisational culture influences staff members' perceptions and motivations (Dutton & Penner, 1993). Furthermore, organisational identity affects how leaders both interpret and react to environmental circumstances (Meyer, 1982; Dutton & Dukerich, 1991). Shared cultural values and a strong sense of identity therefore guide leaders, not only in defining what their organisation stands for, but in justifying their strategies for interacting with key stakeholders (Porac & Thomas, 1990). Identity and culture are related. Identity describes the core, enduring and distinctive features of an organisation that produce shared interpretations among leaders about how they should accommodate to external circumstances (Albert & Whetten, 1985).

Fourth, in marketing research, reputation focuses on the nature of information processing, resulting in 'pictures in the heads' of external subjects, attributing cognitive and affective meaning to cues received about an object they were directly or indirectly confronted with (Fombrun & Van Riel, 1997). A reputation also acts as a signal of quality (Fombrun, 1996). Moreover, from the organisational side, a favourable reputation is key to marketing and reinforcing a competitive position, especially in the knowledge-based sectors such as universities and colleges. These types of services are often referred to as 'credence goods' because these services often hinge on the reputation of the organisation (Fombrun, 1996). Thus, choosing a higher education institution is an intangible, expensive purchase perceived to be fraught with risks, and parents and students may be using rankings as impartial sources of reliable information (Hossler & Foley, 1995) to reduce uncertainty. Thus, theoretically, organisational rankings could help students and parents make organisation choices by not only providing them with reputation assessments but by emotionally bolstering their confidence in their high-stakes decisions.

Fifth, sociologists point out that rankings are social constructions that come into being through the relationships that a focal organisation has with its stakeholders in a shared organisational environment (Granovetter, 1985). These stakeholders interact within a common organisational field and exchange information about organisational actions relative to norms and expectations (Fombrun & Van Riel, 1997). Thus, organisational reputation comes to represent aggregated and holistic assessments of providers' prestige (DiMaggio & Powell, 1983). However, in practice, reputation is linked mainly to certain organisational characteristics (e.g.—in higher education—academic quality, support facilities, leisure activities). To sociologists, then, reputations are indicators of legitimacy: they are aggregate assessments of organisational performance relative to expectations and norms in an organisational field.

Jointly, these five types of academic literature suggest that reputation constitutes subjective, collective assessment of the reliability of organisations. Consistent with this literature, I therefore propose the following definition: an organisational reputation is a collective representation of an organisation's past actions and results that describes its ability to deliver valued outcomes to multiple stakeholders. Turning to the issue at hand, it gauges a higher education institution's relative standing both internally with academics and students and externally with its key stakeholders, in both its competitive and organisational environments. In short, reputation is the overall estimation in which a particular organisation is held by its various stakeholders. Similarly, Cameron (2000, p. 107) noted 'reputation is the beliefs that others have about your incompletely known characteristics'. These definitions of organisational reputation consider at least four elements. First, reputation represents the *net affective* or emotional reaction and involves the overall estimation in which an organisation is held by its stakeholders. A second aspect considers the *object specific components* on which this overall evaluation is based that may include the extent to which the organisation is well known, good or bad, reliable, trustworthy, reputable and believable. The third aspect is that reputation is the result of *past actions* defined as a set of economic and non-economic attributes ascribed to an organisation and inferred from the organisation's past behaviour. The fourth aspect of reputation emphasises *information* cues that result from direct and indirect experiences and information received. This emphasises the management aspect and asserts that it is the outcome of a competitive process in which organisations signal their key characteristics to constituents to maximise social status.

In sum, this section showed that there are different possibilities and different views on how reputation may be an explanatory factor in higher education institutions' reactions to governmental reform initiatives. Positive correlations between reputation and organisational performance were addressed on the one hand, while other evidence showed that organisations through high reputation only signalled their performance, in order to maximise their social status. Therefore, in this study, I am interested in which of these assumptions are justified.

3 The main models of quality management

3.1 Introduction

While the central theme of this study is organisational response to governmental reform, this phenomenon is examined in the context of quality management implementation. Such a focus implies that the particular characteristics of quality management that differentiate it from general organisational characteristics must be delineated and described. In this respect the body of quality management literature can contribute to an understanding of quality management implementation. Therefore, this chapter compares the quality management models in use in Hungarian higher education with the state-of-the-art of what a comprehensive framework would look like.

As mentioned in Chapter 1, quality in higher education has been placed high on the contemporary agenda. A new tendency in state governance of higher education institutions has come to the fore including also the use of quality management mechanisms. The literature from the late 1980s onward suggests a continuing interest in the popular industrial quality models such as TQM in the higher education sector. However, efforts in this direction are weakened by the absence of an agreed model for quality management in higher education. For example, Birnbaum (2000) reviewed seven higher education management fads including TQM and stated that each was eventually abandoned. Furthermore, the survey by Birnbaum and Deshotels (1999) of 469 higher education institutions in the United States concluded that the adoption of TQM in higher education is both a 'myth and illusion'. Similarly Grant et al. (2004) stressed that formal quality management models are not very appropriate for academia. In addition, Vazzana et al. (2000) confirmed that TQM is not focused on core teaching and learning processes. Surveys of TQM users showed widespread dissatisfaction, with a 'success rate of less than 30%'. Myers and Ashkenas (1993), for example found that two-thirds of the organisations surveyed felt their TQM programmes were failing to have any impact. Therefore, I have to emphasise what Seymour (1991) reported as perceived frustration in the implementation of TQM in higher education institutions: a high time investment due to personnel training; insufficient administrative commitment; resistance to change; the difficulty of moving from the superficial application of TQM tools to the adoption of quality management as an operating philosophy; team leaders and members who have little experience in working as a team; and organisational concern that the results are not sufficiently tangible. Moreover, the ISO 9001:2000 standard provides a good system for quality management but its production process function is too general. Finally, the excellence models (EFQM, 'The Baldrige') do not contain a real system and can only be used successfully for excellent organisations.

Based on the above brief discussion, I would state that the approaches reported so far in the literature attempting to implement quality management models as practised in industry across all the operations of higher education institutions are flawed in view of their tenuous fit with the core functions: education and research. At the same time, a substantial segment of higher education institutions' function consists of management and support functions for which these industrial models may well be appropriate, similar to any other service environment (Srikanthan & Dalrymple, 2005). Therefore, the only logical conclusion I can arrive at in relation to a model for quality management in higher education is that inspiration that derives from models that have been developed and used in other organisations can be useful but should not ignore the specific core functions of higher education, i.e. education and research. Thus consideration will have to be given to developing a framework for the core functional areas of higher education. In recent literature a number of models for education quality have been proposed and it is possible to undertake a synthesis of the features of different models (Srikanthan & Dalrymple, 2002). Therefore this chapter aims to collect the arguments for good practices put forward in the literature on quality management models both in general and in higher education.

In the arguments to follow, I will first introduce the important quality management models developed for higher education institutions and proposed in the recent literature. The section that follows will summarise the proposed elements of a comprehensive quality management framework for higher education institutions. The next section will more fully address the education components of the framework. The succeeding section will examine and compare four models such as the TQM, ISO and EFQM that are the most popular quality management models in Hungary in general and also in higher education, and the Hungarian Protocol, which was developed particularly for Hungarian higher education institutions. The concluding section will examine and compare these popular approaches and we can thus come to a better appreciation of the models' strengths and weaknesses and of current practices in the higher education area, and begin to see more clearly the path toward improving quality within higher education institutions.

3.2 Quality management models in higher education

There have been several reviews of fundamental educational processes and various models have been proposed for educational quality management in higher education institutions. The most significant models proposed in recent literature are described briefly below.

3.2.1 Massy' s six quality process domains model

Organisational, faculty and departmental education quality processes were reviewed by Massy on the basis of six domains, including determination of desired learning outcomes, design of curricula, design of teaching and learning processes, design of student examination and use of examination results, implementation quality, and commitment of resources to education quality work (Massy, 1997; Massy, 2003).

Determination of desired learning outcomes: This domain addresses the educational effort's underlying purpose. It highlights the goals of study programmes and their relations to students' needs including their prior knowledge, capability, further employment opportunities, capacity to make a social contribution and quality of life.

Design of curriculum: processes to design and improve programme curriculum, including: what will be taught and from what perspective; the role of design inputs from staff, employers, students and others (government, society); work to bring inputs together into a coherent curriculum by gathering systematic feedback and acting upon it while providing a degree of flexibility appropriate to programme goals; assurance of the standard of academic programmes offered by the organisations; and resolution of controversies.

Design of teaching and learning processes: processes to design, review and improve methods of teaching and learning, teaching materials, and students' learning environment, including: forums for staff members to discuss issues; consideration of desired and achieved learning outcomes; role of external inputs and students' views; and support for innovation to improve student learning.

Design of student examination and the use of examination results: processes to design, review and improve the examination of students, the examination of student learning and the relation of examination to educational objectives, including allocation of responsibility for examination; mechanisms for feedback to improve examination; and processes to enhance the linkage of examination to educational objectives.

Implementation quality: processes to assure that learning outcomes, curricula, teaching, learning and examination design and processes are being carried out coherently and effectively according to plan, including: staff recruitment and development; and promotion of teaching standards and processes to assure and improve the quality of delivered teaching, learning and examination for students, which includes feedback from participants; peer review; measures of the student learning experience outside the classroom; teacher-student interaction; and mechanisms to respond to these indicators.

Commitment of resources to education quality work: how do organisations use resources to enhance education quality work; are quality management processes adequately funded; are incentives established to reward good performance in delivering quality education; do individual components of education quality

work receive funding sufficient to perform their mission; and do these principles of allocation filter down to the unit level?

3.2.2 Generic model for quality management in higher education

Srikanthan and Dalrymple (2002) present a generic quality management model addressing the educational process, synthesising the transformative model, the engagement model of programme quality, the learning model and the responsive university model. The features of their generic model addressing quality management in higher education, based on the previous set of models, can be summarised as follows.

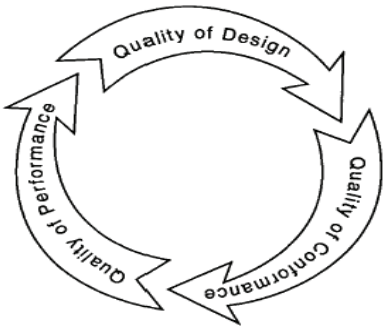
- "A clear focus on 'transformation' of the learners, enhancing them through adding value to their capability and ultimately 'empowering' them" (Srikanthan & Dalrymple, 2002, p. 220). Thus, quality policies have to be learning-oriented and should be centred on the student experience.
- A synergistic collaboration at the interface, which transcends not only the traditional power relationships (i.e. teacher-student), but breaks the barriers among organisations and reaches out into developing new external partnerships within the community. "This means being student-centred in programmes, community-centred in outreach and nation-centred in research" (Srikanthan & Dalrymple, 2002, p. 218).
- There is an important role for leaders in higher education institutions to encourage and ensure an appropriate collegial culture.

3.2.3 Three quality dimensions model

The three quality dimensions model was developed by Mergen et al. in 2000. It discusses a set of measurement parameters to be used in evaluating the quality of education and the tools necessary for evaluating them. Their quality management framework is comprised of three dimensions: quality of design (QD), quality of conformance (QC) and quality of performance (QP). An overview of the model is shown in Figure 3.1. This figure suggests that there is a logical flow from QD to QC and QP. For example, low QP may lead to changes in the QD and/or QC. Similarly, low QC may require better quality control techniques or changes in the design stage. A brief description of these three parameters is provided below.

Quality of design deals with determining the characteristics of a good education in a given market segment at a given cost. It is determined by three factors: (1) the quality of the insights gained about stakeholders and the depth of understanding of their requirements; (2) the quality of the process used to translate these requirements into a product and/or service that provides value to stakeholders; and (3) the continuous improvement of the design process.

Figure 3.1: Relationship between the components of the model.



Quality of conformance deals with how well the designed requirements (i.e. the education ideals of a higher education institution) are satisfied, including the cost requirements, uniformity and dependability. QC is determined by the minimisation of variance from design requirements for the products and/or services. Thus, for each design specification, a proper measure or measures should be developed in order to make sure that design requirements are being met.

Quality of performance deals with how well the education serves the students in their environment. It is a measure of the value that students derive from their education. QP measures include the level of endowment, stakeholder satisfaction, tuition revenues, student enrolment, salaries of fresh employers and career advancement.

3.2.4 Dill's framework for academic quality management

Dill's framework (1992) suggests that a higher education programme may be conceived as an interrelated system. Within the system various sources supply students who are educated through a designed programme featuring specific educational processes and then placed with various customers. The educational programme should be continually designed and redesigned based on stakeholder needs as well as organisational knowledge and expertise. This framework can be applied at any level of analysis but will be addressed here at the level of individual higher education institutions. Academic quality management includes: source management and student selection; programme design; customer needs research; as well as the design and management of a supporting quality information system.

Source management and student selection. The academic quality management approach should place great emphasis on assuring the continual improvement and reliability of incoming student performance based on measures of academic quality defined as critical by those involved in designing the academic

programme. Source management entails identifying and tracking higher education institutions in terms of the quality of their student product over time. Furthermore, an academic quality management perspective would place great emphasis on the relationship between student selection and long-term student success, as well as the integration of student selection with the process of academic programme design.

Academic programme design. The framework emphasises improving teachers' skills in instruction, course planning and student evaluation. This programme design stresses the importance of cross-functional design teams, educational evaluation and materials production. The early identification of vital academic programme components can contribute to reducing predictable variation in academic quality. Furthermore, the framework emphasises the importance of the sequencing of various academic programme components to effective student learning.

Research on customers' needs. Dill (1992) highlights the importance of research on organisational alumni, as well as on potential employers, regarding the relevance of academic skills and knowledge to post-academic success. Alumni surveys have been helpful in identifying the particular value in the workplace of general components of an undergraduate education and the relevance of specific subject areas to success in various occupational categories.

Quality information system includes measures of the performance of applying students, of accepted students, of students at key programme subcomponents as well at the completion of the overall programme, of programme graduates, measures of drop-out rates and measures of alumni expectations. The information gained can be integrated with an active initiative in programme design.

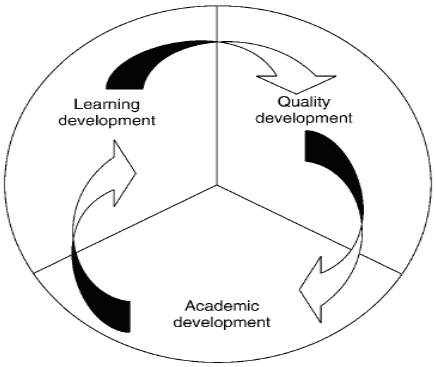
3.2.5 Holistic educational development model

The *educational development model* developed by D'Andrea (2000) involves initiating and managing three major areas: academic development, learning development and quality development. The linkages between these areas are shown in Figure 3.2.

The model emphasises a quality system that "not only performs a regulatory function but one that functions to improve the quality of the educational experience, one that provides a developmental function as well" (Gosling & D'Andrea, 2001, p. 11). In this model the activities of the educational development model would create a 'quality loop'. It stresses the development, implementation and evaluation of educational provision full circle by informing the process of curriculum development with knowledge of current pedagogical theory and practice. It also enhances the necessary professional development for teaching staff with teaching/learning strategies meeting the educational goals and objectives of the curriculum developed. This integrated educational development model creates the links between curriculum development and quality management by creating a collegial environment within the organisation and,

additionally, these processes can enhance support for students' learning development needs as well.

Figure 3.2: Holistic educational development (D'Andrea, 2000).



3.2.6 Veress' s quality management model

In his model, Veress (1999) examines quality management of higher education from an engineering perspective. He defined the notion of quality as the satisfaction of stakeholders. He stresses that only the 'demand-satisfaction process' has quality according to the modern quality management interpretation, while production or consumer processes alone do not. In order to improve quality it has to be known and measured (estimated). Organisations can measure the quality of education, the satisfaction of stakeholders, etc. but if they do not have clear educational processes, regulation processes and conformity control processes they cannot reproduce the processes under the same conditions. Organisations can declare the satisfaction of stakeholders but they do not know what kinds of activities and processes produced it. Thus, they do not know what to change for improvement. Therefore, he emphasises a clear description of educational and secondary processes concerning educational ones, the regulation of processes, conformity control processes and last, but most importantly, quality control processes (satisfaction of stakeholders). Furthermore, he stresses the importance of a 'goal-oriented' quality management system where a goal system is needed for regulating these activities. The quality goal system must be derived from organisational quality policy, which should be derived from the organisational mission.

3.3 Proposed elements of a comprehensive framework

Each model cited in the previous section implies its own unique perspective on educational quality in a higher education institution. At the implementation level, there is a complementarity among the models to develop a rich picture of the nature of required actions. To arrive at an all-round, comprehensive model of quality management for education in higher education institutions, my point is to use the complementarity, adding strengths of one model to the strengths of another model, thus eliminating blind spots and other weaknesses that would result from applying only a single model. Overall the features of a comprehensive framework addressing quality management in higher education, derived from the above discussed six approaches, can be summarised as follows.

- A clear focus on designing, implementing and maintaining a *quality management system*.
- Organisational *quality policy* has to be developed, disseminated and improved continuously.
- The *determination of desired learning outcomes* highlights the goals of the course or programme and their relations to students' needs.
- *Design of curricula* should be continually developing and improving in a responsive way, informed by feedback from a wide variety of stakeholders.
- The *design of teaching/learning processes* requires processes and activities to design, review and improve methods of teaching and learning, teaching materials, and students' learning environment.
- *Design of student evaluation* expects processes and activities to design, review and improve the examination of students, the examination of student learning and the relation of examination to educational objectives and to utilise the evaluation results.
- There should be a clear emphasis on assuring that the curricular, education and examination design and processes are being carried out coherently and effectively according to plan (*quality of implementation*).
- *Resource management* demands control of processes regarding how organisations use resources to enhance education quality.
- A focus on *governing* and *support processes* and *outcomes.*
- A *quality information system* is necessary to support the different processes concerning quality management.
- There is a clear role for *leaders* in higher education institutions to *be committed* in developing, maintaining and improving quality and the quality management system.
- A *synergistic collaboration* at the learning interface, which transcends not only the relationships but breaks down the barriers among higher education institutions and reaches out into developing new external

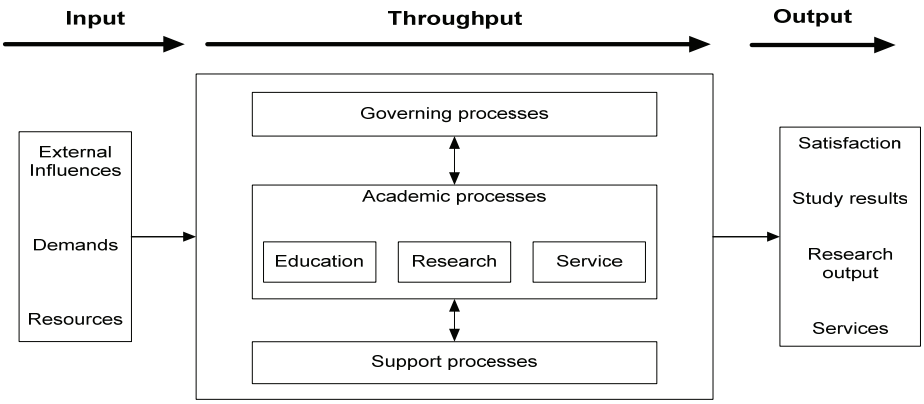
partnerships with community and focusing on *external influencers* (government ministries, accreditation agencies, etc.).
- There should be emphasis on the measurement of the *demands* and *satisfaction of stakeholders*.

Overall, an attempt at synthesising the essence of the quality management models for higher education and implementing them should begin to provide a framework of educational excellence in higher education. Such a comprehensive framework emphasises the education function of the higher education institutions and provides the support processes directly connected with teaching and learning. A draft of particular application that can be specifically implemented in higher education will be spelled out in the following.

3.4 Higher education-specific elements of the comprehensive framework

Taking into account the expectations mentioned above, I conceived the following quality management framework (Figure 3.3). This input – throughput – output model is drawn from insights in a basic system model, but grounded in the character of academic organisations as mentioned above. Higher education institutions are perceived as part of an abstract system in which their fitting to external expectations would influence their success and eventual survival. However, in its focus on the nature of the relationships between the higher education institutions and their environment (stakeholders, government, etc.), and in its concern for unique internal processes, this framework has a quite original aspect. It provides an approach to addressing quality in a comprehensive way, namely education and its directly connected support processes. In the subsections to follow, these components will be addressed in turn.

Figure 3.3: Quality management framework for higher education.



3.4.1 Input

An important contribution of quality management thinking is to focus attention on the effect of organisational input on the quality of goods or services produced (Dill, 1995). Adapting this perspective to higher education would imply attending to three basic areas: external influences, demands and resources.

External influences imply basically governmental expectations and the requirements of accreditation agencies. As mentioned in Chapter 2, resource dependence theory explains that higher education institutions should take into account these expectations in order to survive.

Demands consist mainly of students' expectations and are composed of the requirements of academics, employers, alumni and the (regional) society.

Resources are students, staff, facilities and money in higher education (Astin, 1985). The first three types can, of course, be acquired with money, particularly physical facilities, which can be directly purchased. Thus, for simplicity, it is reasonable to consider three types of resources: students, personnel and financial resources. One further kind of 'resource' should be mentioned here, with which organisations are also engaged: reputation. Chapter 2 explained this concept in detail; however, one thought seems relevant to repeat here about reputation, namely: higher education institutions with a higher reputation improve their ability to attract faculty members, students and money (Astin, 1985).

Higher education institutions should take into account the variation in the academic knowledge and skills of entering students. It has direct implications for the quality of education (Dill, 1995). In a number of countries and also in Hungary, a national curriculum for secondary schools and/or a national achievement examination help universities and colleges select candidates, and this contributes to diminishing the variation of student entrants. Thus, the improvement of academic quality requires a close and continuing articulation between academic programmes and secondary preparatory programmes, and a systematic design and redesign of academic programmes using information on the knowledge and abilities of entering students and on the market.

A further and connecting input factor is the knowledge and skills of especially academic but also non-academic staff. Staff quality should begin with the recruitment of new staff. During the recruitment process, experience and demonstration of ability and potential in quality learning and teaching methodologies are important considerations. As Pascarella and Terenzini (1991, p. 619) emphasised, student learning is unambiguously linked to teachers' skill. For existing staff, good teaching should be acknowledged and rewarded and ongoing professional self-development of faculty members should be demanded. For example, to ensure and improve the quality of teaching, staff members should be required to attend staff development courses. These courses can provide participants with theories and practice for effective teaching, and also act as a forum for open discussion and sharing of experience.

Finally, a number of elements would be critical components of a well-designed academic information system necessary to support the processes of student selection and resource management, curriculum and process design, and stakeholder research. This information should include the performance of applying and accepted students and students at key programme subcomponents, as well as the completion of the overall programme, the performance of programme graduates, and alumni expectations for the performance of students in defined fields (Astin, 1991).

> *Creating an academic information system would require coordinating these data gathering efforts, developing common definitions and standards, and most importantly, integrating the quality information system with an active initiative in program and process design (Dill, 1992, p. 72).*

3.4.2 Output

The focus of quality management in higher education should not only be on the relationship between higher education institutions and their sources (input side) but also on the relationship between academic organisations and their stakeholders (output side) (Dill, 1995). Thus many of the mechanisms proposed for regulating quality in higher education (throughput) have been shaped by the information of study results, service activities and satisfaction of stakeholders. Student satisfaction with courses is on the micro-level; student/employer satisfaction with degree programmes is on a higher level. Both are needed, of course, and the balance between them is up to the organisation. Grant et al. (2004, p. 436) mentioned some examples of measuring organisational outcomes, including:

> *performance on standardised tests, employer assessment of graduate performance, entry-level salary of graduates, employment rate of graduates, ranking and reputation of the school by external sources, [and] increase of the student population.*

Higher education institutions can use this information first by providing it to stakeholders such as to students, who will be able to make more informed, rational choice; to employers, who are interested in the competences and skills of graduated students; and to the state, which argues that the public investment in higher education justifies closer scrutiny of the outcomes achieved by publicly funded organisations and organisations being more accountable.

The concept of value-added can also be important for externals. This says that the effectiveness of any particular higher education institution should be evaluated not in terms of the absolute capability level of the higher education institution's graduates, but rather in terms of the relative improvement achieved

in the students' capabilities between the time of matriculation and the time of graduation (Yunker, 2005). The concept emphasises that statistical comparisons of the relative effectiveness of different organisations in terms of the capabilities of their graduates should control for the different levels of ability exhibited by the different incoming freshmen of the respective organisations.

This information can be provided either directly to stakeholders, and/or to an intermediary body acting on the behalf of stakeholders.

Second, information systematically collected on the needs of stakeholders can motivate and help higher education institutions to design and improve the quality of their activities. Therefore, as I mentioned above, organisations should develop systematic processes of information gathering on their output/outcomes that will become increasingly vital to be utilised in the design and to sustain and improve academic quality in the future.

3.4.3 Throughput

As I mentioned earlier, the simplistic application of models from industry (e.g. ISO, TQM, and EFQM) in higher education is unlikely to improve quality. The support and management areas can be managed by implementing formal quality management models but they are not adapted to the core education processes. Therefore, sufficient attention should be paid to the specific educational processes concerning quality management. The remainder of this section will describe these education processes taking into account the following criteria to be used in developing them, namely: defining education quality in terms of student outcomes; focusing on the actual process of teaching; substituting low-cost for high-cost resources where possible without hurting quality; striving for coherence in the department's curriculum and educational processes; working collaboratively to achieve mutual involvement and support; basing decisions on facts wherever possible; identifying and learning from best practice; and last but not least making improvement a top priority (Massy, 2003).

Determining desired learning outcomes

Before starting a new study programme first of all a cost/benefit analysis has to be conducted together with market research for the proposed programme prior to stating the desired outcomes. The following steps should result from this analysis. Learning outcomes mean student learning and its consequences. Programme designers should consider what students need in order to be successful in their chosen field and acquire meaningful values and social skills[11]. Furthermore, higher education institutions should focus on exploiting the

[11] Pascarella and Terenzini (1991) also emphasised that higher education institutions should attend a wide range of cognitive skills, intellectual functions and social skills.

available teaching, learning and evaluation process options. In addition, attention should be paid to whether student outcome goals reinforce each other and whether curriculum and educational processes appear coherent to students and employers. So courses should build on the students' prior knowledge and capability. When determining student outcome goals, designers should collaborate effectively, otherwise the resulting isolation and fragmentation inhibits efforts to improve quality work and the delivered quality of education. Surveys with employers and alumni concerning the learning outcomes may prove valuable at this stage. Finally, to improve student outcome goals it is useful to compare them with similar programmes in other organisations and reconsider them on a regular basis.

Design of curriculum

Curriculum designers should focus on what will be taught, in what order, from what perspectives and how effectively the above reflects student outcome goals (Massy, 2003). Curriculum should be continually designed and developed in a responsive way, informed by feedback from a wide variety of stakeholders (including an accreditation body and qualification requirements among other things) as well as a teacher's expertise. Design of curricula for programmes should be informed by the systematic collection of feedback and advice from industry, employers, graduate surveys, current students and meetings between staff and students and also by consultations with the appropriate academic departments within the higher education institutions. But the weight given to different sources could be different in the case of distinct programmes, e.g. more weight to employers in the case of vocational training while more weight to academics in the case of master degrees. Furthermore, organisations should pay attention to exploiting available process options, such as whether the assigned materials facilitate active learning, or whether they involve mainly reading and listening. Moreover, purposeful attention should be paid to whether the various parts of the curriculum reinforce each other and the curriculum appears coherent to students (Massy, 2003).

Information collected should be considered and discussed at the programme planning stage and also during meetings of the programme groups. Peer discussions, meetings and debates should be actively pursued in the above processes. Curriculum development should involve staff in an active process of consultation and discussion to facilitate these objectives. Organisations should further be able to reach agreement on essential elements of design. Finally, there should also be mechanisms for ongoing updating of curricula and it is useful to compare them with similar programmes in other organisations.

Design of teaching and learning processes

Deming (1986) emphasised that the improvement of quality does not come from assessment, but from design—from the continuous improvement of the underlying processes of teaching and learning. Dill (1992) further reinforced this message and stated that quality does not at all come from inspection ex post. Similarly, Massy (2003) emphasised that the design of teaching and learning processes requires as much effort as or perhaps even more effort than curriculum design now that information technology offers so many alternatives. So higher education institutions should evaluate process options in terms of their effects on student learning and values as well as on staff workload and convenience. Furthermore they should analyse the learning outcomes and use the results to revise educational processes.

The design of teaching and learning processes should be informed by feedback from students that is gathered by systematic surveys. Organisations should be committed to the development of student-centred learning to support the students' development of independent skills. This ought to be done by creating an environment that provides appropriate experience for students to discover and construct knowledge for themselves while the teacher provides guidance and open communication. In this case instructional strategies can be based on increasing students' active engagement in learning[12] (Pascarella & Terenzini, 1991). Facilities should also be developed to enhance students' learning in addition to formal teaching and to ensure that the learning and teaching activities encourage active learning from students.

Moreover, attention should be paid to whether the various process steps reinforce each other and teaching and learning processes appear coherent to students. Furthermore, organisations should make sure that technology applications are worth their cost. Higher education institutions should provide overall guidance, promote improvement of learning and teaching methodologies and encourage the exploration of different approaches to learning. There should be formal and informal meetings and seminars for staff, and between staff and students to discuss implementation results of the various learning and teaching processes for sharing and further improvement. Thus organisations can take benchmarks beyond the familiar teaching methods of their discipline to examine exemplary processes within and outside their organisation.

To ensure and improve the quality of the design of learning and teaching processes, programme development teams should consider input from external sources such as experts from industry, the professions, experience from internships, exchange programmes, participation in international workshops and seminars, and peer review of teaching. Results should be reviewed by individual teachers and programme teams in order to identify areas for improvement.

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[12] This study only focuses on the quality management aspects of learning processes, but a good description of the issue from an education point of view can be found in Pascarella and Terenzini (1991).

Evaluation of the outcomes of learning processes need to be carried out systematically in order to further understand the degree to which these innovative endeavours are effective in achieving their stated objectives.

Design of student examination and the use of examination results

Higher education institutions should define 'key quality indicators' based on student outcome goals and make sure that evaluation measures provide the data needed to track the indicators. Organisations can use a mix of and balance between final examinations and ongoing examinations. Massy emphasised evidence that should be collected to examine student learning.

The evidence should 1) cover knowledge and skills taught throughout the program's curriculum, 2) involve multiple judgements of student performance, 3) provide information on multiple dimensions of student performance, and 4) involve more than surveys or self-reports of competency and growth by students (Massy, 2003, p. 163-164).

In addition, appropriate attention should be paid to whether the various examination measures and indicators reinforce each other and examinations appear coherent to students. There should be an extensive structure that ensures the examination of outcomes of all activities and the examination process itself during the programme. Evaluation of the final project (diploma work) should receive especially intensive attention. The design of examinations should be an integral part of curriculum development, and an integrative approach should be adopted to ensure that examination methods address and are in alignment with learning objectives, and that they appropriately indicate the level of ability in meeting expected learning outcomes. A particular examination method should work smoothly and connect seamlessly with the process of teaching and learning.

Student examination processes need to be reconsidered in a systematic way. To address the different learning objectives, a range of examination methods could be employed to ensure such alignment. Examples of different methods could be continuous examination, reflective learning strategies, closed and open-book examinations, student peer and self-assessment, and the use of IT-based examination. Programme documents should inform students of the programme objectives, content, learning and teaching methods, and examination methodology. The effective measurement of learning outcomes should lie at the core of educational quality management and the development of such measures should be a very high priority for each programme in every organisation.

Examination processes and results of individual subjects should be thoroughly reviewed and discussed at subject examination review meetings, comments and feedback of which should be fed back to programme committees for consideration and appropriate action. Finally, organisations should evaluate examination practises of comparable departments in other organisations.

Implementation quality

"Effective implementation of curricular processes and examination designs requires planning, diligence and reinforcement. … Implementation quality depends first on self-discipline, then on close interaction with colleagues in the work team and department, and finally organised quality processes" (Massy, 2003, p. 164). Quality management should include a focus on student outcomes and connect seamlessly with processes of teaching, learning and examination. Maintaining implementation quality requires frequent reminders and performance reviews. Academics should collaborate effectively on the design of quality management methods, on interpreting the results and on taking appropriate actions based on quality management results. Thus the overall quality management processes require departments to reflect on and evaluate the quality of the implementation of the various aspects of education delivery, to identify strengths and areas for improvement, and also to set goals and objectives. The teaching performance of individual teachers ought to be monitored.

There should also be processes in place to solicit direct feedback from students on various aspects of education. Feedback should be reviewed in order to ascertain quality teaching to ensure that the curriculum, teaching and examination design and processes have been carried out as planned.

There are in place various means to facilitate the implementation of plans. Higher education institutions should make sure that quality management method applications are worth their cost. In addition, quality management methods should reinforce each other. To monitor the proper implementation of the designs of the curricula, learning and teaching processes and student examinations, the following mechanisms seem fruitful to be employed among other mechanisms: student feedback questionnaire, performance appraisals, staff development record, formal and informal channels for student-staff consultation, academic advisors, annual quality management report and business plan, departmental assessment, benchmarking with other higher education institutions, peer evaluation of teaching, and student course evaluation. Furthermore, organisations should be able to defend their choice of quality management methods by some appropriate combination of literature and experience. Finally, organisations should reconsider quality management processes systematically.

3.5 General quality management frameworks

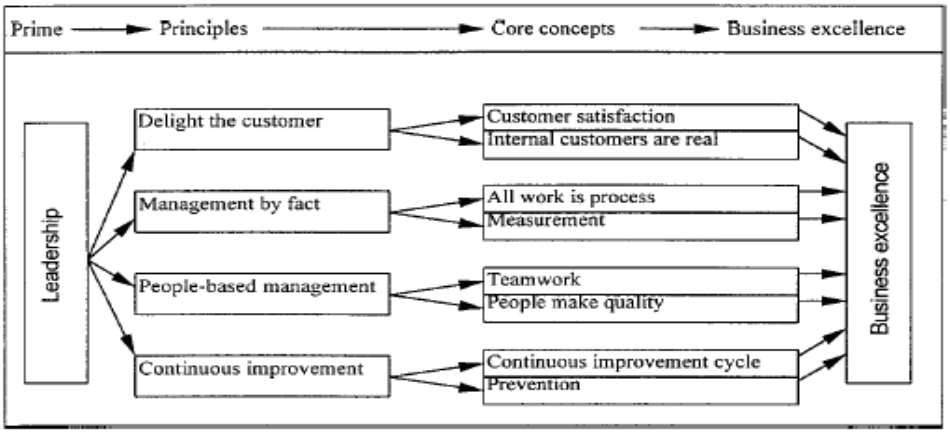
As mentioned above, industry-originated quality management models are popular in Hungary in general and also in higher education. Therefore, the most popular models such as TQM, EFQM and ISO will be described and discussed. Additionally, the Protocol, which was developed particularly for higher education institutions by the Ministry of Education in Hungary, will be addressed as well. This is not the place to provide a full-blown analysis and description of these models. Instead, I will examine two properties of the models. First the basic

elements of these models will be described. Then I will compare and analyse these models with the elements of the comprehensive framework.

3.5.1 Total Quality Management (TQM)

TQM implementation (Kanji & Tambi, 1999) is influenced by certain TQM principles and core concepts that are critical for organisational success. The TQM 'movement' has been very broad and covered many approaches and models. Accordingly, it is not possible to describe *the* TQM approach. The purpose of this section is to introduce a TQM model for higher education institutions that incorporates various critical success factors. Kanji's (1998) model, which purports to be applicable generally and which contrasts with some other TQM approaches, clearly states its principles and assumptions, and these allow one to derive the critical success factors for its development in higher education institutions (Figure 3.4).

Figure 3.4: Business Excellence Model (Kanji, 1998).



It has been applied in 183 higher education institutions in three different countries: the USA, the UK and Malaysia (Kanji, 2001). According to this model, organisations have to be guided through the TQM principles and core concepts by leaders in order to achieve business excellence (Kanji et al., 1999). He states that TQM is suitable for all higher education institutions regardless of age, size or type of control, i.e. whether public or private organisations. Yet, Kanji emphasises that TQM very much depends on the organisational culture. Kanji's model builds on four principles: delight the customer; management by fact; people-based management; and continuous improvement. Each principle is divided into two core concepts, namely: customer satisfaction and internal customers are real; all

work is process and measurement; teamwork and people make quality; continuous improvement cycle and prevention. Leadership serves as a prime in this model and must be transmitted through all the principles and core concepts in order to achieve business excellence. Core concepts represent those managerial areas that must be given special and continual attention to ensure high performance. These factors are critical because only if they are executed properly will the organisation achieve business excellence. These factors are useful because they can be used by managers and leaders for missions, policies and decision making (Kanji et al., 1999).

3.5.2 ISO 9000 standards

ISO 9000:2000 is in fact a family of standards developed to assist organisations in implementing and operating effective quality management systems. ISO 9000:2000 is a procedural approach and represents a real step forward in quality management, since it aims at 'customer satisfaction assurance', not just product quality assurance and it has a process view (Conti, 1999). The new standards comprise three parts: ISO 9000:2000, which covers underlying concepts; ISO 9001:2000, which is the actual specification for a quality management system; and ISO 9004:2000, which is designed as a guide for those organisations that want further improvement of their quality system. Without going into details the description will be limited to the following.

ISO 9001 and 9004 standards each have a different character. The 9001 is a so-called 'good enough' model which defines minimum requirements for quality management systems. If organisations satisfy the requirements they can get certification based only on ISO 9001:2000. In contrast to 9001, 9004 is a 'better and better' model which offers help to develop a management system beyond the minimum requirement status into the TQM sphere. As a consistent pair ISO 9001 and ISO 9004 have the same structure and the same terminology. Figure 3.5 shows the basic concept of the ISO 9001 model. Without conflicts in content, ISO 9004 contains the requirements of ISO 9001 and adds recommendations to gain impressive improvements. In summary,

> *ISO 9001 is a solid base for contracts among partners and for government regulations. Its certificates are of high interest for the organisations themselves, for their suppliers, for their customers, for state authorities, legislative organs and the community at large. ISO 9004 is a model for an ongoing journey to improve the quality management system starting with the minimum level of ISO 9001 (Seghezzi, 2001, p. 864).*

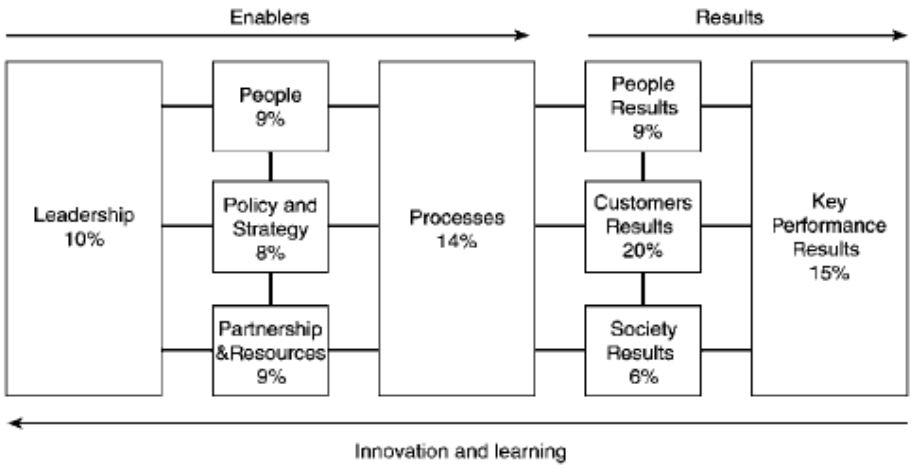
Figure 3.5: The Basic ISO 9001:2000 Model.

Furthermore, Kanji (1998) and Kanji and Tambi (1999) say that ISO 9001 could be integrated with TQM to develop a total quality system. In addition, they propose the use of the EFQM model for the process using an integrated self-assessment framework approach. However, the missing TQM elements in ISO 9001/9004 must be addressed first. The following section will address the content of the EFQM model.

3.5.3 EFQM model

The EFQM model is a set of criteria, systematically articulated, representing the different organisational areas. The EFQM sets of principles recognise the importance of customer focus and the key role of leadership in providing both drive and focus. In addition, the Excellence model, with its wide definition of partnership, its strong emphasis on processes and on continual improvement, its focus on innovation, learning and importance of people and mutually beneficial supplier relationships, the inclusion of public responsibility and its inclusive approach to results (balancing the needs of all stakeholder groups) makes for a holistic view of quality/excellence. It has nine criteria, that is, a subset of 'enablers' (leadership, people, policy & strategy, partnership and resources and processes) and a subset of 'results' (people results, customer results, impact on society results and business results) (Figure 3.6).

Figure 3.6: The EFQM Excellence Model (2003).



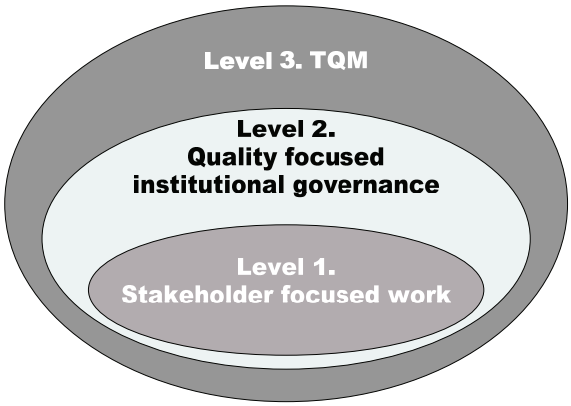
It intends to provide a management and assessment tool for each higher education institution, supporting its self-analysis (including the identification of strong points and areas for improvement), and simultaneously providing a source for quality improvement opportunities. Therefore, it can be assumed that the excellence of a higher education institution will depend primarily upon the processes that take place within its scope (namely teaching/learning, research, public service and secondary service) and the results that, through the processes, it is able to achieve. Using these opportunities of the model, excellent organisations can improve their quality management system with the benefit of a model that allows also benchmarking with other users of the model.

3.5.4 The Protocol

Now I come to the last model, namely the Protocol developed for Hungarian higher education institutions. Hungarian higher education institutions were expected to implement quality management systems by the end of 2001. The Protocol, offered by the Ministry of Education, was developed particularly for them to implement a quality management system. However, the Protocol was not compulsory. Organisations could also implement other quality management mechanisms. Figure 3.7 shows the basic structure of the Protocol.

Level 1 suggests that higher education institutions should regularly collect the demands and satisfaction of their stakeholders, analyse data and information received, and build them into their improvement plans. The Protocol highlights three stakeholders on whom organisations should focus, namely students, employers and staff members. Other groups can also be addressed according to the specific feature of a particular organisation.

Figure 3.7: The basic structure of the Protocol.



Level 2 points out that quality-focused management views should be built into the traditional governance tools. It also offers a number of suggestions: 1) organisational improvement plans should be partner-focused; 2) basic management and governance processes (planning, controlling, assessment) should be stakeholder-focused; 3) leadership should continuously measure and estimate the organisational and faculty work; 4) a higher education institution should use some general and specific quality indicators that inform the leaders on the quality of annual organisational work; and 5) comparisons should be made between similar disciplines based on specified indicators on the one hand (such as research tenders gained, ranking of research outputs, possibility of students being employed, and indicators of the utilisation of different resources) and between higher education institutions based on general indicators on the other hand (such as number of places in student hostels, in computer rooms and the library). In addition, organisational strategy should play as a starting point to the elaboration of organisational quality management. The leaders should fit their objectives with to perspectives of the staff advance system, to the organisational implementation of the credit system, and to strategic decisions concerning recruitment. This level also emphasises the commitment of leaders.

Finally, Level 3 highlights that the most important processes should be controlled in each area of the organisational operation. The organisational work should be continuously and deliberately improved through defining the most important working processes and their networks; controlling the processes in a transparent, controllable and partner-focused way; documenting the processes; and being capable of maintaining and continuously improving the organisational quality management system. TQM can be realised in the following areas: leadership; relations with stakeholders; assurance and improvement of human resources; administration; economic management; infrastructure; teaching and learning; fostering talent; doctoral schools; research; and student life. A number

of these areas are already controlled by organisational documents. The essence of organisational quality management though, is that these regulations should comprise a consistent system and support the stakeholder-focused work.

3.6 Comparison of the quality management models with the comprehensive framework

The comparison of the models presented in the previous two sections will be limited to the ISO models, EFQM and the Protocol. Only well-defined models can be compared with the elements of the 'comprehensive' framework and distinctions are drawn. The TQM philosophy—because of its general character—is not suited for such a comparison in detail. When comparing briefly the principles common to TQM approaches and the elements of the comprehensive framework many similarities can be found. Both emphasise the identification and improvement of critical processes, the importance of satisfaction and the needs of stakeholders, data gathering and analysis, improvement of the work environment, increasing contact and communication among staff in different but related functions, and increasing knowledge of what the organisations are about. But TQM shows differences in some areas, such as emphasising prevention of mistakes and errors to minimise costs rather than being dependent on inspection activity and corrective actions; reviewing the programme group, overall academic management, and collaborative provision by using measurement instruments and statistical methods that will generate performance indices.

One last point before I begin. By comparing these various mechanisms with the elements of the comprehensive framework we can come to a better appreciation of the strengths and weaknesses of these quality management models in academic quality management, and begin to see more clearly the path toward improvement.

3.6.1 Input

As stated earlier, the Protocol requires that higher education institutions should focus on the demands of students, employers, MAB and academic and non-academic staff. The ISO 9001 standard contains only one actor's expectation, namely customers (who are mainly students in the case of higher education). However, the 9004 has a number of requirements regarding demands of additional actors, i.e. other stakeholders and the government (the law). The EFQM model has the widest scope regarding demands. It requires that higher education institutions should focus on the expectations of students, employers, staff, government and society.

Furthermore, the Protocol has the least impact among the criteria of resources. It only has requirements regarding infrastructure, selection of academics and students. The ISO 9001 standard requires that organisations should provide the

resources needed, including how buildings, equipment, materials, information and knowledge are managed. It also requires the provision and maintenance of facilities and managing the physical factors of the work environment needed to achieve conformity of outcomes. In addition, in the ISO 9004 standard the management of finance, partnerships and mutually beneficial supplier relations are covered. Beyond these the EFQM model addresses the use of knowledge and experience, conservation of materials and other resources, how the academic information system might be used to generate creative and innovative thinking, management of technology, and how resource management is evaluated and improved. Little is mentioned in these models about time as a very important source in terms of academic organisation. It is also an important resource because higher education institutions do not have enough financial resources to enrol new staff for quality management.

3.6.2 Output

By providing information to stakeholders (information on study results, research output, service activities), it is assumed that they will be able to make more informed, rational choices. The Protocol does not contain requirements regarding the provision of information but it is only a part of the Hungarian Higher Education Act's regulations. MAB takes care of information requested. The ISO standards and the EFQM model cover information available to customers. Furthermore, the Excellence model distinguishes criteria concerning the expertise of the organisations, which are known outside the organisations.

The major focus of quality management in higher education is on the relationship between academic organisations and their stakeholders (Dill, 1995). The Protocol highlights the importance of collecting information on satisfaction of students, employers, and academic and non-academic staff. It also states that higher education institutions can identify further partners in terms of their specific situation. ISO 9001:2000 does require an organisation to gather and analyse information on student satisfaction and/or dissatisfaction. The scope of 9004 is wider – it focuses on the satisfaction of stakeholders. Furthermore, the Excellence model's scope of customer measures is wider and more strategic than that under ISO standards, with the inclusion of areas such as measuring customer perception, leaving the organisation, loyalty and market share. In addition, the Excellence model focuses on the satisfaction of staff, employers, government, professional fields, the organisation (business results) and the society.

3.6.3 Throughput

This section will describe the specific educational processes concerning quality management and is subdivided as described in section 3.4.

Determining desired learning outcomes. The Protocol contains requirements regarding learning outcomes including measuring the needs of students, staff and employers concerning learning outcomes and emphasises teamwork throughout the planning. The ISO 9001 requires the organisations to design learning outcomes only according to students' input. Besides, ISO 9004 and the Excellence model require inputs from stakeholders including staff, employers, government, society and alumni.

Design of curriculum. The Protocol contains requirements regarding the design of curricula. ISO 9001 requires the organisations to design curricula according to students' input, to develop and continuously update the curriculum and to follow benchmarking activities. Besides, ISO 9004 and the EFQM model require market research activities before designing, inputs from stakeholders (staff, employers, state-of-the-art in the field, government, society) as well, not only from students. But the specific case of higher education should be taken into account in selecting actual marketing tools (e.g. literature review, etc.). According to the Excellence model, it should be checked whether the modules are designed and organised in accordance with the curriculum regulations.

Design of teaching and learning processes. The Protocol does not contain requirements regarding design of teaching and learning processes. Both the ISO standards and the Excellence model require the organisation to design and improve methods of education, teaching materials and students' learning environment. Providing an adequate learning environment means they require proper timetables and sufficient facilities such as rooms, computers and a multimedia centre. They emphasise the role of design inputs from society, governments, industry, professional fields, staff and students. Furthermore, the Excellence model emphasises that the student learning process may be monitored strictly or loosely, and may take place within or outside higher education institutions.

Student examination. The Protocol requires the organisation to develop a student examination system including a common examination framework for the individual subjects. It emphasises the importance of using general and specific quality indicators continuously. Furthermore, the ISO standards require the review of examination methods and improvement of the connection between students and examination methods. The Excellence model contains requirements regarding only study programmes including final theses and final research projects. The quality of examinations should be monitored by documenting the quality criteria and the principles underlying test content and test procedures in an explicit test policy, or by establishing a test committee, for example.

Implementation quality. The Protocol expects the organisation to regulate staff development courses, the academic progress system, and to organise scientific workshops and conferences. In addition, both the standards and the EFQM model require the organisations to evaluate the quality of the implementation of education delivery including: monitoring of teaching performance and corrective actions, supervision of junior teachers, teacher-student interaction, and effective

communication between actors. According to the Excellence model, teachers should motivate students and clarify the educational objectives. Teachers should provide the students with opportunities to orient themselves and to practise, and also give feedback. In practice, this may consist of lecturing and leading seminars, for example, but also helping individual students to master a subject. The EFQM model also emphasises the way in which remuneration of staff takes place, and the way in which leaders steer this element.

3.7 Conclusion

The comparison of the elements of the comprehensive framework and the formal quality models are the final result of this chapter. Table 3.1 shows the relationships between the elements of the comprehensive framework and the different quality models. Together the clusters of the comprehensive framework constitute a widespread listing of elements, covering (almost) all elements of the existing recognised quality management frameworks in higher education. The elements of the comprehensive framework resemble the existing EFQM model with the exception of quality management systems, design of student examinations, quality information systems and external influencers, which are lacking or hardly mentioned in the EFQM model. The results of the comprehensive framework are also compatible with the ISO 9004:2000 standard. However, the comprehensive framework calls for more emphasis on policy and strategy, educational processes, quality information systems and external influencers than ISO does. Therefore, the ISO 9004 standard can be regarded as similar to the EFQM model when it comes to its level of comprehensiveness. The Protocol seems to be somewhat less comprehensive than the other two, with no clear interest in most education processes, quality management systems, policy and strategy, resource management, quality information systems and support processes. Finally, the comparison shows that the elements of education processes are treated less than satisfactory in all the models, while there are three elements that are described fully in all the models: governing processes, commitment of leaders and organisational outcomes.

In addition, despite the difference between the comprehensive framework and general quality management models, there is a substantial commonality in the implementation phase. First there is the focus on students, albeit at differing levels of subtlety. In the general quality management mechanisms the student is one of the most important customers and thus is the focus of all processes. In the comprehensive framework students also play a key role as participant, and then the focus is on the attribute of their learning. Second, at the operational level collaboration amongst staff members is a key requirement in all models, although the fields of interaction may vary to a large extent. Third, each also requires visible commitment and support from the leaders in the implementation. Thus,

by and large, the pattern of implementation required for both general models and the comprehensive framework is similar. Hence, the development of this comprehensive model, covering education and the support functions directly connected with the teaching and learning processes, could be reasonably mutually compatible. In such a framework the approaches to 'directly connected' support functions could be meshed seamlessly with the model addressing teaching and learning.

Table 3.1: Elements of comprehensive framework developed and formal quality models.

Quality management framework	EFQM	ISO 9001	ISO 9004	Protocol
		2000		
Quality management system	0	**	**	0
Policy and strategy	**	0	0	0
Learning outcomes	*	0	*	*
Design of curriculum	*	0	*	0
Design of education processes	*	*	*	0
Design of student examination	0	*	*	*
Implementation quality	*	*	*	0
Resource management	**	*	*	0
Quality information system	**	*	0	0
Commitment of leaders	**	**	**	**
Synergistic collaboration	**	*	**	**
Satisfaction of stakeholders	**	*	**	**
Demands (need research)	**	0	**	**
External influences	0	0	*	*
Governing processes	**	**	**	**
Support processes	**	*	**	0
Organisational outcomes	**	**	**	**

0: weak or not mentioned; *: treated to some extent; **: treated extensively

The comprehensive framework contrasts with those reported so far in the literature of attempting to implement a TQM model, EFQM model, ISO standards etc. selectively across the operations of higher education institutions, which fundamentally defeats the purpose of 'totality' (Vazzana et al., 2000). "Lack of rationale for such poorly developed approaches has been at the root of many of the controversies" referred to earlier (Srikanthan & Dalrymple, 2002, p. 216). The intent of the analysis, therefore, was to suggest a balanced framework for quality management in higher education including especially education but also support processes directly connected with education.

While the comprehensive framework for education quality management outlined above will require further development and evaluation, it provides an

initial and necessary framework for synthesising existing knowledge, and suggesting valuable directions for related research. This section has listed the items as if on a menu; it remains, however, for higher education institutions to produce the real, delicious Hungarian paprika chicken dishes of my home town's university restaurant.

4 Localisation and operationalisation of the theoretical framework

4.1 Introduction

This chapter focuses on what might be called the 'localisation' and operationalisation of the theoretical framework. It starts, in section 4.2, with an overview of the Hungarian higher education arena in order to provide the reader with a more thorough understanding of the vital characteristics that have concerned the quality management activities in Hungarian higher education since the 1990s. In section 4.3, the research model and hypotheses and research propositions derived from the theoretical concepts are discussed. In section 4.4, the operationalisation of variables will be addressed. Section 4.5 discusses the methods used for empirical analysis. The final section summarises the hypotheses and research propositions and the methods to test and evaluate them.

4.2 Hungarian higher education context

In 2004 Hungary had 18 state universities, 13 colleges, five church-maintained universities, 21 church-maintained colleges, and eleven private colleges[13] (Rozsnyai, 2004a). In addition there are eight state-recognised foreign higher education institutions[14], with a license to operate granted by the Minister of Education. The latter ones do not receive state funding. Church institutions receive similar normative funding[15] as state higher education institutions and are

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[13] The Hungarian higher education system has addressed problems of fragmentation with highly specialised institutions under different ministries by working to build much larger and more comprehensive higher education institutions. With World Bank support the government sought to eliminate duplication and achieve economies of scale. The government stipulated that mergers would be made on a geographical rather than a mission basis, e.g. dissimilar institutions in particular geographic areas would be merged, rather than similar institutions in different locations. In the three year period 1998-2001, some 119 state, 32 church, 6 foundational, and 6 foreign—with domestic licence—higher education institutions were merged into 18 state universities, 12 state colleges, 5 church-maintained universities, 21 church-maintained colleges, and 6 private colleges, resulting in a reduction in the total number of higher education institutions from 163 to 62.

[14] CVII/2000, a felsőoktatásról szóló 1993. évi LXXX. törvény módosításáról (Act on Higher Education CVII/2000).

[15] The Higher Education Act established norm-based budgeting, and defined four budget headings: student support (proportional to the number of students), training and maintenance (proportional to the number of students and financing norm determined for the course the student is enrolled in), programme development, and research (of scientific purpose). These are provided by the government except for maintenance and training support, which comes from the owner. In addition, a higher education institution may have its own income. Besides, a higher education

accredited by the Hungarian Accreditation Committee, whose mandate, however, pertains only to secular programmes. Private higher education institutions that wish to be recognised by the state must also be accredited and may receive state financing if they sign an agreement with the government, but here tuition covers a major part of their costs.

In addition, Hungary has a binary higher education system. The Higher Education Act differentiates between universities and colleges (Sections 3 & 4). Universities perform research and teaching, and education at universities is supposed to be research-based. Colleges, in turn, aim to provide more applied knowledge and skills[16]. Both types of higher education institutions may be state, private and/or church establishments.

It follows from the binary system that Hungarian higher education offers college and university degrees. With regard to the levels of education the Higher Education Act (Section 84) specifically lists them as being accredited vocational higher education, college undergraduate education and college postgraduate education, university undergraduate education, university postgraduate education, and doctoral education. Higher education institutions are free to set up vocational higher education programmes, undergraduate programmes and their specialisations, specialised post-graduate and doctoral programmes in the disciplines in which they have been accredited.

The Higher Education Act also describes the positions and levels of organisational governance. It outlines the structure of higher education institutions, which may be divided into faculties, departments, institutes, etc. Higher education institutions can be established by parliament, local governments, churches, and foundations, among others. All units within the higher education institutions are established by the higher education institutions. Universities are headed by rectors, multi-faculty colleges by college rectors, and single-faculty colleges by directors elected by the senate.

The government acts as the key stakeholder for the Hungarian higher education system and plays an important intervening role. Representing the society, the government emphasises its responsibility to protect the public interest and stresses the economic benefits resulting from higher education. Universities and colleges are expected to contribute to economic development by providing scientific and technological innovation as well as highly skilled professionals. In

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institution can be provided financial resources through competitive funding (e.g. project support, etc.).

16 According to the law, the difference between the two categories of higher education institutions is in the length of studies required for a first degree (minimum four years for universities, three for colleges); the minimum areas of knowledge or science and different programmes taught ('several' areas each with 'several' programmes, and one area with 'several' programmes respectively); and the level of the degrees of their academic staff (doctorates for 'docents' at universities, only for professors at colleges). Additionally, universities must have the material and intellectual resources for conducting scientific research, for training for and granting doctorates and for conducting habilitation procedures. Colleges must provide the conditions for conducting research and development (Rozsnyai, 2004b).

order to attain these expectations, government supplies higher education institutions with money raised from taxes on the one hand, and wants to assure itself that the money has been well spent on the other hand. Accountability of the invested finances can be ensured mainly through quality management and quality assessment, therefore, quality management indirectly also serves the investors, taxpayers, and private groups.

Although I often use the term 'government', which suggests that government can be perceived as a single actor, a numbers of actors can be discerned which are all connected to the government. With regard to higher education the following actors can be distinguished: the Ministry of Education, the Hungarian Accreditation Committee[17] (MAB), and the Higher Education and Scientific Council (FTT)[18]. In this section, however, I will only focus on those actors who are involved in higher education policy matters in terms of quality management. The Higher Education Act regulates quality management in Hungary. It authorises the MAB to carry out external evaluation for accreditation, the higher education institutions to take responsibility for their internal quality assurance, and the Minister of Education to oversee the quality of higher education institutions with respect to their compliance to legislation (Rozsnyai, 2004b). This shows that the two most important actors are the Minister of Education and the MAB in that respect[19].

First, the Minister of Education participates in the preparation and formation of state decisions concerning higher education development and policy. It directs the higher education scientific policy and its realisation, coordinates the formation of the concept of national scientific policy and prepares the higher education quality development system. The latter includes the principles of higher education quality policy, quality certification connected with establishing and operating higher education institutions and their quality development programmes. A higher education quality award[20] will also be established for acknowledging 'excellent' performance of higher education institutions. Furthermore, considering the opinion of the FTT on the development of educational specialisations, on the basis of the position taken by MAB, the Minister permits the launching of a major or withdraws the permission and determines the group of programmes consisting of the university and college graduate education programmes. The Minister should also continuously evaluate the experience of the education and the structure of study programmes.

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17 The Higher Education Act of 2005 changed its name to the Hungarian Higher Education Accreditation Committee.

18 The FTT acts as an advisory body to the Minister of Education in matters of financial support, feasibility and strategy for higher education institutions and programmes, including state-financed student numbers (Sections 76-79).

19 In this study, however, I will use more the term government, which also includes the Ministry of Education.

20 According to the Higher Education Act of 2005.

Moreover, he determines the qualification requirements of specialised postgraduate education on the basis of the opinion of the MAB. Here it should be emphasised that he must give reasons for deviating from the standpoint of MAB in his proposal or decision. Finally, the Minister forms the mechanism of supervision and organises the publication of the findings of supervision.

Second, quality management of higher education on the national level was introduced in Hungary in 1992-94 (Szántó, 2004; Rozsnyai, 2004b). The MAB has been operating since the end of 1992[21] and was established originally for supervising the quality of the newly formed doctoral programmes. In the autumn of 1993, however, the Higher Education Act defined its tasks more widely: accreditation of all higher education institutions and degree programmes were included. The act requires all Hungarian higher education institutions and their programmes to be accredited every eight years. In addition to institutional accreditation, the MAB also conducts separate programme accreditation under a variety of schemes required by law.

Accreditation is carried out *ex post*, via institutional accreditation, which involves all the degree programmes of the institution, and *ex ante*, via preliminary accreditation for institutions applying for [a] licence to operate; via the approval of degree programmes to be launched for the first time in the country (in the form of qualification requirements); and via the approval of new degree programmes at an institution (Rozsnyai, 2004a, p. 211).

Concerning institutional accreditation, the MAB worked out its specific standards and procedures. The premise was that the products of higher education institutions are the degrees they issue and therefore all elements contributing to that degree should be evaluated. With this approach the three units asked to prepare separate self-evaluation reports encompassing (1) the higher education institution as a whole, (2) the faculty and (3) the study programme leading to the degree. The department, and any other unit contributing to a study programme (e.g. institutes, laboratories, clinics, etc.), were assessed and included in the team visits from the perspective of how they contributed to the degree as the ultimate output. The MAB only has decision-making powers towards doctoral schools; otherwise the Minister of Education makes the final decision. The first cycle of institutional accreditation was completed in 2001 (Michelberger, 2002). In parallel to the second round of institutional accreditation launched in 2003, the MAB began to conduct programme accreditation for selected disciplines in the whole country within a short time-span.

In the second round, MAB devotes more attention to the evaluation of the educational process and to the quality of educational outcome than previously, while it also analyses the input factors (personnel, infrastructure). For this reason, it assesses, among other things, the quality of students admitted to the given higher education institution (e.g. opinion of academics about students who completed their first year at university or college); the capacity of a higher

[21] It was established first as "Provisional National Accreditation Committee".

education institution for innovation and for development of curricula; the academics' performance as researchers and teachers; students' satisfaction with the higher education institution; the system of requirements (examination questions and thesis papers), the development of the educational process with the help of examination experiences; the expertise, skills, and competencies of graduated students; and the preparation of and adherence to quality management and the development plan. For the sake of evaluating the output factors, MAB proposes to the higher education institutions to ask for feedback from graduates and employers as stakeholders. Later on, these can become organic parts of the quality management systems to be elaborated at higher education institutions.

Furthermore, a separate set of criteria exists for the preliminary accreditation for new higher education institutions. Applications should supply data on the purpose and role of the organisation, the professional background of its contracted academic and non-academic staff, the higher education institution's available infrastructure and its predicted development, and detailed curricula for the degree programmes to be offered. Preliminary accreditation, as opposed to institutional accreditation of already existing higher education institutions, usually does not involve site visits.

In addition to degree programmes evaluated in the eight-yearly institutional accreditation process, the MAB accredits national qualification requirements and all new programmes launched at a university or a college. The national qualification requirements, issued in the form of government decrees, set the framework for all degree programmes taught in Hungary and are initiated by higher education institutions. The requirements describe the requisite content and outcomes, including the main examinations, the knowledge and skills to be attained, and the credit points of study programmes offered in Hungary. The application for launching a degree programme, in which there already are accredited national qualification requirements, focuses on the local context in which the proposed programme will run, such as the teaching staff and infrastructure, as well as the curriculum. All undergraduate programmes must be accredited.

Finally, the MAB conducts programme accreditation within and separately from institutional accreditation. The types of programmes are listed in the Higher Education Act (Section 81), as are doctoral schools, national qualification requirements, new programmes to be launched at higher education institutions, specific post-graduate programmes, and vocational higher education programmes. For study programmes one set of general questions involved everything from its broad aims, including curriculum development policies, to admission requirements, and the make-up of the curriculum. Another set studied in depth the courses and subjects including the academic staff qualifications and subject content, teaching materials and related research.

Having described the context in Hungarian higher education, the research model and the hypotheses and research propositions are presented in the following section.

4.3 Research model, hypotheses and research propositions

4.3.1 The research model

The central theme of the study is to interpret 1) whether higher education institutions implement quality management mechanisms and if so, to what extent and in what way (e.g. different quality management mechanisms); 2) whether there are differences between Hungarian higher education institutions; and 3) how we can explain these differences, in other words which organisational characteristics influenced the quality management implementation.

The theoretical framework begins with the resource dependency theory, which assumes that—in order to survive—higher education institutions need a sufficient supply of resources. These resources often cannot be produced by the universities and colleges themselves, therefore, to guarantee the flow of resources, they must interact with other organisations that control these resources, and thus they depend on them. It was argued that governmental organisations are the most crucial resource providers for Hungarian higher education. This perspective concludes that a higher education institution will be more likely to follow the governmental requirements when it depends more on governmental resources.

The theoretical framework also emphasised that for understanding the response of universities or colleges to governmental demands it is not enough to examine the 'objective' resource dependencies. It is also necessary to investigate the way higher education institutions perceive their environment and how they act to avoid dependencies in order to maintain their legitimacy. It is here that neo-institutional approaches provide an important contribution. The neo-institutional approach highlights that a higher education institution may be able to satisfy governmental demands by adapting symbolically but not genuinely implementing quality management mechanisms. The announced implementation might therefore engender a favourable governmental reaction, regardless of whether the mechanisms are actually implemented.

Second, it was argued that both resource dependence theory and neo-institutional theory pay less attention to the role of organisational decision-making processes in organisational responses to institutional change. In this study, decision-making processes are addressed by Allison's two models of bureaucratic (OPM) and political (BPM) decision making. According to the OPM the processes of higher education institutions function according to certain regular patterns of behaviour and standard operational procedures from which actions emerge. These constitute routines for dealing with standard situations,

but do not constitute a far-sighted, flexible adaptation to particular unique issues, which thus are often handled slowly. In addition, according to the BPM, the staff members do not constitute a monolithic group. Rather, all persons have particular preferences and positions on a particular issue, which may have a significant effect on organisational action. Thus the outcomes are seen as resulting from various overlapping bargaining games among organisational staff members, which create considerable leeway for the organisational response in quality management implementation. This model also emphasises the role of committed leaders, who can support and legitimise the implementation because they have the authority to allocate resources and thus can enhance the scope and pace of quality management implementation. Finally, the use of external consultants is supposed to bring in further expertise as well as legitimacy to the intra-organisational processes and in this way may increase the pace, scope and adequacy of quality management implementation.

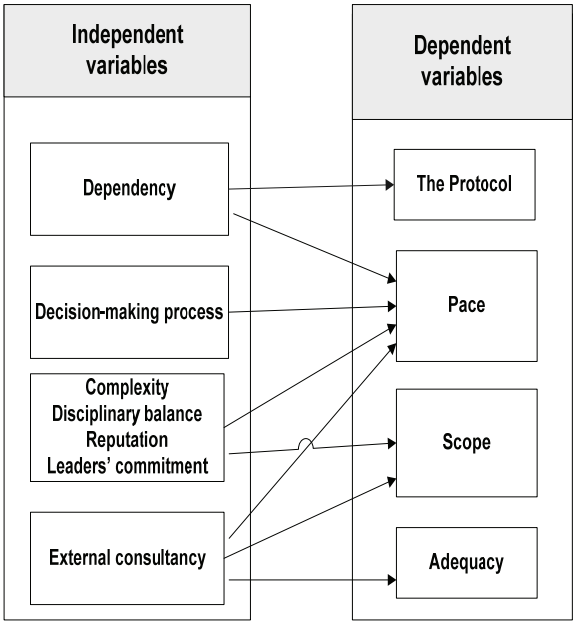
In addition, it was argued that further insight can be gained by incorporating some specific characteristics of higher education institutions into the framework of the study. First, complexity referred to the fact that higher education institutions have separate functional groups and units, each of which is focused on specialised tasks. The framework pointed out that the more complex a higher education institution is the more difficult it is (with slower pace or narrower scope) to implement quality management mechanisms. Furthermore, disciplinary characteristics as regards distinctive values, perspectives and definitions of quality are expected to have an impact on quality management. In so-called hard and convergent sciences quality management implementation may work faster and may be broader in scope than in soft and divergent fields. Finally, reputation is the overall estimation in which a particular university or college is held by its various stakeholders. On the one hand, arguments were put forward that a higher education institution with a clear, well-developed reputation, may implement quality management with wider scope and faster pace. On the other hand, based on resource dependency theory, arguments could be developed that higher education institutions with strong reputations may be less dependent on government and may thus not behave as government expects. The study sought to evaluate empirically which arguments best describe the situation.

In sum, the theoretical framework explained how the organisational characteristics (these are in the independent box) influence the implementation of quality management (these are in the dependent box).

As regards the independent variables, dependency, the decision-making process, complexity, disciplinary characteristics, reputation, leaders' commitment and external consultancy are expected to influence quality management implementation. 'Dependence' was derived from resource dependency theory and refers to the relationship between higher education institutions and the Hungarian government (including the Ministry of Education) and the Hungarian Accreditation Committee (MAB). The character of the 'decision-making process'

is derived from Allison's models, which address the phenomenon from two perspectives: the bureaucratic (OPM) and political (BPM) decision-making model. 'Complexity' and 'reputation' were derived from the literature on organisational characteristics in general and higher education's characteristics more specifically. 'Complexity' refers to the fact that organisations have separate functional groups and units, each of which is focused on specialised tasks. 'Reputation' reflects the overall estimation in which a particular organisation is held by its various stakeholders. Furthermore, disciplinary characteristics originated from the literature on culture in higher education and explore the distinctive academic values, perspectives and definitions of 'quality' in various disciplinary areas. Finally, the variables 'commitment of leaders' and 'external consultancy' mainly originated from the literature of organisational decision making and quality management. The 'commitment of leaders' was defined as an agreement or pledge to do something in the future. 'External consultancy' addresses the involvement of external experts in the creation and implementation of new management mechanisms.

Figure 4.1: Research model.



The second category of variables can be decomposed into four elements: the scope and pace of implementation, the (using of the) Protocol, and the adequacy of the quality mechanism implemented. The pace and scope of implementation were derived from the literature of implementation. The 'pace of implementation' indicates the level or extent of new mechanisms reached within a particular time

period and the 'scope of implementation' refers to the number of core organisational activities involved in the implementation process. The last two variables concern specific elements of quality management implementation. The 'Protocol' refers to the question whether a higher education institution used the Protocol developed by the Hungarian government in order to establish quality management systems in higher education institutions. The 'adequacy' of a quality management mechanism implemented was primarily derived from quality management literature and refers to the extent to which a quality management system covers the aspects of the comprehensive model. Furthermore, the 'adequacy' of a quality management mechanism is connected to neo-institutional theory, namely to the question whether this system works symbolically or genuinely.

Figure 4.1 shows the theoretical argumentation that independent variables influence the particular features of quality management implementation[22]. This will be presented in detail in the following section that develops the hypotheses and research propositions. Afterwards, I shall return to the 'missing arrows' in the figure when treating the limitations of the empirical investigation.

4.3.2 Hypotheses and research propositions

In this section, hypotheses and research propositions are presented that specify the expected relations between the independent and dependent variables. The descriptions lead to the hypotheses or research propositions for each independent variable that will be researched empirically. One last point before I begin. The theoretical framework was only summarised above in general terms to develop the research model. To derive hypotheses and research propositions, however, a more detailed analysis of the relevant parts of the theoretical framework is needed.

As a starting point, the resource dependence approach emphasised that higher education institutions are basically directed at securing their survival. For survival, institutions need resources and because none of them are able to generate all of the distinctive resources that they need, they must interact with other organisations that control these resources, and thus depend on such organisations. In Hungarian higher education, these resources (money and legitimacy) mainly stem from the government and MAB. There is no variation, however, between the dependency of universities and colleges on MAB; they all need accreditation in equal measure and against equal standards. The importance of government for the higher education institution depends on whether financial resources can (also) be obtained from other organisations. In the absence of other

[22] Four independent variables (complexity, disciplinary characteristics, reputation and leaders' commitment) were put into a single box to simplify the figure, because all of them are connected with the same dependent variables (pace and scope).

organisations that distribute money, the dependence of a higher education institution on government is very high. Accountability of the invested resources can be ensured through quality management, which is why quality mechanisms, among other things, are expected to be introduced in higher education institutions. The government (specifically the Ministry of Education) developed the Protocol to help higher education institutions build their quality management system. However, the Protocol was not compulsory to follow. It could also be supplemented and transformed. Universities and colleges could even decide to implement other quality management mechanisms. Based on these notions the following hypothesis can be formulated:

Hypothesis 1a. The less higher education institutions depend on government the later quality management will be implemented.

Hypothesis 1b. The less higher education institutions depend on government the less they will follow the Protocol.

The second hypothesis takes into account the complexity of higher education institutions. 'Complexity' has major effects on structural conditions, relationships between the higher education institutions and their environment, and the processes within them. In the theoretical framework presented above, the complexity of a higher education institution was divided into three most commonly identified categories: horizontal and vertical differentiation and geographical dispersion. These factors seem to restrict the pace and scope of implementation: higher education institutions may have more sub-units or faculties, a different extent of the level of education (from vocational training to PhD), and faculties can be located in numerous places. These ideas are expressed in the second hypothesis.

Hypothesis 2a. The higher the complexity of higher education institutions, the slower the pace of quality management implementation.

Hypothesis 2b. The higher the complexity of higher education institutions, the narrower the scope of quality management implementation.

Next, hypothesis 3 refers to the different disciplines that have distinctive goals, values, cultures, and concepts of quality. These disciplinary characteristics are expected to have an impact on quality management implementation in the following way: quality management implementation seems to be faster and to have wider scope in the hard and convergent fields than in the soft or divergent fields. These factors give rise to the following hypothesis:

Hypothesis 3a. The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the faster the pace of quality management implementation.

Hypothesis 3b. The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the wider the scope of quality management implementation.

As highlighted, higher education institutions are structurally differentiated and faculties or departments are quite independent from each other in many respects. The opportunity for slippage between decision and real implementation could be large. However, slippages do not occur automatically because they are inversely correlated with the leaders' commitments to a particular issue as they depend on the leaders' degree of determination not to permit them to do so. The commitment in this case means to what extent and how implementation processes occur. The pace of implementation is faster and the scope of implementation is wider on those issues that leaders deem more important, and the opposite on issues that are considered less important. The following research proposition[23] is formulated in similar terms and states my expectations regarding the commitment of leaders:

Research proposition 4a. The higher the commitment of leaders, the faster the pace of quality management implementation.

Research proposition 4b. The higher the commitment of leaders, the wider the scope of quality management implementation.

Moreover, quality management implementation does not occur automatically; it is not self-executing. It is controlled by various individuals who have different skills and experience and who each face part of the many constraints, uncertainties, contingencies and many possible alternatives faced by universities and colleges. The physical and psychological limits of their capacities as problem solvers constrain the pace, scope and adequacy of the implementation process. Therefore, higher education institutions may refer the task to another expert body for resolution. This body could be external or internal but there are economic limitations on the range of choices which are available to higher education institutions. Using an internal advisory body means a cheaper solution for universities and colleges, although they have to count on limited time and managerial capacity of these staff members and on the labyrinth of organisational

[23] Some of my proposals cannot be tested quantitatively but only studied qualitatively by case studies. Therefore they are referred to as 'research propositions' instead of 'hypotheses' in this study.

bureaucracy. External consultants are expected to have more experience with existing quality management mechanisms and implementing new quality methods; they can expand choices for higher education actors; they know the basic principles of quality management mechanisms and systems, thus they can help find the relationship between core and support processes to better focus the mainstream of the implementation on crucial core areas; and they can help to avoid possible pitfalls and in this way enhance the pace, scope and adequacy of quality management implementation. I am now able to formulate the fifth proposal, referring to the relationship between external consultancy and the features of quality management mechanisms implemented:

Hypothesis 5a. The more the higher education institutions are supported by external consultants, the faster they can implement quality management.

Hypothesis 5b. The more the higher education institutions are supported by external consultants, the wider the scope of quality management implementation.

Research proposition 5c. The more the higher education institutions are supported by external consultants, the more adequately they implement quality management.

Higher education institutions, as was shown above, are not necessarily powerless entities totally malleable according to external demands (Gornitzka, 1999). Rather than being passive recipients of environmental forces, they might respond individually in a number of ways to environmental demands, and will make strategic decisions about adapting to the environment. But this decision happens according to OPM—including standard operating procedures—on the one hand, or as political resultants on the other hand. Standard operation procedures are routines for dealing with standard situations and allow staff members to deal with numerous average instances without much thought. But they do not constitute a flexible adaptation to particular, unique issues. These specific instances and situations, particularly critical ones that typically do not have 'standard' characteristics, like quality management, are often handled slowly.

On the other hand, according to Allison's bureaucratic politics model, I can consider behaviours in different situations as something that emerges from subtle, overlapping games among staff members. The moves can be explained in terms of bargaining among individuals with various objectives in different sub-games. The particular preferences and stands of individual staff members can have a significant effect on organisational action. Thus the actions rarely follow from an agreed doctrine in which all members concur. Instead agreement reflects the momentary operational convergence of a mix of motives. Staff members can frequently disagree about particular interests and goals. Thus other interests come into play, including e.g. personal interests, faculty or departmental

interests, a research centre's interests and the interests of the student council. All individuals may pull and haul with the power at their discretion for outcomes that advance their conception of interests. This struggle seems to decrease the pace of quality management implementation. In the following research proposition these ideas are expressed.

> **Research proposition 6a.** The more bureaucratic the decision-making processes, the slower the pace of quality management implementation.

> **Research proposition 6b.** The more political the decision-making processes, the slower the pace of quality management implementation.

The last hypothesis refers to the relationship between organisational reputation and the pace and scope of quality management implementation. Since many features of a higher education institution and its services are hidden from view, reputations are information signals that increase an observer's confidence in the organisation's products and services. As the theoretical framework showed, researchers have found positive correlations between reputation and organisational performance (such as implementing quality management mechanisms). Possibly, the higher organisational performance derives from the higher education institution actually having a higher decision-making capacity (in this study I use this term as the maximum rate at which the organisation generates decisions. It means that the higher the decision-making capacity organisations have, the higher their performance in quality management implementation). In other words, the difference between organisational reputations points to a real difference between them. This leads to the expectation that higher education institutions with higher reputations will implement quality management with wider scope and faster pace.

In a different perspective, the resource dependency approach assumes that higher education institutions with a strong reputation depend less on government and need not behave as the government expects. In that case, resistance to policy reforms represents minimal risk to organisational interests because the higher education institution is not held captive by a single provider of resources. This leads to the expectation—contrary to the one derived in the previous paragraph—that higher education institutions with a high reputation will implement quality management with narrower scope and slower pace.

I have no theoretical arguments to favour either of these argumentations. Therefore, based on the arguments above, I offer a two-way hypothesis that 'reputation' could influence the implementation of quality management in different ways:

> **Hypothesis 7a**: Reputation can have a positive or a negative influence on the pace of implementation of a quality management mechanism; it will be more

negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.

Hypothesis 7b: Reputation can have a positive or a negative influence on the scope of implementation of a quality management mechanism; it will be more negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.

4.3.3 Limitations of the empirical investigation

Looking back at the collection of hypotheses and research propositions or looking back at the 'boxes' and 'arrows' in Figure 4.1, the major observation is that a large number of relations have been laid between the independent and dependent variables. For instance, all the independent variables influence the pace of quality management implementation. Yet, there still are some 'missing arrows', i.e. possible relations that nevertheless have not been phrased as hypotheses or research propositions**.** The main reason for the 'missing arrows' is that our theoretical perspectives do not allow us to formulate expectations about this relationship. This applies in particular to the dependent variable 'Protocol'. As stated earlier, the Protocol, offered by the government, was developed particularly for Hungarian higher education institutions to implement quality management systems. The resource dependency theory explained that higher education institutions should follow the Protocol to the extent of their dependency from the government. This is the only connection to the theoretical independent variables that could be made with the 'Protocol'; other aspects of quality management implementation are covered under the more general (that is to say, not specifically Hungarian) variables of pace and scope of implementation. As far as the scope of implementation is concerned, this was seen to depend on the set of organisational variables (complexity, disciplinary characteristics, reputation and leaders' commitment) and 'external consultancy', but not on 'dependency', for the empirical reason that the Hungarian government in its policy only concentrated on quality management for education, not for research; it did not demand a wider scope. Similarly, the scope of quality management implementation was not connected to the decision-making process because bureaucratic and political decision-making were in the first place expected to affect the speed of decision-making rather than its substance. Finally, both elements of adequacy (comprehensiveness of quality management mechanisms and their symbolic or genuine adoption) are closely related to the support of quality experts. Implementing a comprehensive quality framework requires that the 'implementors' know the different quality management mechanisms and their possible usage for organisations; so it was only seen in relation to external expertise, not to any other independent variable. Moreover, genuine

implementation demands that organisations should be provided with appropriate quality procedures, information about the connections of the elements of the organisational quality management system, and last but not least, quality management training for staff members on how to use quality management mechanism. All these facts also only concern the extent of the support, summarised under the variable of external quality consultants. To the extent that the Protocol seems to be somewhat less comprehensive and adequate than some other models, it would have a negative relationship with application of expertise, but this was thought to be covered adequately by 'comprehensiveness'.

Another limitation of the empirical investigation is that our study would not allow investigating some relationships quantitatively. This type of argument has been important in distinguishing 'hypotheses' from 'research propositions' because some statements are amenable to statistical hypothesis testing, while others could be approached in our study only through case studies.

4.4 Operationalising the variables

In this section the variables for the empirical analysis are operationalised. This operationalisation will be presented in separate subsections for each of two sets of variables: the first set is the independent variables and the second set contains the dependent variables.

4.4.1 The independent variables

The operationalisation of variables starts with an overview of the independent variables. For each hypothesis and research proposition one independent variable was identified.

Dependency (Hypothesis 1). This independent variable indicates that a higher education institution depends on other actors whenever it strives for goals whose achievement can be facilitated or retarded by them. In the case of higher education the most important resource is money. In Hungarian higher education, this resource can mainly be from the government, but the financial dependency on government is not the same for all Hungarian higher education institutions. I distinguish three types of organisations, namely state, church-related and private higher education institutions. The importance of governmental resources is small for private and church-related higher education institutions as there are other organisations (foundation, churches) from which these resources can be obtained. Private organisations may also have other sources available in terms of input resources (e.g. tuition fees). Church organisations receive state financing similar to state organisations, as mentioned in the previous section. In this study the variable dependency was operationalised by asking higher education institutions to what extent their income was received from government on the one hand, or

from other sources on the other hand. A higher education institution depends more on the government if it has fewer other (not governmental) resources available.

Complexity (Hypothesis 2). The second independent variable relates to the complexity of higher education institutions. Complexity is a multidimensional phenomenon differing both across organisational units and up and down the hierarchy, resulting in a mosaic of groups structured by functional tasks and employment status. In terms of operationalisation, three characteristics are important as indicators: horizontal and vertical differentiation and geographical dispersion. First, horizontal differentiation within the individual higher education institution is the primary form of division by fields of knowledge. Such division has occurred typically at two levels of higher education institutions. The broadest groupings, known by terms such as 'faculties' established in different disciplinary areas, encompass a number of basic units. Each higher education institution in Hungary has a number of faculties from as low as one—in the case of small college—to more than ten or fifteen, with a clear trend over time for the number to increase, as mentioned in section 4.2. The narrower groupings, which are the basic building blocks or operating units, known generally as 'chairs' or 'departments', encompass a specialty within a profession (e.g. constitutional law, internal medicine) or an entire basic discipline (e.g. physics, history) within a large faculty (of natural sciences, or arts and humanities). In this study horizontal differentiation was operationalised by asking the organisations in how many broad disciplinary fields they have study programmes. The eight disciplinary fields were defined according to the standard list of MAB: 1) natural sciences, 2) technical sciences, 3) medicine, 4) agriculture sciences, 5) social sciences, 6) the arts, 7) art, and 8) theology. Second, research into the vertical dimension used indicators of the depth of the hierarchy. Within higher education institutions, it seems relevant to describe vertical differentiation based on the hierarchy of their study programme system. In this research vertical differentiation is indicated by the number of vertical levels of vocational training, bachelor, master, and PhD training at a particular higher education institution. Finally, geographical dispersion, which refers to the multiple locations of organisational sub-units, was operationalised by identifying the number of cities where faculties are located.

Disciplinary balance (Hypothesis 3). This variable addresses whether a higher education institution occupies one set of disciplines (e.g. hard or convergent) more than another set (e.g. soft or divergent). The cognitive dimension of disciplines representing the epistemological aspects includes a continuum from hard to soft sciences, and the social dimension representing the social features of academic tribes includes the convergent-divergent fields of inquiry. Mostly they coincide (hard-convergent vs. soft-divergent), but there are a few exceptions. Theology is such an exception that appears in my sample: soft-convergent. However, church organisations—based on practical operation—will be characterised as soft *and/or* divergent. But we do not need go into too much detail,

as the main issue for this study is to establish simply a ratio between broad disciplinary areas within a higher education institution.

The disciplinary balance will be measured by the number of study programmes within higher education institutions. As for the moment I assume that only simple measures will be needed in order to avoid spurious precision (i.e. using a sophisticated measure/indicator here, while other—more crucial ones for my hypotheses—can only be measured very crudely), I will measure the ratio of 'hard-convergent' programmes to the total number of programmes. The higher that ratio, the more the balance in the institution is toward a single type of discipline. Conversely, the lower this ratio, the more dispersed the disciplinary cultures in the higher education institution will be.

Commitment of leaders (Research proposition 4). The commitment of leaders is defined as their agreement or pledge to do something in the future. The following indicators are crucial with regard to the commitment of leaders. First, it can be measured whether the leaders clearly expressed their commitment in the quality manual of their higher education institution. Second, I look at the assurance of appropriate resources (money, time, infrastructure and staff) for quality implementation; this may include the appointment of full-time staff committed to implementing quality management. Moreover, the position of the quality leader and the quality committee within the higher education institution signals the commitment of leaders concerning quality management implementation. If leaders signal the importance and are committed to quality management, the quality leader and the quality committee will be positioned directly under the organisational council or rector. The more these activities mentioned above can be observed within an organisation, the more the leaders are committed to quality management implementation.

External consultancy (Hypothesis and research proposition 5). This variable indicates to what extent a higher education institution was supported by external consultants in quality management implementation. The term external consultants (often, paid consultants) refers to external experts whose work is to create and implement new management techniques. In my case, they may play a particularly influential role in assessing the organisational goals and policies, leading training for staff members, choosing a comprehensive quality management mechanism, helping to identify the basic educational processes, and working out the organisational quality management system and quality manual. Two indicators are used to operationalise this phenomenon. The first indicator relates to the number of training hours delivered by external consultants. The second indicator measures the areas of the external support such as helping in doing self-assessment, developing quality policy and a quality manual and implementing a quality management system.

Bureaucratic decision-making process (OPM) (Research proposition 6a). This variable addresses to what extent the decision-making processes concerning quality management implementation can be characterised as bureaucratic.

Bureaucratic features refer to higher education institutions consisting of a conglomerate of loosely coupled units, each with a substantial life of its own, and functioning according to standard patterns of behaviour. To carry out reliably complex actions, the behaviour of large staff numbers is coordinated by standard operating procedures and established programmes. This phenomenon was operationalised in the following way. The first indicator explores whether the quality management implementation occurs according to the previously existing organisational routines and standard operating procedures. The second includes whether the institutions develop new standard operating procedures for the particular quality committees, and when. The third addresses whether they follow the new rules all the time (esp. also in cases where the instructions are not well suited to new situations). The following explores the extent the institutions think their standard operating procedures are well suited for quality management implementation. The final indicator addresses the procedures that the institutions use to inform people about e.g. the results of implementation, meetings and decisions.

Political decision-making process (BPM) (Research proposition 6b). This independent variable addresses to what extent the decision-making processes concerning quality management implementation can be seen as political. The phenomenon refers to organisational decision-making processes as bargaining along regularised channels among staff members positioned hierarchically within an organisation. The following indicators were singled out for operationalisation. First, people assure themselves access to relevant information and decisions and they use it for parochial ends, in other words in a political way rather than for the benefit of the higher education institution as a whole. The second includes whether persons according to their stakes struggle for more resources for quality management, or the members of a quality committee fight e.g. for more funding (extra budget). The third indicator explores whether leaders requested that particular members should be in particular quality management units. The next addresses whether overlapping interests constitute the stakes for which games are played and whether persons pull and haul for their stakes. Finally, an indicator of political decision-making processes can be if persons disagree on issues and they fight and bargain for their own rights. These show that I can speak of political decision-making processes only if means are used in political ways, which can be exploited for parochial ends, not the ends officially intended.

Reputation (Hypothesis 7). This variable refers to the overall estimation in which a higher education institution is held by its various stakeholders. While reputation is supposed to represent a holistic view, in practice reputation may be linked to only certain organisational characteristics. Regarding Hungarian higher education institutions, it seems to be fruitful to take into account the following indicators: the first indicator refers to the 'application rate' of first year students within a study year. The second indicator identifies the rate of qualified academics (professors and docents) within a higher education institution. The next indicator measures the number of study programmes of a higher education

institution (the more the better). The last indicator relates to the organisational age, which is supposed to correlate with the organisational reputation in the eyes of students and other stakeholders.

4.4.2 The dependent variables

The hypotheses and research propositions that explore whether differences in the independent variables mentioned above result in differences in the quality management mechanism implemented mainly relate to the following dependent variables: scope and pace of quality management implementation. Exceptional cases are, however, the following from the point of view of dependent variables: hypothesis 1 relates to the pace of implementation and the 'Protocol following'; research proposition 5c refers to the adequacy of quality management mechanisms; and research proposition 6 only relates to the pace of quality management implementation. The dependent variables are operationalised as follows.

Scope of quality management implementation. This variable relates to the number of core organisational functions in which quality management is implemented. The first indicator relates to the extent quality management mechanisms more or less cover study programmes at higher education institutions (education quality management system). The second one explores whether higher education institutions introduced a research quality management system next to the education quality management system as well. The final indicator focuses on the extent to which the organisational quality management systems contain the support functions[24].

Pace of quality management implementation. The variable addresses the speed of quality management implementation in the higher education institution. In terms of operationalisation, two indicators of pace emerge. Given the fact that higher education institutions need a quality manual[25] that contains all of the procedures and processes concerning the quality management system, first, the year of developing a quality manual seems to be a good indicator of the pace of quality management implementation. In addition, the year of implementation of the first quality management system in a higher education institution can be another crucial signal of the pace.

Adequate quality management. In this study two sets of indicators are used to address the adequacy of quality management. The first set refers to the extent to

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[24] The support functions were listed in the questionnaire i.e.: student administrative services, rectoral staff, social services, computing service, maintenance, technical service, library, institutional governance, network with stakeholders, Human Resource Management, financial service, infrastructure, talent caring, publishing service, and language school.

[25] It is a general process in quality management that organisations that implement quality management systems develop quality manuals which contain e.g. a quality policy and procedures comprehensively.

which the organisational quality management systems include the elements of the comprehensive framework (summarised in Table 3.1, including e.g. design of curriculum, design of education processes, implementation quality, satisfaction of stakeholders, etc.). The second set indicates whether the quality management system developed works genuinely in practice—such as clear procedures, operating elements in practice not only on paper, and improving activities—and not only in a symbolic way.

The Protocol. The Protocol was developed by the Hungarian government particularly for higher education institutions to implement quality management systems. In the survey, the Protocol was operationalised using the following questions as indicators: Did the higher education institutions identify students, employers and staff members as stakeholders? And how many quality indicators and in which field did the universities and colleges use?

In this section, the operationalisation of the central concepts of this study was presented. The suggested conceptualisation is certainly not the only conceivable one. It was developed in line with the theoretical perspective employed in this study and with reference to its empirical object, i.e. quality management in Hungarian higher education institutions. To test the hypotheses and evaluate the research propositions a comprehensive research method was chosen. In the next section of this chapter, the methodology used in this study will be addressed.

4.5 Methodology

4.5.1 Introduction: comparative method

In order to assess the inferred hypotheses and research propositions, a comparative research design is used. I combined a statistical analysis covering all higher education institutions with a case study approach for a selected sample of institutions. First, however, a pilot case study at the University of Veszprém was made. This is not reported separately, but presented as a normal case study, as it was successful enough and did not lead to major adaptations in either the survey or the case study protocol. Then, a statistical analysis of the survey results was conducted. Some general information on organisational characteristics and quality management was acquired through existing statistics, studies of documents and especially by questionnaire. Finally, to study further organisational characteristics, another five (together with the pilot: six) higher education institutions were selected for case study analyses, where numerous further empirical data were acquired through interviews, observations and organisational documents. Actors from these higher education institutions were to cooperate by informing me on organisational characteristics, particularly the decision-making process, commitment of leaders, and features of the quality management system.

Lijphart (1971), amongst others, maintained that the combination of the statistical and case study methods is appropriate in many research situations. This is a "practice that we think should be followed much more frequently than is the case in contemporary social science" (King et al., 1994, p. 69). Similarly, Slaughter (2001) stated:

> *To study the new problems facing higher education and to frame them with new theories calls for mixed methods, multiple site case studies, data gathering from micro to macro levels, and a variety of analytical techniques linked to discrete levels and units of analysis. To be comparative, studies must focus on more than a single institution (p. 407). … [T]o make meaningful … comparisons, quantitative data would be useful because of its breadth. However, qualitative data would be necessary to destabilize categories, to capture subjectivity, narrativity, and new stories. Great care would have to be exercised in framing … questions, … methods and units of analysis, to say nothing of interpretation (p. 408).*

In this study I follow this logic to obtain information relevant to test the theory without introducing so much bias as to jeopardize the quality of the inferences. Provided I am aware of the inherent flaws of each method, I can compensate them with each other. There are at least three reasons for using quantitative and qualitative methods together in order to develop converging lines of inquiry (Cook & Reinhardt, 1979; King et al., 1994; Yin, 2003a; Verschuren & Doorewaard, 1999). First, explanatory research[26] usually has multiple purposes, which must be carried out under the most demanding of conditions. This variety of needs requires a variety of methods. Second, when used together for the same purpose, the two methods can build upon each other to offer insights that neither alone could provide. Third, if the inference I seek to make is more than a very narrowly cast hypothesis, my theory should have implications at many levels of analysis, and I should use data from all these levels to provide some information about my theory. Thus, the approach developed, which captures some of the complexity of individual cases in Hungarian higher education but still permits covering a

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[26] *Explanation* – providing a falsifiable answer to the question why some state of the world is as it is (or was as it was) probably is the most common goal of research in any science, and studies of higher education policies form no exception. Scientific explanation consists of three basic elements: 1) the establishment of general empirical relationships among two or more variables; while 2) all other variables are controlled, that is, held constant (Lijphart, 1971); in addition, 3) there is a theory to select variables for element 1 (Popper, 1980, p. 106). But "social science research, whether qualitative or quantitative, involves the dual goals of describing [as well as] explaining. … Each is essential. We cannot construct meaningful causal explanations without good description; description, in turn, loses most of its interest unless linked to some causal relationships. … It is not description versus explanation; … it is whether systematic inference is conducted according to valid procedures. Inference, whether descriptive or causal, quantitative or qualitative, is the ultimate goal of all good social science" (King et al., 1994, p. 34)

significant portion of all cases, may provide close to the best approach of my research questions.

Statistical analysis generally can be characterised as aiming to include all available cases. However, for practical reason, it usually requires sampling. Thus, the underlying logic is that the larger the N the less likelihood there is of any observed significant relationship between variables having come about through sheer chance (Peters, 1998). As the population of Hungarian higher education institutions is not that large, in this study all the higher education institutions in Hungary are going to be in the units observed (the population), and sampling is not an issue.

In addition, some researchers stated that the statistical and case study methods are fundamentally different orientations to social science research (Frenderis, 1983; Ragin, 1987). Statistical analysis, as just mentioned, is best served with large numbers and random sampling. The case study depends upon the careful a priori selection of the cases. With these two approaches combined (statistical and case study), I hope to make a valid assessment of the influential factors of organisational responses to governmental requirements in terms of quality management.

This section is thus structured as follows. In section 4.5.2, I address the cross-sectional analysis as a research method applied for studying some of my variables. I will not go into much detail of statistical analysis because the whole population will be analysed and not a sample. Instead I will point out the representativeness of the population in Chapter 5 which is more crucial in my case. In section 4.5.3, I explain the choice of a comparative case study analysis as a further employed research method. Then, in section 4.5.4 the methods of data collection and their characteristics will be provided. Section 4.5.5 gives an overview of the methodological pitfalls.

4.5.2 Cross-sectional analysis

For the empirical analysis of the study, first of all, I chose cross-sectional[27] statistical analysis. Statistical analysis is a crucial weapon in the arsenal of comparative analysis. It provides a means of assessing the relative effects of a variety of independent variables on each dependent variable, and it also permits looking at the joint effects of the multiple independent variables on the dependent variable (Peters, 1998). The results of these analyses do not prove causation[28], but they provide a place to start thinking about causation; without association then there cannot be any causation.

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[27] The term cross sectional analysis means a comparison across (geographical) units where data are taken from a single point in time.

[28] The language of causation is the language in which consequences, or effects, are attributed to one or more causes, or to the interaction of causes. The effect is the phenomenon that is to be explained; the cause or causes form the explanation of the effect. The word 'cause' has been given many meanings over the past centuries (Cook & Campbell, 1979), but in a rather general sense it

I did a survey to gather the data for the statistical analysis. All accredited higher education institutions in Hungary were included in the study, and their secretaries general and quality leaders were the targeted respondents to make sure that I get valid empirical results for the selected hypotheses. Furthermore, to obtain comparable data, all institutions were asked in the same time period.

First, in the statistical analysis, I analyse the bivariate relationships between the applicable dependent and independent variables separately. Bivariate analysis explores whether the dependent and independent variables are related and whether these relationships are statistically significant (Mann, 1995). In selecting a statistical method for the bivariate analyses, I can use a standard cross-tabulation method because the dependent and independent variables will be measured in ordinal scales.

The second step in the statistical analysis will be to test the whole 'specified' model based on my theoretical framework. This will allow me to test whether (some of) the independent variables (together) can explain the variance in the dependent variables. It also can include the composite effects of all independent variables on the dependent variables and explore whether the model outcomes suffer from interaction effects. One of the simplest ways to do this is by multiple regression analysis. Such an approach may lead to different outcomes—in terms of directions and significant relationships—than those found in the cross-tab analyses.

The capacity of statistical analysis to test theory makes it obvious that this is a crucial part of my study. In my study, there are, however, some research propositions that ask for in-depth study via a comparative case study.

4.5.3 Comparative case study method

This section discusses some important features of the case study method underlying the approach of this study. First, a few words follow on the comparative case study method as such. Second, an overview of the main characteristics that influence the selection of cases will be given. Finally, some remarks on data presentation are provided.

Comparative case study analysis

For further empirical investigation of the study, I apply a comparative case study design. Researchers have used this research method across a variety of disciplines. Social scientists, in particular, have made wide use of this qualitative method to examine contemporary real-life situations and provide the basis for the

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can be seen as characteristics of research units that, if rightly manipulated, would produce its effect.

application of ideas and extension of methods. By definition, case study calls for intensive amounts of data about a small number or a single unit of analysis (Yin, 2003a; Yin, 2003b). The choice of case study analysis is determined by the following factors.

First, the case study allows investigating a phenomenon of interest within their broad context. Gall et al. (1996, p. 545) described the rationale for using case-study research as "to shed light on a phenomenon, which is the process, events, persons, or things of interest to the researcher". The implementation of quality mechanisms is a complex organisational process that is difficult to isolate from its organisational environment; as a matter of fact I am particularly interested in the extent to which some independent variables have an impact on quality management implementation. A case study provides the opportunity to appreciate these impacts and to explore to what extent the proposed concepts and theorised relationships are viable.

Second and related to the foregoing, the case study facilitates the appraisal of some variables central to this inquiry that are not directly observable. In order to appraise these concepts, the complex social, organisational settings in which they emerge should be captured. As Yin (1993, p. 31) pointed out

> *the major rationale for using this method is when your investigation must cover both a particular phenomenon and the context within which the phenomenon is occurring, either because (a) the context is hypothesized to contain important explanatory variables about the phenomenon or (b) the boundaries between phenomenon and context are not clearly evident.*

Therefore, I advance a comparative case study research design. This design not only structures one part of my empirical inquiry, but also serves as a tool to explore the motives for organisational action. I discuss it in some length in order to construct an appropriate design for this study. Ragin explains, with reference to the case-oriented comparative method:

> *by examining differences and similarities in context it is possible to determine how different combinations of conditions have the same causal signification and how similar causal factors can operate in opposite directions (1987, p. 49).*

Selecting cases should be theoretically justified (Yin, 2003a). "If they [*case studies*—TCs] are embedded in a theory, they are potentially theoretically relevant" (Teune, 1990, p. 45). Generalisation of the results from either type of case study design is made to theory, and not to 'populations' (Yin, 2003a). The theorised pattern of results is pattern-matched against the empirically observed data from the case study. Multiple cases strengthen the results by replicating the pattern-matching and by yielding greater confidence in the robustness of the theory (Yin, 1993). These help assure that the case study can test and advance a theory. These replications will be addressed in the following.

In the methods of case study research, two strategies are considered relevant for social sciences: direct replication and theoretical replication (Yin, 2003a). The replication logic is analogous to that used in experiments (Hersen & Barlow, 1976). "Only with such replications would the original finding be considered robust and worthy of continued investigation or interpretation" (Yin, 2003a, p. 47).

The logic underlying the use of case studies is the same. As Yin (2003a) stated, each case must be carefully selected so that it either a) predicts similar results (a *direct* replication) or b) predicts contrasting results but for predictable reasons (a *theoretical* replication). The direct replication diminishes the danger of idiosyncrasy and the theoretical one explains the possible effects of a 'third' or 'control' variable. If the cases selected according to theoretical replication provide the same result, the relationship between two variables (one independent and one dependent) is the product of a common independent variable.

In my study different cases based on the variation of the values of some independent variables will be chosen in order to cope with the threats to internal validity and the possible influence of extraneous factors on observed findings. If all the cases turned out as predicted, they would provide compelling support for the initial set of propositions.

Summarising I can state that the case study method is an empirical inquiry that "investigates a contemporary phenomenon within its real-life context, addresses a situation in which the boundaries between phenomenon and context are not clearly evident, uses multiple sources of evidence" (Yin, 1993, p. 59), checks the outcomes of questionnaires returned, explains research propositions, which can only be evaluated by it, and develops lessons generalisable to the major substantive themes in a field. Having dealt with the issues associated with comparative case study analyses, it is now time to present which and how the cases were selected.

Selection of the cases

The rationale behind the choice of case study design was provided in the previous section and is an examination of strategies available when faced with the possibility of using a different number of cases. As a starting point, I pose that all of the cases cannot be studied; sampling and selection are essential. Therefore, case selection is a crucial question in the design of comparative case study analysis – first of all, how many cases, and then which ones? As Peters (1998, p. 68) and Lijphart (1971, p. 686) pointed out, for a strictly comparative analysis, careful selection of cases is essential.

Following the line of logic, it is preferable to select cases on the basis of independent variables without regard to the values of the dependent one (King et al., 1994). However in the context of my study, this would require detailed empirical research to measure the commitment of leaders and decision-making

processes (two of my independent variables). Thus a number of case studies would then need to be carried out before the actual selection could take place. Under such conditions, I will choose cases on the basis of variation in some independent variables such as *complexity*, *disciplinary balance*, *external consultancy*, and *dependency*, which do not necessitate in-depth prior field work. Then, if there is a strong association between the independent and dependent variables—in a way explained earlier—in the final set of cases, I might be willing to make tentative inferences.

One additional selection criterion is related to feasibility and access. These mean that some persons are willing to be the subject of a case study and that information is available. Keeping these basic considerations (selection based on the independent variables and feasibility and access) in mind, the above mentioned four independent variables (complexity, disciplinary balance, external consultancy, and dependency) were crucial for case selection. The statistical analyses of all cases also provided information useful for selecting cases systematically.

In addition, various views exist as to how cases ought to be selected from another point of view. Stake (1994, p. 237) makes a distinction between three forms of case study: intrinsic (where the intention is to learn something from a particular case), instrumental (where the intention is to provide insight into an issue or refining theory) and collective (which actually is an instrumental case study design extended to several cases jointly). The present study is based on a collective case study design. The reason is that higher education in Hungary comprises a number of higher education institutions with different characteristics, geographic location, size and complexity, academic specialisations and, last but not least, reputation. However, they all belong to an organisational field. Thus, the selection of universities and colleges within this study has also been made with a view to embrace the breadth of the variation within this organisational field allowing for some synchronic comparisons (Yin, 2003a; Stake, 1994). Consequently, to evaluate and explain the organisational response to governmental expectation in terms of quality management six higher education institutions have been selected as cases that are of sufficient characteristics to fit the requirements of research design: the University of Veszprém (UV), the University of Pécs (UP), the University of Miskolc (UM), King Sigismund College (KSC), the Theological College of Szeged (TCS), and Budapest Tech (BT).

In relation to type and ownership, UM, UV and UP are state universities, BT is a state college, TCS is a church-related college and KSC is a private college. Moreover, UV and UP are from the western part of Hungary, BT and KSC operate in Budapest and UM and TCS work in the eastern part of the country. In relation to dependency, four of the higher education institutions are relatively dependent from the government (the University of Veszprém, the University of Miskolc, the Theological College of Szeged, and Budapest Tech) and two can be characterised as relatively independent from the government (the University of Pécs and King Sigismund College). The selection of cases also includes complex

higher education institutions (UM, UP and UV) and less complex ones like KSC, BT and TCS. In relation to disciplinary balance, two higher education institutions have disciplinary balance more towards hard and convergent fields (BT, UV) and the other four (UP, KSC, TCS and UM) have more towards soft or divergent. In addition to the variation in dependency, complexity and disciplinary balance, the six organisations had also been quite differently supported by external consultancy. UV, UM and TCS were not seriously supported by external consultants. UP was supported but the consultants were internal. Finally, BT and KSC were extensively supported by external consultants.

Furthermore, the study covered about a half decade, from 2000 to 2005, the period in which institutional quality management came high on the political agenda for higher education in Hungary. It is the ambition of the present study to demonstrate connections between various events, processes, procedures, and actors in order to emphasise the complexity involved in the implementation of a quality management system. The fact that the study deals with a period rather close to the present is due to the methodological attempt to preserve a reasonable span of time, keeping in mind that change takes time, while at the same time ensuring that the events analysed are contemporary enough for informants to remember details and processes of importance.

Within each case study, the organisation as a whole, a number of sub-units (quality management committees and other units) and also the behaviour of individual actors were analysed. These together allow one to study the phenomena in operational detail. The selection of sub-units depends on the overall situation in a particular case. In some instances for example, the subject of study was multiple units where more particular features could be studied, in other instances only one or a few will be examined.

In sum, this section discussed the selection of the cases in order to achieve a determinate research design that minimises bias as a result of the selection process. Since perfect designs are unattainable, I have combined my critique of selection processes with a suggestion for a strategy that can provide insight into the research problem. Thus en route to that goal, it was useful and effective to employ a mixed-selection procedure that takes into account observed values of independent variables and additional selection criterion relating feasibility and access.

Data presentation

Data presentation involves a wide range of possible choices for style of presentation, depending on whether the cases are to be communicated employing impressionistic, literary or other techniques (Van Maanen, 1988). However, irrespective of the choice of style of presentation, it seems fruitful that the text should communicate narrative and analytical elements simultaneously. In the present study it has been essential to highlight actors and factors of importance

regarding quality management implementation. This has influenced the way the text is systematised. However, regarding the presentation of case studies, the systematisation may appear a bit paradoxical. Normally case studies imply exactly an attempt to catch totalities and complex connections and not fragments (details of particular processes) which may be easily labelled under certain headings and put into sharply delimited analytical categories (Stensaker, 2004).

In a critical comment to this tendency of fragmentation, Czarniawska (1997, p. 186) argues for the use of narrative means in data presentation as an alternative to catching the complex interplay between the organisational factors and actors that influenced the organisational processes. In addition, Somers and Gibson (1994) postulate that social life itself is "*storied* and that narrative is an *ontological condition of social life*" (p. 38). They see narrativity as important to social science because of its focus on contextual relationships, causal emplotment, selective appropriation as well as temporality, sequence and place. In other words, relationality is analytical: for example, "all identities must be analyzed in the context of relational matrices because they do not 'exist' outside of those matrices" (Somers & Gibson, 1994, p. 65). What this means for this study is that I have to deconstruct and understand the stories that are being told, for example about leaders being committed to quality management implementation and academics working in quality management committees according to the organisational procedures. Analysis of the story will thus enable me to contextualise and evaluate quality management implementation. Therefore, as analytical generalisation is an important aim, a certain degree of systematisation and categorisation is needed.

The compromise chosen in the present study is to establish a firm structure around the framing of each case presented, in order to make reading and comparison easy. On the other hand, the categories are defined broadly, in order to make space for various processes and events. In addition, quotations from the interviewees have been included. The reason for this is both to make the empirical examples more alive in compliance with the need to catch the complex interplay between the organisational actors and factors, and also in order to offer the readers some possibilities of developing alternative interpretations of the particular processes and information.

4.5.4 Methods of data collection and their characteristics

The decision to undertake a combined (statistical and case study) approach indicates that data gathering and analysis was carried out quantitatively as well as qualitatively. Such 'soft' and 'hard' data were gathered via (1) *content analysis of documents*, (2) *questionnaires*, (3*) interviews* and (4) *observations*.

Content analysis of documents

An important means of increasing the available information for comparison is to utilise document analysis, or the reanalysis of data collected for other purposes (Hakim, 1982). I can rearrange existing data or analyse and interpret these data from a different perspective in the course of my own study. Of course this requires the use of reliable scientific data. Most statistical materials meet this requirement and I can also assume the numbers provided in these documents have been verified and audited.

Document analysis can be characterised as: the use of existing material; being relatively easily accessible; the absence of direct contact with the research object; and looking at the material used from a different perspective than at the time of its production (Verschuren & Doorewaard, 1999). In document analysis one important characteristic is that the material used has been produced entirely by others. Because of these characteristics (produced by others and no direct contact with the unit observed) document analysis has some limitations. First, the researcher has no influence on it. Second, there is no guarantee that they fit my research questions. The last issue is that of measurement and the comparability of data gathered across higher education institutions. Here there may also be difficulties because familiar organisational core processes may be understood widely and yet be very different. For example, the content of quality indexes can differ from organisation to organisation, so that equivalence may become difficult to establish. I therefore can address a number of organisational characteristics with some confidence but I cannot have absolute confidence about the findings and I have to be careful about the comparability of findings. Three categories of existing material were used for carrying out document analysis: research publications[29], official statistical material, and organisational documents.

Questionnaire

One further method was fruitful to use, namely the questionnaire. A questionnaire was developed to add a range of scales to the existing materials. The questionnaire focused on 'pace', 'scope', 'following the Protocol', and 'external support'. The questionnaire was developed for three principal reasons. First, the primary and motivating purpose of it was to obtain background information about the independent and dependent variables. It addressed an overall range of indicators in the contemporary organisational contexts. Second, by comparative evaluation of the results, its outputs were intended to assist the empirical analysis. Third, the questionnaire was constructed to provide data that adequately represent the 'life-world' of each higher education institution. Thus, it provided quick, stable and reliable measurement of the units of analysis.

[29] Articles from Magyar Minőség (Hungarian Quality Journal)

These characteristics mentioned above have their advantages, but also have a number of drawbacks. Questionnaires have the advantage that more people and organisations can be included: they are less time-consuming and less costly than face-to-face interviews. This enables a researcher to send out more questionnaires, thereby enlarging the data-set. The more evidence is found in varied sources, the more powerful the explanation becomes, and the more confidence we should have in the conclusions (King et al., 1994). This way of data collection, however, has the disadvantage that the questions have to be formulated very clearly, often with pre-coded answering options. Furthermore, the questions should be developed mainly in a descriptive way (descriptive questions) so that bias through 'socially desirable answers' can be minimised. Besides, a questionnaire should not be too elaborate, because respondents' motivation to cooperate has to be ensured.

Interview and observation

The comparative case study method requires collecting data on the same variables across higher education institutions**.** Therefore, two further methods will be used to collect information on the same variables for case study analysis: interviews and observations.

First, the interview provides an opportunity to gather data in the respondent's own words, to focus inquiry more pointedly toward the study's central questions, to draw data efficiently from a setting, and to seek information directly from the persons who are most in the know in a setting. Thus, data in the present study are also constituted by qualitative interviews mainly with present and former quality leaders at the higher education institutions. Giving priority to them may be accounted for in different ways. First, quality leaders often possess a lot of information on both internal conditions and the relation and dependency of the organisation to the surroundings, and also on quality management issues. Second, there is reason to expect that they play a very central role in the processes of decision-making and in the creation of quality management initiatives that lead up to organisational activities related to quality management implementation. Third, they are probably the best at evaluating the potential effects of the work on quality and its consequences concerning quality management implementation. Consequently, the selection of informants was based less on representation than on the fact that they possess insight and breadth of outlook related to questions central to this study. Informal contacts in some higher education institutions were also important in order to get into contact with central informants.

A total of 14 in-depth interviews were carried out in universities and colleges. As mentioned above, priority was given to quality leaders at various levels. Other persons who were involved in quality management implementation, or who in other ways were of importance, were occasionally included as informants. An important criterion used to select informants was also that a majority of the persons interviewed had been in their university or college and in their position

at least for (much of) the period subjected to analysis. However, the limited amount of interviews at each organisation may supplant richness in detail for the benefit of more extensive and significant features of quality management implementation. This trade off between number of interviews and depth per interview was necessary as a consequence of the frames of time and resources of the study.

All interviews lasted between 120 and 200 minutes. A pre-composed interview guide formed the frame for the interviews (see Appendix IV). The interviews consisted of a combination of open, semi-open and closed questions and their topics were communicated to respondents in advance. This gave the interviewees ample time to prepare for specific topics they considered relevant. The structure of the interview guide was in accordance with the aim to survey central features and indications of quality management implementation, decision-making processes and the commitment of leaders via open questions. The questions dealt with characteristics specifying the particularities of quality management implementation which exactly describe the unique organisational quality management implementation. Furthermore, the semi-open questions and questions on examples were employed in order to identify processes of significance to quality management implementation and to address the operating of quality management committees. Finally, closed questions were included on the results of quality management activities and general organisational features.

Nevertheless, the interview guide was not adhered to slavishly at all times. For instance, situations often demanded probing in order to clarify various statements and the meaning attached to certain concepts stated by informants. Thus the interview guide may be said to consist of formal and informal (open) interview-designs combined, with the purpose of making structured interviews possible to an extent where the organisations may be compared to each other with regard to various themes. At the same time it was designed to catch local and unique events of importance to quality management implementation.

Interviewing face-to-face had the advantage that it provided room for interaction between researcher and respondent. If necessary, questions and answers were clarified and specified.

As a limitation of the interviewing technique relevant in my study I would like to mention that an interview offers little insight into the physical and social context. (Participant) observation may describe this context better than an interview. In addition, gathering observational data is a method of generating data in which the researcher observes individuals, situations, objects or processes. In some methods of observation, there is the chance that people behave in a different way than they usually would. This can be prevented if the researcher participates in the daily activities of the particular case. A central power of observation as a data collection tool is its inquiry into a natural, dynamic environment on its own terms (Guba & Lincoln, 1981). In other words, there is minimal risk of distortion or of obtaining an incomplete picture of the object

under study. Furthermore, its advantage also is that the risk of strategic response by the individuals is, in principle, smaller than with the technique of interviewing. Observation also has a few disadvantages. It can be troublesome and time-consuming to process the outcome of the observations in a reliable and valid way into answers to research questions. Furthermore, I do not find out any motives for behaviour, which I do get in an interview. In this way, the interview and the observation complement each other. Finally, the answers to questionnaires can be checked through interviews and observations.

In this study, I used all of the above mentioned methods. Besides, some informal interactions with organisational actors and personal relationships also contributed to the data base.

Consequently, the multiple data collection techniques applied in this study help to provide a thick description and provide a comprehensive view of the research setting. Finally, the mix of quantitative and qualitative methods—the combination of depth and breadth, of generalisation along with thoroughgoing description—can help produce greater confidence in results, elicit creativity in problem definition, discover unusual or deviant dimensions of phenomena, and lead to more inclusive theorising (Jick, 1979). The final section deals with possible methodological pitfalls.

4.5.5 Avoiding methodological pitfalls

Some remarks have to be made regarding a number of methodological problems specifically related to my study, which will be treated in turn. First, concerning comparability, Goedegebuure and van Vught (1994) list two problematic aspects of comparative social science (the *problem of equivalence* and *Galton's problem*) that are relevant for the study. Second, in qualitative studies, the issues of validity and reliability are complex, problematic, controversial and paradigm specific (Denzin, 1994). The issues of validity and reliability are also important for quantitative analyses. Therefore, these issues concerning case studies on the one hand and my survey on the other hand will also be addressed.

First on comparability, the *problem of equivalence* relates to the need "to have confidence that the components and their properties being compared are the 'same', or indicate something equivalent" (Teune, 1990, p. 54). To minimise the problem, comparisons should be made between units that in their social context are as similar as possible (Lijphart, 1971). Furthermore, possible interfering differences should be addressed rather than denied; how these factors have an impact on the phenomenon of interest and to what extent they bear on the theorised causal relationship must be explained. In this study, I attempt to minimise the problem of equivalence by examining one empirical object throughout all cases—Hungarian higher education institutions.

Second, *Galton's problem* refers to the lack of independence of cases. This problem concerns the question of how much of the characteristics of a specific case are inherent to its own autonomous dynamics and how much is due to the

impact of other cases or historical learning[30]. In fact, this research takes the dependence of (possible) cases as a starting point of inquiry. It is not a problem that the higher education institutions are dependent cases, because I want to see to what extent and why they behave differently although they are in the same context. I then look for these differences in organisational characteristics, traditions and culture. Furthermore, a relatively small number of cases selected (six in my case) is an advantage, because "a small number of cases allows for more attention to details and a more thorough analysis of possible interdependencies between cases" (Goedegebuure & Van Vught, 1994, p. 13).

In addition, despite the fact that the case studies may be classified as a typical example of qualitative research, within the present case studies qualitative interviews are combined with more quantitative ways of inquiry. In practice this implies an attempt to transcend the contradiction between research attempting to describe singular cases and research aiming at uncovering general evidence. An approach like this, however, demands additional attention concerning trustworthiness (validity and reliability).

Validity is the simple question of whether we are measuring what we think we are measuring, or whether the observations we make are a function of other factors not included in the analysis. The validity of a given study can be determined on the basis of three criteria (Kvale, 1989). The criterion of correspondence is concerned with whether what is described corresponds to the real world. The criterion of coherence deals with whether the results are logical and consistent. Finally, the criterion of pragmatics/utility deals with applicability and contingent possibilities for generalising the study. The former two criteria refer to what is often called internal validity, while the latter refers to what is often called external validity.

Within the present case studies the criterion of correspondence is obtained in several ways. First, variation is emphasised when it comes to the level of the informants´ formal position in the focal higher education institution. This variation is important because they may have different functions and see different aspects as participants in quality management implementation at each particular higher education institution. Second, informants belong to several 'worlds'. Often they are simultaneously members of an academic field, members of particular national bodies, and they represent particular institutions. This opens up for several interpretation alternatives, so-called interpretation pluralism, which however, puts forth the question of which interpretation is the right one. A useful suggestion for remedying this problem, which is also pursued in this study, is to use methodology as a mediating tool (Kirk & Miller, 1986).

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[30] It is remarkable to note that a tension may occur between two of the methodological expectations mentioned above. The *equivalence problem* derives from cases that are analogous on the one hand, whereas *Galton's problem* on the other hand cautions against the dependence of cases – which are often located in the same social context!

This leads me to the question of whether the information gathered from the informants is logical, reasonable and consistent (the criterion of coherence). Often one may fall into the trap of becoming 'anecdotal', for instance, by emphasising details and spectacular statements at the cost of the ordinary and less dramatic (Silverman, 1993, p. 153). In order to avoid this trap, quotations were focused on the issues directly relevant to the study. In addition, different variants of triangulation have also been applied in order to establish and enhance the validity of the interpretation. Patton (1990, p. 464) distinguishes four kinds of triangulation[31] that contribute to the validation of qualitative analysis. These are 1) checking out the consistency of findings from different data-collection methods (methods triangulation), 2) triangulation between different data sources within the same method (triangulation of sources), 3) using multiple analysts to review findings (analyst triangulation), and 4) using multiple perspectives or theories to interpret the data (theory/perspective triangulation).

In each higher education institution studied I was able to compare my data with the information gained through prior questionnaires, documents, personal networks and sometimes participant observation in order to nuance and control the interpretations presented in the case studies. I was also usually able to check my preliminary interpretations with more respondents. I compared the views inspired by different theoretical perspectives. Analyst triangulation was not carried out as such, but some of my colleagues commented on my analyses and the coherence of the interpretations. These triangulations may enhance both validity and reliability, especially if the independent observations appear to accord concerning the interpretation of a phenomenon (Kirk & Miller, 1986).

However, the validity of a study is not only connected to recognition justification of earlier statements and interpretations. Not least it is important to focus on what is not formulated, not reflected upon or given attention to by the informants. One way to uncover symbolic expressions is to illustrate the background to the understanding of the leaders via so-called thick descriptions (Stensaker, 2004, p. 90). This implies making explicit the context of various acts (Geertz, 1983), providing sufficient scope and depth in reporting to enable the readers to understand and separately interpret the study's finding, and to make it possible for readers to make their own applications to similar settings. Not least, thick descriptions will be relevant in relation to external validity (criterion of utility). As the informants of the case studies do not make up a statistically representative sample, the possibilities for generalisation refer rather to theoretical assumptions and statements rather than to the statistical universe (Yin, 2003a). Thus, the best I can do is to offer a description, as complete as possible, of the context in question. This may offer a useful basis of evaluation to researchers interested in testing the theoretical assumptions in other contexts.

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[31] The concept of triangulation calls for the use of multiple methods of data collection (e.g., observation plus interviewing, document examination, and even questionnaires). Multiple sources of data can also be a mode of triangulation, as can the use of the same methods on different occasions.

Attempts to increase the reliability of the study have also been undertaken by using a partially structured interview guide during interviews. This in itself is supposed to enhance reliability (Merton et al., 1990). Nevertheless questions may be put whether the data and information gathered are actually of high reliability. Uncertainty will always prevail as to whether data-gathering was carried out accurately enough. Within a more qualitatively oriented research design, however, it will prove more difficult to fulfil the demands for many independent and identical measurements. Silverman (1993, p. 146) claims that it is possible for other researchers to replicate a study if the researcher describes and documents his actions during the research process. As Stensaker (2004, p. 92) concluded:

> *high reliability during different interviews will depend on whether the procedures followed are identical from one interview to another, that the informants understand the questions the same way, and that the answers may be grouped without misunderstandings occurring.*

In order to enhance the reliability of the study, the interview guide was pre-tested on four persons who all had been in similar positions as the interviewees selected. This pre-test led to some minor corrections in the wording of some questions. However, the interview guide contained relatively few questions with closed answering categories, something which Silverman (1993, p. 148) claims contributes to high reliability. Instead the interview guide was open to the informants' own alternatives. This choice was made because I did not want to transfer my own opinion to the informants. The time allotted for the interview in most instances was sufficient, and when more time was used it was normally at the suggestion of the informant. All interviews started with an introduction about the purpose of the study.

One condition which may have a negative influence on reliability is the fact that none of the interviews were recorded. This choice was made because often people want to express their opinion more freely if they are not recorded. Instead quotations from informants were written down directly on the pre-fabricated questionnaires during the interview. Of course this way of gathering data implies that not all information communicated was written down. At the same time this gave the informant an opportunity to correct statements while they were being set to paper. Informants were often asked to specify statements that I perceived as unclear.

Finally, the survey was also required to be valid and reliable. Developing the questionnaire involved several stages. The first stage involved a series of meetings with academics and use of literature reviews on the one hand, and the results of my first case study (at the University of Veszprém) on the other to develop the items of the questionnaire. In a second stage, first stage outcomes were used to develop a set of questions that covered characteristics and factors fundamental to this study. Third, quality specialists constructively criticised the

questionnaire. This process was used to establish the face validity of the questionnaire, eliminating linguistic ambiguities, reducing the ambiguity of questions, as a more controllable source of measurement errors (Selltiz et al., 1976), and to analyse the adequacy of the questionnaire to ensure that it would be suitable for capturing the data required for the study. Fourth, the refined questionnaire was piloted on staff members at the University of Veszprém. On the basis of their suggestions, some changes were made to the wording of a few questions. Moreover, two questions which were felt to be difficult to understand were deleted. Finally, the targeted respondents were the secretaries general and quality leaders, who have responsibility for some general information on the organisational characteristics and also for quality management. In this way it was ensured that the respondents had the knowledge to answer the questions correctly. Secretaries general occupy the highest administrative position in Hungarian higher education institutions, which ensures their knowledge of the institution's history regarding the institution in general including general aspects of quality management implementation. Quality leaders, by whatever title they were denoted, were of course the persons in charge of the actual implementation of quality management systems. This sums up the steps taken to enhance the validity and reliability of my survey.

4.6 Summary table of Part I

With the presentation of Part I the stage is set for the empirical research. Whereas until now the focus was on theoretical expectations, based on theoretical and methodological assumptions, the focus in the next part will shift to empirical situations, based on empirical evidence and findings. In Table 4.1, crucial elements of Part I are summarised. This table shows the independent and dependent variables of the hypotheses and research propositions addressed in this chapter. Furthermore, it presents the methods that were chosen for analysing and testing the particular hypotheses and for evaluating the research propositions. Table 4.1 shows that research propositions will only be evaluated by case studies and hypothesis 7 only by statistical analysis. All other hypotheses will be tested by both statistical and case study analysis.

Table 4.1: Structure of variables and methods.

Hypotheses and research propositions	Independent variables	Dependent variables	Methods
Hypothesis 1a	Dependency	Pace	Crosstab, MR, CS
Hypothesis 1b	Dependency	Protocol	Crosstab, CS
Hypothesis 2a	Complexity	Pace	Crosstab, MR, CS
Hypothesis 2b	Complexity	Scope	Crosstab, MR, CS
Hypothesis 3a	Disciplinary balance	Pace	Crosstab, MR, CS
Hypothesis 3b	Disciplinary balance	Scope	Crosstab, MR, CS
Research proposition 4a	Commitment	Pace	CS
Research proposition 4b	Commitment	Scope	CS
Hypothesis 5a	External consultancy	Pace	Crosstab, MR, CS
Hypothesis 5b	External consultancy	Scope	Crosstab, MR, CS
Research proposition 5c	External consultancy	Adequacy	CS
Research proposition 6a	Bureaucratic decision-making process	Pace	CS
Research proposition 6b	Political decision-making process	Pace	CS
Hypothesis 7a	Reputation	Pace	Crosstab, MR
Hypothesis 7b	Reputation	Scope	Crosstab, MR

Legend, Table 4.1:

MR : multiple regression

CS : case study

Part II Empirical Analysis

5 Cross-sectional analysis

Part II of this book consists of three chapters. Chapter 5 addresses cross-sectional analysis and Chapter 6 presents a case study analysis. Chapter 7 analyses in more depth the results of these two empirical investigations and evaluates the hypotheses and research propositions.

First, in this chapter, a survey description will be provided in section 5.1. Section 5.2 presents the survey results in two steps: 1) survey results based on a bivariate analysis of the relationships between the dependent and independent variables; and 2) survey results based on a multiple regression analysis. In section 5.3, the chapter concludes with a brief overview of the major outcomes of these statistical analyses.

5.1 Survey description and descriptive findings

In this section the questionnaire survey, the sample design and population coverage will be described. Based on key descriptors like type, owner and region of higher education institutions it will be indicated whether the survey sample is representative for the entire higher education system. Afterwards, descriptive findings of the survey as regards the main features of quality management implementation at higher education institutions will be presented.

5.1.1 Survey description

The basic purpose of this survey was to gather background information on the Hungarian higher education institutions as well as data on the independent and dependent variables. The main themes of the written questionnaire addressed some general characteristics of the higher education institutions (e.g. type and ownership of the particular higher education institution), organisational reputation, characteristics of quality management implementation, support by external consultancy, and data concerning the financial situation of the higher education institutions.

The survey was designed to collect data from all accredited higher education institutions in Hungary. The population of the survey consists of the universities and colleges listed by the Hungarian Accreditation Committee in 2004. Altogether there are 68 institutions included in this list. These 68 institutions were included in the gross sample of the survey. The targeted respondents were the secretary general and the quality leader (director) of these higher education institutions. Targeting these respondents in the higher education institutions was

done to ensure that the respondents had the institutional knowledge in general as well as knowledge on quality management more specifically.

The inquiry was performed in September/October 2004. The questionnaire was designed to be self-explanatory and respondents could complete it themselves. The final questionnaire consisted of 45 questions (see Appendix III). Questions predominantly required either 'yes/no' responses or the application of a 5-point scale, e.g. from 'strongly hindering' (1) to 'strongly helping' (5). In addition, some open questions required written responses and there were also questions to obtain the profiles of the institutions and respondents. Each questionnaire was accompanied by a cover letter explaining the purpose of the survey. Questionnaires were sent with a self-addressed postage pre-paid envelope. Each targeted person was asked to respond within four weeks after receiving the questionnaire. The response to the survey was closely monitored, and telephone calls were made to institutions that did not respond within the stipulated time. Most of the returned questionnaires were received between four and six weeks after being sent out.

In total, 132 individual respondents representing 68 higher education institutions were asked to complete the questionnaire. Two institutions responded that they were established only about one year ago, so they could not contribute effectively to the survey; another 22 institutions did not respond to the questionnaire at all. The response to the questionnaire consisted of 58 individual respondents representing 44 higher education institutions, yielding a response rate of 65% of the higher education institutions included in my survey[32]. Furthermore, questionnaires were checked for completeness and usefulness of all essential information[33]. Questions that were not answered by respondents were treated as missing data and were excluded from the analysis.

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[32] If two questionnaires were returned from the same institution then the answers were weighted, as my unit of analysis is the higher education institution, not the individual respondents. An internal consistency analysis was performed separately for each higher education institution where two questionnaires had been returned by checking the reliability of the responses between the two representatives of one institution. The reliability of empirical measurements can be estimated by using a reliability coefficient such as Cronbach's alpha, which ranges between 0 and 1. Higher values of Cronbach's alpha indicate a higher degree of reliability. Typically, a reliability coefficient of 0.7 (Nunnally, 1967; Nunnally, 1978) or higher is considered adequate. The reliability values of the responses between two representatives of one institution were always higher than 0.95. Accordingly, the results of this analysis provide strong evidence that scores can be calculated for an institution with two respondents by weighting (0.5 - 0.5) the answers and summing the weighted scores.

[33] Mainly the questions concerning institutional incomes were not completed in some cases. Through telephone calls and site visits in a number of cases additional financial information was obtained, which raised the number of cases to 28 for income-related data.

Table 5.1: Individual response, institutional response, institutional gross sample/institutional response compared (n, in %).

		A. Individual respondents	B. Responding institutions		C. Institutional gross sample*		Difference B.-C.	
		N	N	%	N	%	N	%
Type	University	23	17	38	24	35	-7	+3
	College	35	27	62	44	65	-17	-3
Owner	State	35	25	57	31	46	-6	+11
	Church	15	13	30	26	38	-13	-8
	Private	8	6	13	11	16	-5	-3
Region	West	18	13	30	16	24	-3	+6
	Budapest	23	19	43	33	48	-14	-5
	East	17	12	27	19	28	-7	-1
Total		58	44	100	68	100	-24	-35

* Source: www.mab.hu, (MAB), 01.09.2004.

Table 5.1 shows that 38% of the responding higher education institutions were universities and 62% colleges. 57% of the responding institutions were state-owned, 30% church-related institutions and 13% were private. 30% of the responding institutions were located in the western part of Hungary, 27% in the eastern part and 43% in Budapest. Of the total population, 35% were universities and 65% colleges; 4% were state-owned, 38% church-related and 16% private institutions. The proportions of higher education institutions in Hungary according to location are the following: 24% are from the western part of Hungary, 28% from the eastern part and 48% from Budapest. These figures imply that the distribution of my responding institutions largely follows those of all accredited higher education institutions. Concerning the type and location, the responses are quite representative for the total population of higher education institutions. The only notable difference can be found regarding ownership, especially state-owned and church-related institutions. In my sample, state-owned institutions were overrepresented[34] (with 11%) and church-related institutions were underrepresented (with 8%). To redress the balance, phone interviews with three church-related higher education institutions were undertaken. These three interviews were not 'full' interviews and did not change the analyses because they confirmed the results of those church-related institutions already in the sample. All in all, I can conclude that this sample in all

[34] The overrepresentation of state-owned institutions in the sample partly relates to the fact that I could call and personally ask almost all secretaries general or quality leaders at state-owned institutions who did not respond to the questionnaire by the deadline to return it.

other aspects fully reflects the total population of higher education institutions in Hungary in 2004.

5.1.2 Survey findings on quality management implementation: an overview

This section provides a descriptive overview of the main survey results as regards quality management implementation in Hungarian higher education institutions. This description focuses on several aspects as regards the type, scope, and pace of quality management system implementation, the use of the Protocol, and the role of external consultancy.

Governmental reform in Hungarian higher education included among other things the development of an institutional quality manual as a major step in the overall process of quality management implementation. In fact, it was an implicit expectation of the government that higher education institutions should develop a quality manual. I thus asked the institutions to indicate whether they developed a quality manual at all and if so, in which year.

Figure 5.1: Year in which quality manual was developed (in %, n=44).

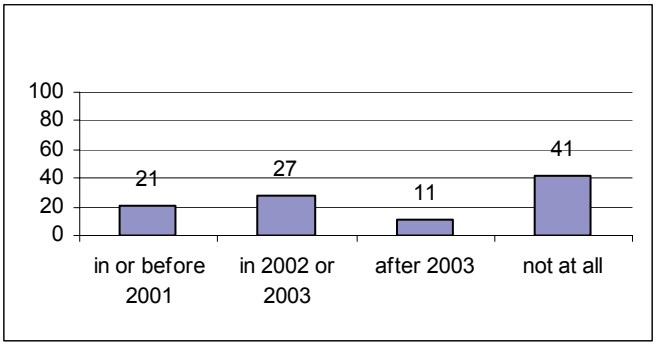

Figure 5.1 shows that more than half of the institutions (n=26) had developed a quality manual at the point in time when the survey was undertaken, and 41% (n=18) have so far not developed a quality manual. This last point suggests that a considerable part of the institutions (n=18) responded to governmental demands slowly.

27% (n=7) of the institutions that developed a quality manual were universities and 73% (n=19) were colleges. 58% (n=15) of these institutions were state-owned, 23% (n=6) church-related, and the rest, 19% (n=5) private higher education institutions. 35% (n=9) of them were located in the western part of Hungary, 42% (n=11) in Budapest, and 23% (n=6) in the eastern part of the country. In addition, 56% (n=10) of the institutions that did not develop quality manuals were universities and 44% (n=8) colleges. 61% (n=11) of these institutions were state-owned, 33% (n=6) church-related, and 6% (n=1) private higher education

institutions. 22% (n=4) of these institutions were located in the western part of Hungary, 45% (n=8) in Budapest, and 33% (n=6) in the eastern part of the country. These findings show that more than two-thirds (n=19) of the institutions that developed quality manuals by 2004 were colleges. In addition, almost two-thirds (n=11) of the institutions that did not develop a quality manual by 2004, were state-owned institutions and almost half (n=8) were located in Budapest.

Moreover, 22% (n=2) of the institutions that developed quality manuals in or before 2001 were universities, and 78% (n=7) colleges. 22% (n=2) of these institutions were state-owned, 22% (n=2) church-related, and the rest, 56% (n=5) private higher education institutions. 33% (n=3) of them were located in the western part of Hungary and 67% (n=6) in Budapest. In addition, 25% (n=3) of the institutions that developed a quality manual in 2002 or 2003 were universities and 75% (n=9) colleges. 67% (n=8) of these institutions were state-owned, and 33% (n=4) church-related higher education institutions. 50% (n=6) of them were located in the western part of Hungary, 25% (n=3) in Budapest, and also 25% (n=3) in the eastern part of the country. Furthermore, 40% (n=2) of the institutions that developed quality manuals after 2003 were universities and 60% (n=3) colleges. All of these institutions (n=5) were state-owned higher education institutions. 40% of these institutions (n=2) were located in Budapest, and 60% (n=3) in the eastern part of the country.

This evidence shows that 78% of the institutions (n=7) that developed a quality manual in or before 2001—i.e. the quickest ones—were colleges, more than half (n=5) were private higher education institutions, and none of them were located in the eastern part of the country. Conversely, all institutions (n=5) that developed quality manuals after 2003—i.e. the slowest among the institutions that developed a quality manual—were state-owned higher education institutions.

Consequently, these findings show that colleges and private higher education institutions seemed to develop quality manuals and thus responded to governmental demands the fastest in that sense. In contrast, the state-owned institutions appeared to respond the slowest.

In addition to a quality manual, the following indicator explored whether institutions implemented a quality management system by autumn 2004. This was measured in three categories.

Figure 5.2: Quality management system implemented (in %, n=44).

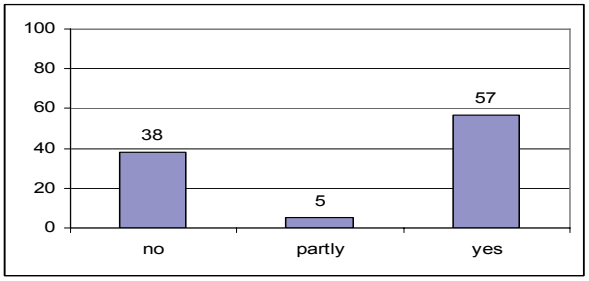

Figure 5.2 suggests that more than half the institutions (n=25) implemented a quality management system by 2004, 5% (n=2) partly, while 38% (n=17) have so far not implemented quality management systems. The latter fact shows that more than one-third of the institutions did not follow the formal rules set by government that had demanded the implementation of a quality management system by the end of 2001.

20% (n=5) of the institutions that implemented a quality management system by 2004 were universities and 80% (n=20) colleges. 32% (n=8) of these institutions were state-owned, 44% (n=11) church-related, and the rest, 24% (n=6) private higher education institutions. 36% (n=9) of them were located in the western part of Hungary, 44% (n=11) in Budapest, and 20% (n=5) in the eastern part of the country. In addition, 65% (n=11) of the institutions that did not implement quality management systems by 2004 were universities and 35% (n=6) colleges. 94% (n=16) of these institutions were state-owned, and only 6% (n=1) church-related higher education institutions. 18% (n=3) of them were located in the western part of Hungary, 47% (n=8) in Budapest, and 35% (n=6) in the eastern part of the country.

This illustrates that 80% (n=20) of the institutions that implemented a quality management system were colleges, while around two-thirds (n=11) that did not implement quality management systems were universities. In addition, almost all (n=16) institutions that did not implement a quality management system were state-owned institutions and none of them were private. Furthermore, 81% of the institutions (n=17) that developed a quality manual also implemented a quality management system. This evidence suggests that state-owned institutions and universities seemed to implement quality management systems slower, while colleges and private ones did so faster.

A further question addressed the type of quality management system implemented by the institutions.

Figure 5.3: Type of quality management models implemented (in %, n=25).

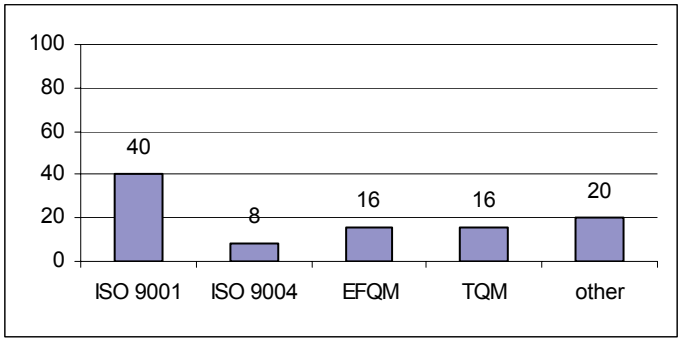

Figure 5.3 shows that almost half the institutions (n=12) that implemented a quality management system used one of the ISO models for their quality management implementation. EFQM (n=4) and TQM (n=4) models were less than half as popular as the ISO models. The 'other models' (n=5) contained e.g. the MAB expectations and the Comenius model[35]. This shows that the ISO 9001 and 9004 models were very popular among the Hungarian higher education institutions, which was not surprising given the common knowledge that these models were very popular in the industrial and service sectors in Hungary.

17% (n=2) of the institutions that implemented ISO (9001 or 9004) models were universities and 83% (n=10) colleges. 67% (n=8) of these institutions were state-owned, 8% (n=1) church-related, and 25% (n=3) private higher education institutions. 25% of these institutions (n=3) were located in the western part of Hungary, 50% (n=6) in Budapest, and 25% (n=3) in the eastern part of the country. Furthermore, all institutions (n=4) that implemented an EFQM model were colleges. 50% (n=2) of these institutions were church-related, and 50% (n=2) private higher education institutions. 50% (n=2) were located in the western part of Hungary, 25% (n=1) in Budapest, and 25% (n=1) in the eastern part of the country. Moreover, 25% (n=1) of the institutions that implemented a TQM model were universities and 75% (n=3) colleges. 50% (n=2) of these institutions were state-owned, and 50% (n=2) church-related higher education institutions. 25% (n=1) were located in the western part of Hungary, 50% (n=2) in Budapest, and 25% (n=1) in the eastern part of the country.

These findings showed that ISO models were very popular among higher education institutions that implemented quality management systems, and especially among colleges (83% of the institutions (n=10) that implemented ISO models were colleges). In addition, only colleges (n=4) implemented EFQM models and most of the institutions that implemented TQM models (75%, n=3) or 'other' models (80%, n=4) were colleges.

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35 The Comenius model was developed for improving quality in elementary schools.

In addition, the scope of quality management implementation in education indicated the extent to which a quality management system had been implemented across all study programmes in an institution. Originally, this indicator was measured at a ratio scale, and then the answers were condensed into two brackets.

Figure 5.4: Percentage of programmes covered in education quality management system (in %, n=44).

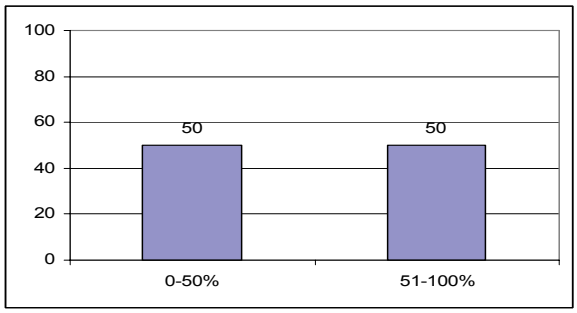


Figure 5.4 shows that 50% of the institutions (n=22) implemented quality management systems in less than half of their study programmes and 50% (n=22) at more than half of their study programmes.

50% (n=11) of the institutions that implemented a quality management system at less than half of their study programmes were universities and 50% (n=11) colleges. 86% (n=19) of these institutions were state-owned, 9% (n=2) church-related, and the rest, 5% (n=1) private higher education institutions. 14% (n=3) were located in the western part of Hungary, 45% (n=10) in Budapest, and 41% (n=9) in the eastern part of the country. In addition, 27% (n=6) of the institutions that implemented a quality management system at more than half of their study programmes were universities and 73% (n=16) colleges. 32% (n=7) of these institutions were state-owned, 45% (n=10) church-related, and the rest, 23% (n=5) private higher education institutions. 45% (n=10) were located in the western part of Hungary, 41% (n=9) in Budapest, and 14% (n=3) in the eastern part of the country.

These findings show that 86% of the institutions (n=19) that implemented quality management systems at less than half of their study programmes were state-owned institutions, while almost three-fourths (n=16) that implemented a quality management system at more than half of their study programmes were colleges. This evidence suggests that the education quality management system in state-owned universities focused on a smaller part of their study programmes, while colleges, and especially non state-owned ones, were more comprehensive in this sense.

The second indicator of scope of quality management implementation explored whether institutions introduced quality management of research as part of their system by autumn 2004. This was measured in two categories.

Figure 5.5: Research quality management system (in %, n=40).

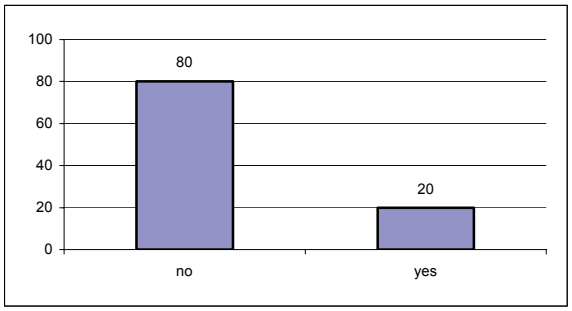


Figure 5.5 illustrates that only 20% of the institutions (n=8) implemented quality management systems for the research part, while 80% (n=32) did not by 2004.

25% (n=2) of the institutions that implemented quality management systems for the research part by 2004 were universities and 75% (n=6) colleges. 63% (n=5) of these institutions were state-owned, and 37% (n=3) private higher education institutions. 25% (n=2) were located in the western part of Hungary, 50% (n=4) in Budapest, and 25% (n=2) in the eastern part of the country. In addition, 38% (n=12) of the institutions that did not implement a research quality management system by 2004 were universities and 62% (n=20) colleges. 56% (n=18) of these institutions were state-owned, 35% (n=11) church-related, while 9% (n=3) were private higher education institutions. 31% (n=10) were located in the western part of Hungary, 41% (n=13) in Budapest, and 28% (n=9) in the eastern part of the country.

This evidence demonstrates that a relatively high (80) percentage of the institutions (n=32) did not implement research quality management systems, around two-thirds (n=20) of those that did not were colleges, and more than half (n=18) were state-owned institutions. In addition, three-fourths of the institutions (n=6) that implemented a quality management system for the research part were colleges. In sum, a relatively low number of higher education institutions implemented a research quality management system compared to the number of institutions that implemented an education quality management system.

The last indicator of scope addresses to what extent quality management systems implemented contained service and secondary support areas at institutions by autumn 2004. This was measured for fourteen areas and the answers were then condensed into two brackets.

Figure 5.6: Service and support quality management system (in %, n=44).

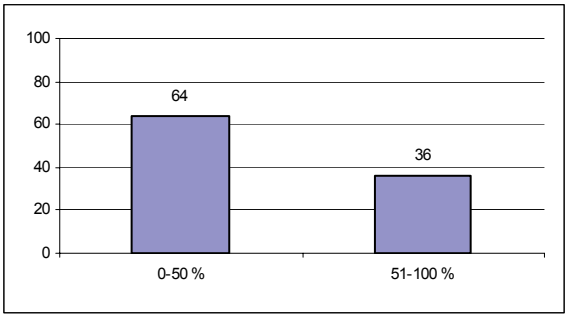


Figure 5.6 shows that just over one-third of the institutions (n=16) implemented service quality management systems more comprehensively (i.e. in more than 50% of the service and secondary support areas), while around two-thirds (n=28) did not (less than 50% of the service and secondary support area).

25% (n=4) of the institutions that implemented a service and support quality management system more comprehensively were universities and 75% (n=12) colleges. 50% (n=8) of these institutions were state-owned, 25% (n=4) church-related, and 25% (n=4) private higher education institutions. 25% (n=4) were located in the western part of Hungary, 50% (n=8) in Budapest, and 25% (n=4) in the eastern part of the country. In addition, 46% (n=13) of the institutions that implemented service and support quality management systems less comprehensively were universities and 54% (n=15) colleges. 64% (n=18) of these institutions were state-owned, 29% (n=8) were church-related, while 7% (n=2) were private higher education institutions. 32% (n=9) were located in the western part of Hungary, 39% (n=11) in Budapest, and 29% (n=8) in the eastern part of the country.

Consequently, the findings so far suggest that colleges implemented different parts of their quality management systems more comprehensively than universities, such as education, research, as well as service and support. Many more colleges implemented quality management systems than universities up to the end of 2004 and colleges were also faster. Finally, ISO models were the most popular among higher education institutions and many more colleges implemented ISO models than universities.

Furthermore, I was interested in the extent to which the institutions followed the instructions of the Protocol that was described in Chapter 3. The first indicator measured whether the institutions identified the students as stakeholders; the results showed that all institutions did. The second indicator measured whether the institutions identified the employers of graduated students as stakeholders. This was measured in two categories.

Figure 5.7: Employers identified as stakeholders (in %, n=44).

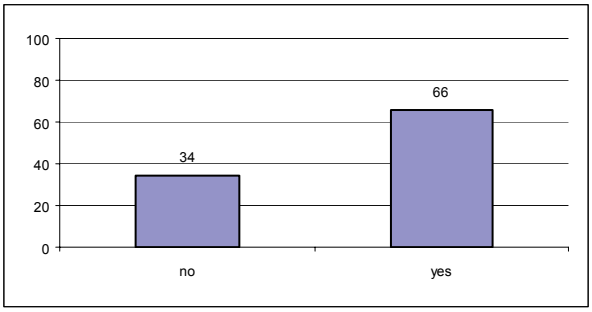


Figure 5.7 suggests that around two-thirds of the institutions (n=29) identified employers as stakeholders, while around one-third (n=15) did not. This seems to be a good ratio taking into account that the concept of 'employers as external stakeholders' was relatively new in Hungarian higher education.

41% (n=12) of the institutions that identified employers as stakeholders were universities and 59% (n=17) colleges. 59% (n=17) of these institutions were state-owned, 24% (n=7) church-related, and 17% (n=5) private higher education institutions. 28% (n=8) were located in the western part of Hungary, 48% (n=14) in Budapest, and 24% (n=7) in the eastern part of the country. In addition, 33% (n=5) of the institutions that did not identify employers as stakeholders were universities and 67% (n=10) colleges. 60% (n=9) of these institutions were state-owned, 33% (n=5) church-related, while 7% (n=1) were private higher education institutions. One-third (n=5) were located in the western part of Hungary, one-third (n=5) in Budapest, and also one-third (n=5) in the eastern part of the country. Consequently, it can be said that the evidence did not show any clear correlation with the three control variables.

The third indicator measured whether the institutions identified staff members as stakeholders. This was measured in two categories.

Figure 5.8: Staff members identified as stakeholders (in %, n=44).

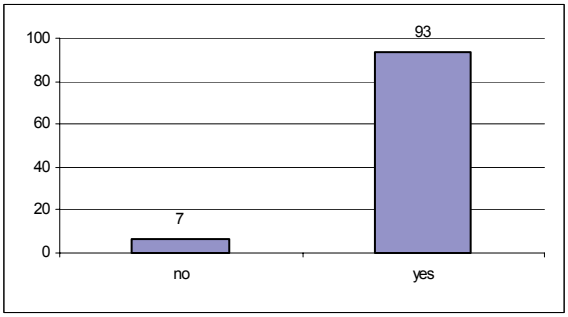


Figure 5.8 illustrates that almost all institutions (n=41) identified staff members as stakeholders, while only 7% (n=3) did not.

34% (n=14) of the institutions that identified staff members as stakeholders were universities and 66% (n=27) colleges. 56% (n=23) of these institutions were state-owned, 29% (n=12) church-related, and 15% (n=6) private higher education institutions. 29% (n=12) were located in the western part of Hungary, 44% (n=18) in Budapest, and 27% (n=11) in the eastern part of the country. In addition, all institutions (n=3) that did not identify staff members as stakeholders were state-owned universities.

The last indicator measured to what extent the institutions used quality indexes[36] in the areas where the Protocol suggested to use such indexes. This was measured in two categories.

Figure 5.9: Quality indexes used in fields suggested by the Protocol (in %, n=44).

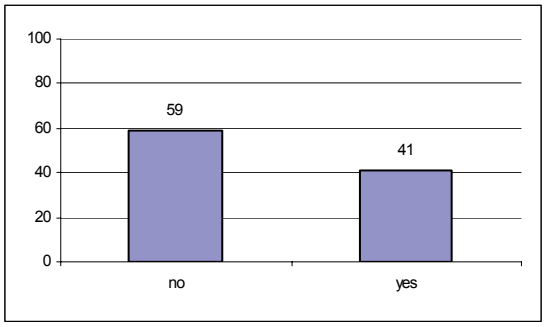


Figure 5.9 shows that more than half the institutions (n=26) did not use quality indexes in the suggested areas, while 41% (n=18) did.

33% (n=6) of the institutions that used quality indexes in the suggested areas were universities and 67% (n=12) colleges. 67% (n=12) of these institutions were state-owned, 11% (n=2) church-related, and 22% (n=4) private higher education institutions. One-third (n=6) were located in the western part of Hungary, one-third (n=6) in Budapest, and one-third (n=6) in the eastern part of the country. In addition, 42% (n=11) of the institutions that did not use quality indexes in the suggested areas were universities and 58% (n=15) colleges. 54% (n=14) of these institutions were state-owned, 38% (n=10) church-related, while 8% (n=2) were private higher education institutions. 27% (n=7) were located in the western part of Hungary, 50% (n=13) in Budapest, and 23% (n=6) in the eastern part of the

[36] Quality indexes are indicators that are used to determine the level of quality achieved: a measurable variable that can be used to determine the degree of adherence to a standard or achievement of quality goals.

country. To sum up, the evidence did not show any clear correlation with the three control variables.

Finally, I was interested in the extent to which the institutions were supported by external consultancy. The first indicator relates to the number of training hours delivered by external consultants. This is an ordinal variable with five categories.

Figure 5.10: Number of training hours (in %, n=44).

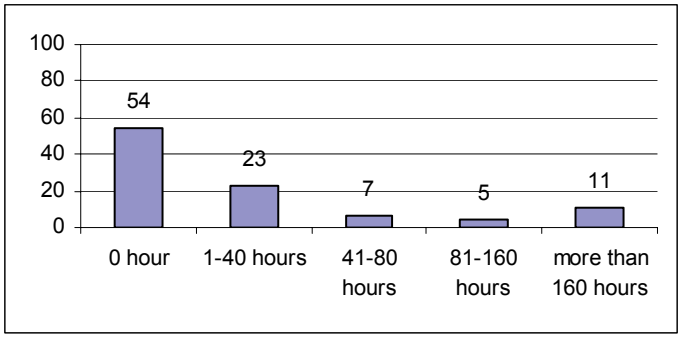


Figure 5.10 shows that more than half the institutions (n=24) were not supported by quality training provided by external consultants at all, while the other 46% (n=20) were supported to some extent. The relatively high percentage (46%) of institutions supported by external consultants is interesting to note—given the continuously decreasing governmental resources—because institutions have to mobilise quite some resources to do so.

25% (n=5) of the institutions that were supported by quality training provided by external consultants were universities and 75% (n= 15) colleges. 70% (n=14) of these institutions were state-owned, 20% (n=4) church-related, and the rest, 10% (n=2) private higher education institutions. 40% (n=8) were located in the western part of Hungary, 25% (n=5) in Budapest, and 35% (n=7) in the eastern part of the country. In addition, 50% (n=12) of the institutions that were not supported by external consultants at all were universities and 50% (n=12) colleges. 50% (n=12) of these institutions were state-owned, 33% (n=8) church-related, and the rest, 17% (n=4) private higher education institutions. 21% (n=5) were located in the western part of Hungary, 58% (n=14) in Budapest, and 21% (n=5) in the eastern part of the country. Most remarkable here was that three-fourths of the institutions (n=15) that were supported with quality training provided by external consultants were colleges, and 70% (n=14) state-owned institutions.

Moreover, 40% (n=4) of the institutions that were provided with between 1 and 40 hours of quality training were universities and 60% (n=6) colleges. 90% (n=9) of these institutions were state-owned and 10% (n=1) church-related higher education institutions. 40% (n=4) were located in the western part of Hungary,

10% (n=1) in Budapest, and 50% (n=5) in the eastern part of the country. Furthermore, all institutions (n=3) that were provided with between 41 and 80 hours of quality training were colleges in Budapest. In addition, all institutions (n=2) that were provided with between 81 and 160 hours of quality training were colleges located in the western part of Hungary. Finally, 20% (n=1) of the institutions that were provided with quality training of more than 160 hours were universities and 80% (n=4) colleges. 80% (n=4) of these institutions were state-owned, and the rest, 20% (n=1) church-related higher education institutions. These findings illustrate that 80% of the institutions (n=4) that were provided with the most quality training (more than 160 hours) were colleges, and all of these institutions (n=5) implemented ISO models.

Consequently, these findings suggest that colleges were supported more with quality training by external consultants than universities. This might, among other things, mean that colleges seem to have fewer internal human resources (time, knowledge) to train their staff members.

The second indicator measures the areas of external support. Institutions were asked whether external consultants helped in doing self-assessment, developing quality policy and a quality manual and implementing quality management systems. This is a variable with five categories.

Figure 5.11: Areas of external support (in %, n=44).

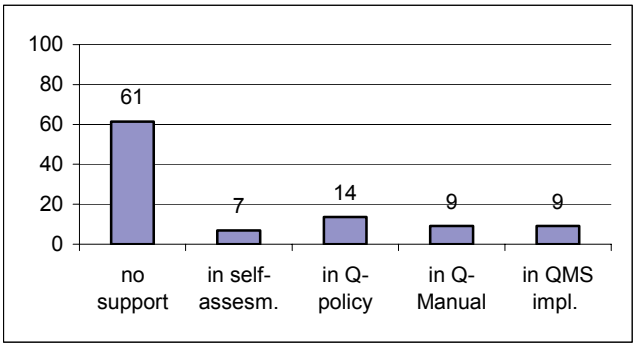


Figure 5.11 shows that more than half the institutions (n=27) were not supported in these areas, while 39% (n=17) were supported to some extent in these fields. That only 9% (n=4) of the institutions were supported by external consultancy through the whole implementation process may be due to the disadvantageous financial situation of higher education institutions and the relatively high price of such consultations.

48% (n=13) of the institutions that were not supported by external consultancy in these fields were universities and 52% (n=14) colleges. 63% (n=17) of these institutions were state-owned, 26% (n=7) church-related, and the rest, 11% (n=3) private higher education institutions. 26% (n=7) were located in the western part

of Hungary, 44% (n=12) in Budapest, and 30% (n=8) in the eastern part of the country. In addition, 24% (n=4) of the institutions that were supported by external consultancy to some extent in these fields were universities and 76% (n=13) colleges. 53% (n=9) of these institutions were state-owned, 29% (n=5) church-related, and the rest, 18% (n=3) private higher education institutions. 35% (n=6) were located in the western part of Hungary, 41% (n=7) in Budapest, and 24% (n=4) in the eastern part of the country. This evidence shows that around three-fourths of the institutions (n=13) that were supported by external consultants in these fields were colleges. It should also be highlighted that 88% (n=15) of the institutions that were supported by external consultancy in these fields were given quality training to some extent and also implemented a quality management system.

Moreover, the findings demonstrated that all institutions (n=4) that were supported by external consultancy in implementing quality management systems (comprehensive support by quality experts) were colleges and implemented ISO models.

In sum, these findings show that around three-fourths of the institutions (n=13) that were supported by external consultants in these fields were colleges, and only colleges (n=4) were 'the most comprehensively' supported by external consultants. This might suggest that colleges, as mentioned earlier, have fewer internal human resources and less knowledge to properly implement quality management systems without external consultants. Alternatively, this might suggest that colleges took quality management more seriously than universities; hence, they sought out more training, irrespective of resources. In addition, the findings suggests that only the type of institution (university-college)—as a control variable—was meaningful for the interpretation. Finally, the research found a strong correlation (Spearman's $\rho = 0.740$) between external consultancy and the use of ISO models.

Having described the population and the main characteristics of quality management implementation I turn now to statistical analyses to answer the research questions.

5.2 Statistical analyses

In the statistical analyses, a brief description of the independent and dependent variables will be given first. Then I will test the hypotheses by analysing the bivariate relationships between the individual independent and dependent variables. Finally, a brief account will be given of a multiple regression analysis of the same relationships.

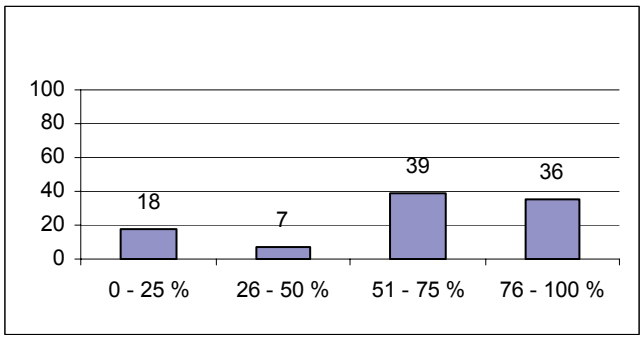
5.2.1 Building of variables

The quantitative independent variables[37] include (financial) dependency, complexity, reputation, the disciplinary balance, and external consultancy. The dependent variables include the Protocol and the pace and scope of quality management implementation. The construction of variables[38] is based on the operationalisation already presented in Chapter 4.

Dependency

The 'dependency' variable relates to the financial dependency of higher education institutions. Institutional income was divided into two categories: financial resources from the government and from other sources. Originally, these indicators were measured at a ratio scale, and I calculated the sum of both categories. The total income from government and from other sources was computed and the financial dependency was defined as the governmental income divided by the total income at a particular higher education institution. This data was condensed into four brackets. The frequency distribution of the variable is shown in Figure 5.12[39].

Figure 5.12: Financial dependency (in %, n=28).



[37] The description of institutional complexity and reputation is addressed in Appendix II.

[38] Associations between the indicators of variables can be measured by correlation indexes, which gauge the strength of the relationship or association (Chen & Popovich, 2002; Blalock, 1972). It can provide us information whether the variables measure the same construct. If yes, one variable can be left out. Still I will not do this automatically but take into account what my theory says. Pearson's r is probably the most widely used statistic but, in my case, the most fruitful one to use is the Spearman rank order correlation (r_{rank}). This assesses the relationship between two sets of true ranked scores. Taking the minimum (or average) proposed level of 0.7 for r_{rank} (Nunnally, 1978), one of the indicators can be left out if the value of r_{rank} is over 0.7.

[39] As mentioned earlier, data concerning institutional incomes were not provided in some cases. Through telephone calls and site visits in a number of cases additional financial information was obtained, which raised the number of cases to 28 for income-related data.

Figure 5.12 suggests that most Hungarian higher education institutions were quite dependent from governmental funding in their overall income. More than one-third of the institutions (n=10) received more than 75% of their income from government, about 40% (n=11) received between 51% and 75% of their income from government. This is what I had expected because the proportion of state and church-related[40] higher education institutions together in Hungary is around 84%.

All institutions (n=5) that received less than 25% of their income from government were colleges. 20% (n=1) of these institutions were state-owned, while 80% (n=4) were private higher education institutions. 20% (n=1) were located in the western part of Hungary, and 80% (n=4) in Budapest. In addition, one of the institutions that received between 25% and 50% of their income from government was a university and the other a college. One of these institutions was state-owned, and the other a private higher education institution. One was located in the western part of Hungary, and the other in Budapest. Furthermore, 64% (n=7) of the institutions that received between 51% and 75% of their income from government were universities and 36% (n=4) colleges. All these institutions (n=11) were state-owned higher education institutions. 46% (n=5) were located in the western part of Hungary, 27% (n=3) in Budapest, and also 27% (n=3) in the eastern part of the country. Finally, 30% (n=3) of the institutions that received more than 75% of their income from government were universities and 70% (n=7) colleges. 60% (n=6) of these institutions were state-owned, and 40% (n=4) church-related higher education institutions. 30% (n=3) were located in the western part of Hungary, 40% (n=4) in Budapest, and 30% (n=3) in the eastern part of the country.

These findings illustrate that all institutions (n=5) that were relatively independent from governmental funding (less than 25% of their income from government) were colleges and 80% of them (n=4) were private colleges. 81% (n=17) of the institutions that were relatively dependent from governmental funding (more than 50% of their income from government) were state-owned higher education institutions. Overall state-owned and church-related institutions were more dependent from governmental funding than private ones.

Complexity

The 'complexity' variable describes to what extent institutions are complex in terms of horizontal, vertical and geographical dispersion. The first indicator measured the horizontal differentiation of the institutions concerning disciplinary fields. The second indicator described the vertical differentiation of the institutional study programme systems (such as VT, BSc, MSc, and PhD). The third one measured their geographical dispersion. The results of these three

[40] As mentioned in Chapter 4, church institutions are also provided with governmental funding in Hungary.

indicators were condensed into one composite variable (the highest correlation among the three indicators = 0.612, which means that they indicate different dimensions of the variable) and its frequency distribution is shown in Figure 5.13.

Figure 5.13: Complexity of higher education institutions (in %, n=44).

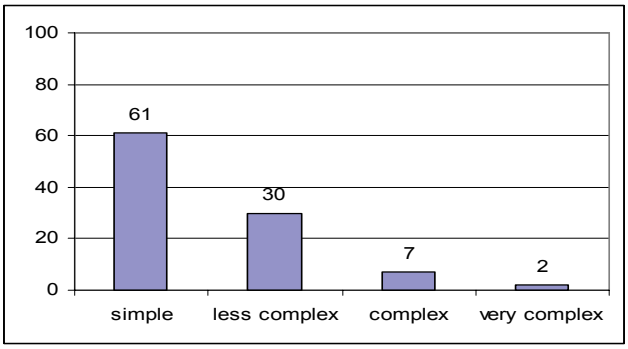


Figure 5.13 shows that many of the institutions were not complex. 61% (n=27) of the institutions were simple and 30% (n=13) were less complex.

11% (n=3) of the simple institutions were universities and 89% (n=24) colleges. 41% (n=11) of these institutions were state-owned, 37% (n=10) church-related, and the rest, 22% (n=6) private higher education institutions. 26% (n=7) were located in the western part of Hungary, 52% (n=14) in Budapest, and 22% (n=6) in the eastern part of the country. In addition, 77% (n=10) of the less complex institutions were universities and 23% (n=3) colleges. 85% (n=11) of these institutions were state-owned, and 15% (n=2) church-related higher education institutions. 31% (n=4) were located in the western part of Hungary, 38% (n=5) in Budapest, and 31% (n=4) in the eastern part of the country. Furthermore, all complex institutions (n=3) were state universities and two of them were located in the west, with only one in the eastern part of Hungary. Finally, the only very complex institution was a state-owned university located in the eastern part of Hungary.

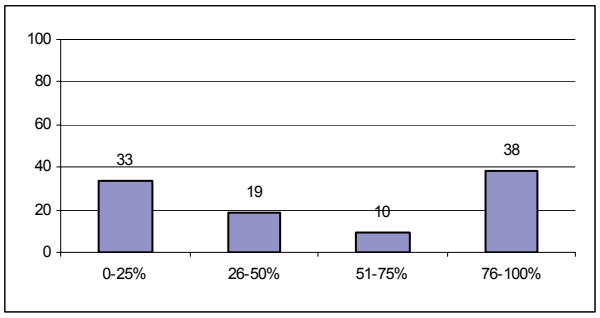
These findings show that 89% of the simple institutions (n=24) were colleges, while all complex and very complex institutions (n=4) were state-owned universities.

Disciplinary balance

The 'disciplinary balance' variable describes to what extent the institutional balance is towards hard and convergent disciplines. The first indicator measured the number of study programmes in hard and convergent disciplines. This was normalised by the total number of study programmes per institution. Both were

measured originally at ratio scale. These figures were condensed into four brackets. The frequency distribution of the variable is shown in Figure 5.14.

Figure 5.14: Disciplinary balance towards hard and convergent fields (in %, n=42).



As Figure 5.14 indicates, many institutions (n=30) were on either end of the scale. 33% (n=14) of the institutions were on the soft and divergent end, while 38% (n=16) were on the hard and convergent end of the scale.

29% (n=4) of the institutions that were on the soft and divergent end of the scale were universities and 71% (n=10) colleges. 29% (n=4) of these institutions were state-owned, while 71% (n=10) were church-related higher education institutions. 29% (n=4) were located in the western part of Hungary, 57% (n=8) in Budapest, and 14% (n=2) in the eastern part of the country. In addition, 50% (n=4) of the institutions that were more on the soft and/or divergent part of the scale (i.e. between 26% and 50%) were universities and also 50% (n=4) were colleges. 50% (n=4) of these institutions were state-owned, 25% (n=2) church-related, and the rest, 25% (n=2) private higher education institutions. More than one-third (n=3) were located in the western part of Hungary, 25% (n=2) in Budapest, and the rest (n=3) in the eastern part of the country. Furthermore, 50% (n=2) of the institutions that were more on the hard and/or convergent part of the scale (i.e. between 51% and 75%) were universities and 50% (n=2) colleges. All these institutions (n=4) were state-owned higher education institutions. Half (n=2) were located in the western part, and the other half (n=2) in the eastern part of the country. Finally, 31% (n=5) of the institutions that were on the hard and convergent end of the scale were universities and 69% (n=11) colleges. 75% (n=12) of these institutions were state-owned, while 25% (n=4) were private higher education institutions. 19% (n=3) were located in the western part of Hungary, 56% (n=9) in Budapest, and 25% (n=4) in the eastern part of the country.

This evidence illustrates that universities are rather balanced, while colleges are on either end of the scale. In addition, all institutions that concentrate on either hard-convergent or soft-divergent disciplines are also the institutions that are less complex.

External consultancy

The 'external consultancy' variable relates to the question to what extent external consultancy supported the implementation of quality management. In the questionnaire, institutions were asked about the number of training hours delivered by external consultants and the areas of external support. The results of these two indicators were merged into one composite variable (correlation between the indicators = 0.702, which is on the borderline of acceptability, as a high correlation means that the two indicators almost measure the same concept) and its frequency distribution is shown in Figure 5.15.

Figure 5.15: External consultancy (in %, n=44).

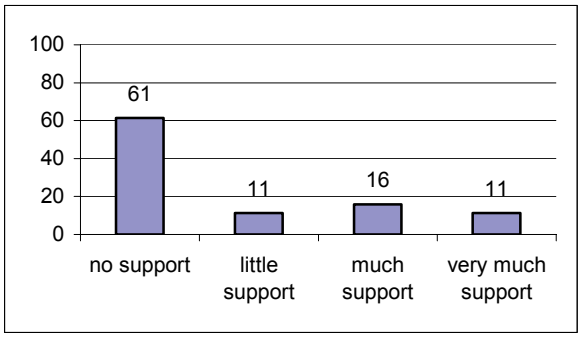


Figure 5.15 indicates that almost two-thirds of the institutions (n=27) were not supported by external consultants at all, and only 11% (n=5) were provided with very much support.

48% (n=13) of the institutions that were not supported by external consultants were universities and 52% (n=14) colleges. 63% (n=17) of these institutions were state-owned, 26% (n=7) church-related, and the rest, 11% (n=3) private higher education institutions. 26% (n=7) were located in the western part of Hungary, 44% (n=12) in Budapest, and 30% (n=8) in the eastern part of the country. In addition, 14% (n=1) of the institutions that were much supported by external consultants were universities and 86% (n=6) colleges. Finally, 20% (n=1) of the institutions that were very much supported by external consultants were universities and 80% (n=4) colleges. 80% (n=4) of these institutions were state-owned, and 20% (n=1) church-related higher education institutions.

These findings show that 83% of the institutions (n=10) with much or very much support were colleges. In addition, all institutions (n=5) with very much support received more than 50% of their income from government and were simple or less complex higher education institutions.

Institutional reputation

The 'institutional reputation' variable is the overall estimation in which a particular university or college is held by its stakeholders. The first indicator measured the institutional reputation on the input side (students' over-application rate). The second described the institutional age based on the starting year of the institutions. The third indicator measured the academic qualification of staff members. The last one measured the number of their study programmes. The results of these four indicators were condensed into one composite variable (the highest correlation among the four indicators = 0.460, which means that they indicate different dimensions of the variable) and its frequency distribution is shown in Figure 5.16.

Figure 5.16: Institutional reputation (in %, n=44).

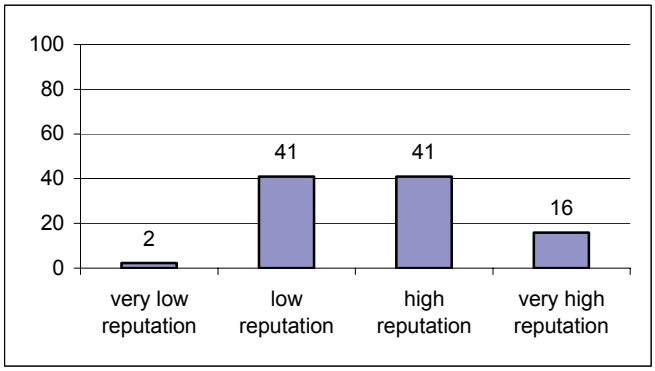


Figure 5.16 shows that more than half the institutions (n=25) had relatively high reputations. 41% (n=18) had high, while 16% (n=7) had very high reputations.

One church-related college in Budapest had a very low reputation. In addition, 6% (n=1) of the institutions with low reputations were universities and 94% (n=17) colleges. 22% (n=4) of these institutions were state-owned, 45% (n=8) church-related, and the rest, 33% (n=6) private higher education institutions. 33% (n=6) were located in the western part of Hungary, 45% (n=8) in Budapest, and 22% (n=4) in the eastern part of the country. Furthermore, 50% (n=9) of the institutions with high reputations were universities and 50% (n=9) colleges. 83% (n=15) of these institutions were state-owned, while 17% (n=3) were church-related higher education institutions. 28% (n=5) were located in the western part of Hungary, 50% (n=9) in Budapest, and 22% (n=4) in the eastern part of the country. Finally, all institutions (n=7) with very high reputations were state-owned universities. 29% (n=2) were located in the western part of Hungary, 14% (n=1) in Budapest, and 57% (n=4) in the eastern part of the country.

These figures show that almost all institutions (n=18) with very low and low reputations were colleges, while all institutions (n=7) with very high reputations were state-owned universities. In addition, 86% (n=6) of the institutions with very high reputations were not supported by external consultants.

Protocol

The 'Protocol' variable indicates to what extent institutions followed the Protocol during the implementation of quality management systems. The questions posed to institutions were whether they identified students, employers and staff members as stakeholders and whether institutional management was quality based[41]. This last indicator measured whether institutions used quality indexes[42] in fields where the Protocol suggested. The values of the four indicators were added and then merged into one composite variable (the highest correlation among the four indicators = 0.121, which means that they indicate different dimensions of the variable) and its frequency distribution is shown in Figure 5.17.

Figure 5.17: Protocol (in %, n=44).

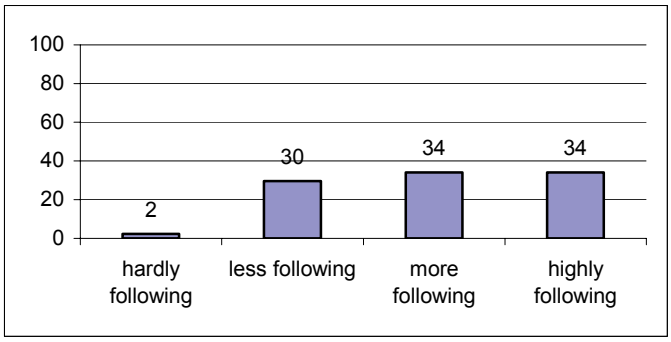


Figure 5.17 shows that scores are skewed to the right, which indicates that the institutions followed the instructions of the Protocol more than not. 34% (n=15) followed more, while the same 34% (n=15) followed the Protocol highly during the implementation of quality management systems.

The only institution that hardly followed the Protocol was a state-owned university in Budapest. In addition, 38% (n=5) of the institutions that followed the Protocol less were universities and 62% (n=8) colleges. 62% (n=8) of these institutions were state-owned, while 38% (n=5) were church-related higher education institutions. 46% (n=6) were located in the western part of Hungary,

41 The Protocol expects that institutions use indicators to estimate different parts of their working area. I labelled these indicators as 'Protocol following'.

42 For example: quality indexes concern teachers' performance, students' performance, facilities for teaching, and others.

16% (n=2) in Budapest, and 38% (n=5) in the eastern part of the country. Furthermore, 40% (n=6) of the institutions that followed the Protocol more were universities and 60% (n=9) colleges. 47% (n=7) of these institutions were state-owned, 33% (n=5) church-related, and the rest, 20% (n=3) private higher education institutions. 7% (n=1) were located in the western part of Hungary, 80% (n=12) in Budapest, and 13% (n=2) in the eastern part of the country. Finally, one-third (n=5) of the institutions that highly followed the Protocol were universities and two-thirds (n=10) colleges. 67% (n=10) of these institutions were state-owned, 13% (n=2) church-related, and the rest, 20% (n=3) private higher education institutions. 40% (n=6) were located in the western part of Hungary, 27% (n=4) in Budapest, and 33% (n=5) in the eastern part of the country.

This evidence illustrates that almost two-thirds of the institutions (n=19) that more or highly followed the Protocol were colleges, and 57% (n=17) were state higher education institutions.

Pace of implementation

The 'pace of implementation' variable measured the institution's speed of quality management implementation. The first indicator addresses the year of developing quality manuals and the second one explores whether institutions introduced quality management systems by autumn 2004. The answers to these indicators were summed and then merged into one composite variable (correlation = 0.406, which means that they indicate different dimensions of the variable) and its frequency distribution is shown in Figure 5.18.

Figure 5.18: Pace of implementation (in %, n=44).

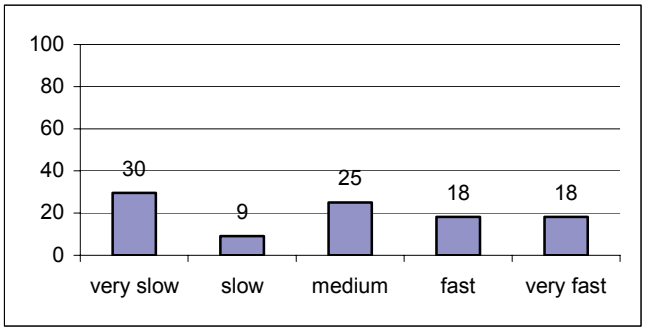


Figure 5.18 indicates that fewer institutions (n=16) have a (very) fast pace in quality management implementation. 18% (n=8) of the institutions implemented quality management systems fast and another 18% (n=8) very fast.

62% (n=8) of the institutions that implemented quality management systems very slowly were universities and 38% (n=5) colleges. 92% (n=12) of these institutions were state-owned, and only 8% (n=1) church-related higher education institutions. 16% (n=2) were located in the western part of Hungary, 46% (n=6) in Budapest, and 38% (n=5) in the eastern part of the country. In addition, all the institutions (n=4) that implemented a quality management system slowly were state-owned higher education institutions. Furthermore, 54% (n=6) of the institutions that implemented quality management systems with medium pace were universities and 46% (n=5) colleges. 46% (n=5) of these institutions were state-owned, 46% (n=5) church-related, and the rest, 8% (n=1) private higher education institutions. Furthermore, all institutions (n=8) that implemented a quality management system fast were colleges. 50% (n=4) of these institutions were state-owned, and 50% (n=4) were also church-related higher education institutions. Finally, 13% (n=1) of the institutions that implemented quality management systems very fast were universities and 87% (n=7) colleges. 13% (n=1) of these institutions were state-owned, 25% (n=2) church-related, and 62% (n=5) private higher education institutions. 38% (n=3) were located in the western part of Hungary, and 62% (n=5) in Budapest.

These findings show that 94% (n=16) of the institutions that implemented quality management systems very slowly or slowly were state-owned higher education institutions. Furthermore, also 94% (n=15) of the institutions that implemented a quality management system fast or very fast were colleges. In addition, 62% (n=5) of the institutions that implemented quality management systems very fast were private higher education institutions. This would indicate that colleges and private institutions implemented quality management systems faster than universities and state-owned institutions.

Scope of implementation

The 'scope of implementation' variable explores the scope of quality management systems implemented at a particular institution. Measures of scope cover three dimensions. The first indicator measured to what extent a quality management system implemented contains the study programmes at institutions. The second explored whether institutions implemented research quality management systems or not. The last indicated to what extent a quality management system implemented contains service and secondary support areas. The values of these three indicators were summarised into one composite variable (the highest correlation among the three indicators = 0.440, which means that they indicate different dimensions of the variable) and its frequency distribution is shown in Figure 5.19.

Figure 5.19: Scope of implementation (in %, n=40).

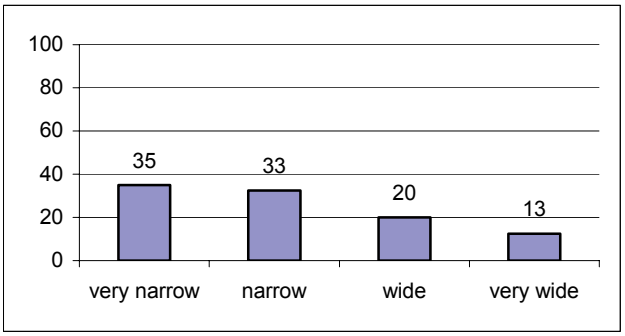


Figure 5.19 indicates that more institutions had a rather narrow scope of quality management implementation. 35% (n=14) had a very narrow scope, 33% (n=13) narrow, while only 33% (n=13) had a wide or very wide scope of quality management implementation.

57% (n=8) of the institutions that had a very narrow scope of quality management implementation were universities and 43% (n=6) colleges. 86% (n=12) of these institutions were state-owned, and only 14% (n=2) church-related higher education institutions. 14% (n=2) were located in the western part of Hungary, 43% (n=6) in Budapest, and 43% (n=6) in the eastern part of the country. In addition, 23% (n=3) of the institutions that had a narrow scope of quality management implementation were universities and 77% (n=10) colleges. 39% (n=5) of these institutions were state-owned, 46% (n=6) church-related, and the rest, 15% (n=2) private higher education institutions. 39% (n=5) were located in the western part of Hungary, 46% (n=6) in Budapest, and 15% (n=2) in the eastern part of the country. Furthermore, 25% (n=2) of the institutions that had a wide scope of quality management implementation were universities and 75% (n=6) colleges. 38% (n=3) of these institutions were state-owned, 38% (n=3) church-related, and the rest, 24% (n=2) private higher education institutions. 50% (n=4) were located in the western part of Hungary, 25% (n=2) in Budapest, and 25% (n=2) in the eastern part of the country. Finally, 20% (n=1) of the institutions that had a very wide scope of quality management implementation were universities and 80% (n=4) colleges. 60% (n=3) of these institutions were state-owned, and 40% (n=2) private higher education institutions. 20% (n=1) were located in the western part of Hungary, 60% (n=3) in Budapest, and 20% (n=1) in the eastern part of the country.

This evidence illustrates that 81% of the institutions (n=22) that had a very narrow or narrow scope of quality management implementation were state-owned higher education institutions. In addition, 77% of the institutions (n=10) that had a wide or very wide scope of quality management implementation were colleges and implemented quality management systems with a high or very high

pace. These would indicate that state-owned institutions implemented quality management systems with a narrower scope and colleges with a wider scope.

5.2.2 Cross-tabulation analysis

As a following step in the statistical analysis the bivariate relationships between selected dependent and independent variables will be discussed[43]. For analysing their relationships, the cross-tabulation method will be used. Thus a number of cross-tabs will be constructed, one for each relationship. It should be highlighted that the conclusions of these statistical analyses must remain tentative because of the relatively low number of cases, as I mentioned in Chapter 4.

Dependency – pace

According to hypothesis 1a it is expected that institutions with higher dependency would implement quality management faster. Table 5.2 shows, on the contrary, that an institution's financial dependency has a negative relationship (-0.201) with the pace of quality management, which indicates that the more dependent the higher education institutions are the slower the pace of quality management implemented. This relationship, however, was not statistically significant at the 5% level.

Table 5.2: Relationship between dependency and pace.

Dependency		Pace					Total
		very slow	slow	medium	fast	very fast	
0 - 25 %	N	*1*				*4*	*5*
	%	20.0				80.0	100.0
26 - 50 %	N					*2*	*2*
	%					100.0	100.0
51 - 75 %	N	*6*	*1*	*2*	*2*		*11*
	%	54.5	9.1	18.2	18.2		100.0
76 - 100 %	N	*3*	*1*	*1*	*3*	*2*	*10*
	%	30.0	10.0	10.0	30.0	20.0	100.0
Total	N	*10*	*2*	*3*	*5*	*8*	*28*
	%	35.7	7.1	10.7	17.9	28.6	100.0

Kendall's τ_c = -0.201; p=0.253

[43] Note that throughout this chapter I will use the word *relationship* to imply both strength and direction, which indicates that two variables show related patterns in their values. This does not imply causality in the relationships. In this study I will reserve the term *correlation* if I address the statistical Pearson or Spearman correlation measure.

To have a closer look into this finding two further cross-tabs were carried out. The relationship between the 'dependency' variable on the one hand and the indicators used to build the 'institutional pace' variable on the other hand was tested. These cross-tabs showed that dependency has a negative relationship with the pace of developing both quality manuals and quality management systems (-0.260, -0.119 respectively), but neither was statistically significant at the 5% level. Based on the methodology used in this study this suggests that there is no statistically significant relationship between institutional dependency and pace of quality management implementation.

Dependency – Protocol

According to hypothesis 1b it is expected that institutions with higher dependency would follow the governmental Protocol more than other higher education institutions. Table 5.3 shows that an institution's financial dependency has a statistically significant negative relationship (-0.286) with using the Protocol (p=0.017), which is in the opposite direction from my hypothesis. It would suggest that based on the methodology used in this study the more dependent higher education institutions are the less they are 'Protocol following'. Behind this result could be the fact that the Protocol does not provide a comprehensive model for institutions as I explained in Chapter 3. Further reasons were explored through the interviews I took at institutions.

Table 5.3: Relationship between dependency and the Protocol.

Dependency		**Protocol**				Total
		hardly following	less following	more following	highly following	
0 - 25 %	N			*4*	*1*	*5*
	%			80.0	20.0	100.0
26 - 50 %	N				*2*	*2*
	%				100.0	100.0
51 - 75 %	N		*3*	*1*	*7*	*11*
	%		27.3	9.1	63.6	100.0
76 - 100 %	N		*4*	*5*	*1*	*10*
	%		40.0	50.0	10.0	100.0
Total	N		*7*	*10*	*11*	*28*
	%		25.0	35.7	39.3	100.0

Kendall's τb = -0.286; p=0.017

Complexity – pace

According to hypothesis 2a it is expected that institutions with higher complexity would implement quality management slower. Table 5.4 shows that institutional complexity has a statistically significant negative relationship (-0.293) with the pace of quality management implementation (p=0.009). It means that indeed the more complex the higher education institutions the slower the pace of quality management implementation.

Table 5.4: Relationship between complexity and pace.

Complexity		**Pace**					Total
		very slow	slow	medium	fast	very fast	
simple	N	*6*	*1*	*6*	*7*	*7*	*27*
	%	22.2	3.7	22.2	25.9	25.9	100.0
less complex	N	*4*	*3*	*5*	*1*		*13*
	%	30.8	23.1	38.5	7.7		100.0
complex	N	*2*				*1*	*3*
	%	66.7				33.3	100.0
very complex	N	*1*					*1*
	%	100.0					100.0
Total	N	*13*	*4*	*11*	*8*	*8*	*44*
	%	29.5	9.1	25.0	18.2	18.2	100.0

Kendall's τ_c = -0.293; p=0.009;

Complexity – scope

According to hypothesis 2b it is expected that institutions with higher complexity would implement quality management with a narrower scope. Table 5.5 shows that institutional complexity has a negative relationship (-0.159) with the scope of quality management, which would suggest that the more complex the higher education institutions the narrower the scope of quality management implemented, in accordance with the hypothesis. However, this relationship was not statistically significant at the 5% level.

Table 5.5: Relationship between complexity and scope.

Complexity		Scope				Total
		very narrow	narrow	wide	very wide	
simple	N	*7*	*9*	*5*	*4*	*25*
	%	28.0	36.0	20.0	16.0	100.0
less complex	N	*5*	*3*	*3*		*11*
	%	45.5	27.3	27.3		100.0
complex	N	*1*	*1*		*1*	*3*
	%	33.3	33.3		33.3	100.0
very complex	N	*1*				*1*
	%	100.0				100.0
Total	N	*14*	*13*	*8*	*5*	*40*
	%	35.0	32.5	20.0	12.5	100.0

Kendall's τ_b = -0.159; p=0.271;

In order to elaborate this result, three further cross-tabs were carried out. The relationship between the 'complexity' variable on the one hand and the indicators used to build the 'institutional scope' variable on the other hand was tested. These cross-tabs showed that complexity has the expected negative relationship with using education and service and support quality management systems (-0.285, -0.117 respectively), while it has practically no relationship with using a research quality management system (0.006). However, only one—concerning the education quality management system—was statistically significant at the 5% level. Based on the methodology used in this study this suggests that there is no statistically significant relationship between institutional complexity and scope of quality management implementation, although the relationship tends to go in the direction that the hypothesis predicted.

Disciplinary balance – pace

According to hypothesis 3a it is expected that the more the disciplinary balance is towards hard and convergent sciences within institutions, the faster the pace of quality management implementation. Table 5.6 shows, however, that a balance towards hard and convergent sciences has a negative relationship (-0.060) with the pace of quality management, but this is very weak and also not statistically significant at the 5% level.

Table 5.6: Relationship between disciplinary balance and pace.

Disciplinary balance		Pace					Total
		very slow	slow	medium	fast	very fast	
0-25%	N	*3*	*1*	*4*	*4*	*2*	*14*
	%	21.4	7.1	28.6	28.6	14.3	100.0
26-50%	N	*3*		*3*		*2*	*8*
	%	37.5		37.5		25.0	100.0
51-75%	N	*2*			*2*		*4*
	%	50.0			50.0		100.0
76-100%	N	*4*	*3*	*4*	*2*	*3*	*16*
	%	25.0	18.8	25.0	12.5	18.8	100.0
Total	N	*12*	*4*	*11*	*8*	*7*	*42*
	%	28.6	9.5	26.2	19.0	16.7	100.0

Kendall's τ_c = -0.060; p=0.614;

For a closer look into this finding further cross-tabs were carried out between the 'disciplinary balance' variable and the indicators used to build the 'pace' variable of quality management implementation. These cross-tabs showed that a balance towards hard and convergent sciences has a slightly negative relationship with the pace of developing both quality manuals and quality management systems (-0.082, -0.043 respectively), but neither was statistically significant at the 5% level. Based on the methodology used in this study this suggests that there is no statistically significant relationship between disciplinary balance and pace of quality management implementation.

Disciplinary balance – scope

According to hypothesis 3b it is expected that the more the disciplinary balance is towards hard and convergent sciences within institutions, the wider the scope of quality management implementation. Table 5.7 shows that a balance towards hard and convergent sciences has a positive relationship (0.150) with the scope of quality management, which suggests that the more the balance towards hard, convergent sciences the wider the scope of quality management implemented. This relationship, however, was not statistically significant at the 5% level.

Again, in order to have a closer look into this finding three further cross-tabs were carried out. The relationship between the 'disciplinary balance' variable and the indicators used to build the variable 'institutional scope' was tested. These cross-tabs showed that a balance towards hard and convergent sciences has a negative relationship with using education and service and support quality management systems (-0.207, -0.140 respectively), while it has a positive relationship on using a research quality management systems (0.277). However, only the latter was statistically significant at the 5% level. This means that the more the balance towards hard and convergent sciences the more the higher education institutions implemented research quality management systems.

Table 5.7: Relationship between disciplinary balance and scope.

Disciplinary balance		Scope				Total
		very narrow	narrow	wide	very wide	
0-25%	N	*5*	*5*	*3*		*13*
	%	38.5	38.5	23.1		100.0
26-50%	N	*4*	*1*	*2*	*1*	*8*
	%	50.0	12.5	25.0	12.5	100.0
51-75%	N	*1*	*1*	*2*		*4*
	%	25.0	25.0	50.0		100.0
76-100%	N	*3*	*6*	*1*	*3*	*13*
	%	23.1	46.2	7.7	23.1	100.0
Total	N	*13*	*13*	*8*	*4*	*38*
	%	34.2	34.2	21.1	10.5	100.0

Kendall's τ_b = 0.150; p=0.236;

External consultant – pace

According to hypothesis 5a it is expected that institutions with more external support would implement quality management faster. Table 5.8 shows that external consultancy has a statistically significant positive relationship (0.415) with the pace of quality management (p=0.000). It means that the more the external support, the faster the pace of quality management implementation.

Table 5.8: Relationship between external consultancy and pace.

External consultancy		Pace					Total
		very slow	slow	medium	fast	very fast	
no support	N	*13*	*2*	*7*	*2*	*3*	*27*
	%	48.1	7.4	25.9	7.4	11.1	100.0
little support	N		*2*	*2*	*1*		*5*
	%		40.0	40.0	20.0		100.0
much support	N			*1*	*1*	*5*	*7*
	%			14.3	14.3	71.4	100.0
very much support	N			*1*	*4*		*5*
	%			20.0	80.0		100.0
Total	N	*13*	*4*	*11*	*8*	*8*	*44*
	%	29.5	9.1	25.0	18.2	18.2	100.0

Kendall's τ_c = 0.415; p=0.000;

External consultant – scope

According to hypothesis 5b it is expected that institutions with higher external support would implement quality management with a wider scope. Table 5.9 shows that external consultancy has a statistically significant positive relationship (0.556) with the scope of quality management (p=0.000). It means, as expected, that the higher the external support the wider the scope of quality management implemented.

Table 5.9: Relationship between external consultancy and scope.

External consultancy		**Scope**				Total
		very narrow	narrow	wide	very wide	
no support	N	*12*	*11*	*2*		*25*
	%	48.0	44.0	8.0		100.0
little support	N	*2*		*2*		*4*
	%	50.0		50.0		100.0
much support	N		*1*	*2*	*3*	*6*
	%		16.7	33.3	50.0	100.0
very much support	N		*1*	*2*	*2*	*5*
	%		20.0	40.0	40.0	100.0
Total	N	*14*	*13*	*8*	*5*	*40*
	%	35.0	32.5	20.0	12.5	100.0

Kendall's $\tau_b = 0.556$; p=0.000;

Institutional reputation – pace

Hypothesis 7a presented two possible correlations between institutional reputation and pace. If it is more negative, then the 'more reputation' finding implies independence from governmental resources. If it is more positive, then the 'more reputation' finding implies actual decision-making capacity of the higher education institution. Table 5.10 shows that institutional reputation has a statistically significant negative relationship (-0.431) with the pace of quality management implementation (p=0.000). Accordingly, the independence from governmental resources seems to explain this relationship rather than increased decision-making capacity.

Table 5.10: Relationship between reputation and pace.

Reputation		Pace					Total
		very slow	slow	medium	fast	very fast	
very low	N					*1*	*1*
	%					100.0	100.0
low	N	*3*		*4*	*6*	*5*	*18*
	%	16.7		22.2	33.3	27.8	100.0
high	N	*5*	*3*	*7*	*2*	*1*	*18*
	%	27.8	16.7	38.9	11.1	5.6	100.0
very high	N	*5*	*1*			*1*	*7*
	%	71.4	14.3			14.3	100.0
Total	N	*13*	*4*	*11*	*8*	*8*	*44*
	%	29.5	9.1	25.0	18.2	18.2	100.0

Kendall's τ_c = -0.431; p=0.000;

Institutional reputation – scope

Hypothesis 7b presented two possible correlations between institutional reputation and scope, analogous to hypothesis 7a.

Table 5.11: Relationship between reputation and scope.

Reputation		Scope				Total
		very narrow	narrow	wide	very wide	
very low	N		*1*			*1*
	%		100.0			100.0
low	N	*3*	*6*	*5*	*3*	*17*
	%	17.6	35.3	29.4	17.6	100.0
high	N	*5*	*6*	*3*	*1*	*15*
	%	33.3	40.0	20.0	6.7	100.0
very high	N	*6*			*1*	*7*
	%	85.7			14.3	100.0
Total	N	*14*	*13*	*8*	*5*	*40*
	%	35.0	32.5	20.0	12.5	100.0

Kendall's τ_b = -0.340; p=0.012;

Table 5.11 shows that institutional reputation has a statistically significant negative relationship (-0.340) with the scope of quality management implementation (p=0.012). Again, the independence from governmental resources seems to explain this relationship rather than increased decision-making capacity.

To get more information and have another look at the results of the cross-tabular analysis, in the next section a multiple regression analysis will show

whether the independent variables together concerning one dependent variable indicate the same result for quality management implementation.

5.2.3 Multiple regression

It does not seem wise to trust only in a single analysis, thus a more sophisticated one was planned to be used as a triangulation of methods. Moreover, by performing a multiple regression, I could also get insight into higher-order effects, i.e. whether the constellation of independent variables collectively has different effects than what appeared in the bivariate analysis. In using multiple regression analysis[44], however, because of the relatively small number of cases I am interested more in the direction than in statistically significant results. This does not mean that I do not focus on the significance but that the direction of the results is even more important. In this section, first the potential interactions among the independent variables and then the multiple regression will be addressed.

Potential interactions among the independent variables

As an intermediate step between the cross-tab analysis of the individual relationships between the independent and dependent variables and multiple regression, first I have to explore whether there are correlations among the independent variables. I made correlation analyses among my five independent variables: dependency, external consultancy, disciplinary balance, complexity and institutional reputation. Nunnally (1978) emphasised that one of the indicators can fruitfully be left out if the value of the correlation between the indicators is over 0.7. I found only one relatively high statistically significant relationship at the 5% level, namely between complexity and institutional reputation, but it was lower than 0.7 (the value was 0.686). This result suggests that each independent variable can stay in my models for multiple regression.

Multiple regression analysis

As explained in Chapter 4, multiple regression analysis can be used to test the combined effects of the independent variables. Such an approach may lead to different outcomes—in terms of directions and significant relationships—than those found in the previous cross-tabs. Two separate multiple regression analyses were executed: one with pace and the other with scope of quality management

[44] I am interested in whether a particular combination of independent variables are more useful than others to predict the dependent variable, and whether the variation in dependent variables can be explained adequately by the combined variations in each of the model's independent variables.

implementation as the dependent variable. The major outcomes from the multiple regression analysis are presented in Table 5.12.

The general result from the regression analyses is that the adjusted R-squared values are relatively high. The adjusted R-squared values indicate that 58% of the variation in pace of quality management implementation and 54% of the variation in scope of quality management implementation can be explained by the combined variations in all of the particular model's independent variables. However, not all of the independent variables had a significant relationship with the dependent one. In this respect, it is remarkable that for both dependent variables the same independent variables (institutional reputation and external consultants) contribute significantly to the result. In addition, for both dependent variables the relationship with complexity was proven relatively weak. Finally, it should be noted that the 'dependency' independent variable was not included in the multiple regression of the 'scope' dependent variable because the theoretical framework did not identify a relationship between these variables[45].

Table 5.12: Results of multiple regression analyses.

Independent variables	Standardised Coefficients (Beta)	Sign
	Dependent variable: pace	
Reputation	-0.531	< 0.01
External consultancy	0.401	< 0.01
Complexity	-0.054	> 0.05
Dependency	-0.183	> 0.05
Disciplinary characteristics	-0.093	> 0.05
Adjusted $R^2 = 0.585$		
	Dependent variable: scope	
Reputation	-0.399	< 0.01
External consultancy	0.602	< 0.001
Complexity	0.075	> 0.05
Disciplinary characteristics	0.203	> 0.05
Adjusted $R^2 = 0.547$		

In addition, when I cross-checked the relevance of the resulting model by running the multiple regression again with stepwise inclusion of independent variables, the reputation of the higher education institutions and the amount of involvement of external consultants proved to be the only two significant

[45] With the data, I can check what happens if dependency is included in the multiple regression. The results of the four above-mentioned variables (reputation, external consultancy, complexity, disciplinary balance) hardly changed, while the R^2 rose to 0.793. The results showed a negative relationship between dependency and scope of quality management implementation (Beta = -0.179), but it was not statistically significant at the 5% level.

independent variables. This reinforces the results of the analysis of the beta-coefficients I did above. In the following the major conclusions of statistical analyses will be summed up.

5.3 Summary of the results of both analyses

Looking over the results from the two steps of the statistical analysis of the relationship between certain institutional characteristics and certain features of quality management implementation, the following conclusions can be drawn. The results from the bivariate and multiple regression analyses largely coincide, showing a similar relationship between the independent and dependent variables.

- Both analyses show a statistically significant negative relationship between 'institutional reputation' and the pace as well as the scope of quality management implementation.
- Similarly, we found a statistically significant positive relationship between 'external consultancy' and the pace as well as the scope of quality management implementation in both analyses.
- In addition, the bivariate analyses and the multiple regression analysis showed on the one hand a positive relationship between 'disciplinary balance' and the scope of quality management implementation. On the other hand, both analyses showed a negative relationship between 'disciplinary balance' and the pace of quality management implementation. Neither relationship was, however, statistically significant at the 5% level.
- Similarly, both analyses showed a negative relationship between 'institutional dependency' and the pace of quality management implementation, though they were not statistically significant at the 5% level.
- Furthermore, the multiple regression provided the same negative relationship between 'complexity' and the pace of quality management implementation as the cross-tab analysis. But the regression was not statistically significant at the 5% level. As regards the relationship between 'complexity' and the scope of quality management implementation the two analyses showed slightly differing results. The cross-tab analysis showed a slightly negative relationship while the multiple regression found a slightly positive one. However, neither relationship was statistically significant at the 5% level.

In sum, the results of the two statistical methods offer nearly identical results with regard to the postulated relationships between the independent and dependent variables. However, in one case (complexity–pace), the significance found in cross-tab analysis disappeared in the regression. This indicates that

disciplinary balance and complexity were only superficially related with scope, and that disciplinary balance and dependency were also only superficially related with the pace of quality management implementation. This may, however, have been caused by the other independent variables (institutional reputation and external consultancy).

Altogether, the empirical evidence provides strong support for hypotheses 7a-b and 5a-b. The findings showed strong negative relationships between reputation with pace and scope (hypothesis 7a-b), which suggests that the independence from governmental resources seems to explain this relationship rather than increased decision-making capacity. The relationships between external consultancy with pace and scope (hypothesis 5a-b)—predicting that more support by external consultants enhances the pace and scope of quality management implementation—also proves to be significant in both analyses, and they also have the greatest impact on quality management implementation based on the results of the empirical findings. These two variables proved to be the strongest explanatory variables. Furthermore, both analyses suggest that the expected negative relationship between complexity and pace (hypothesis 2a) exists, though the regression was not significant at the 5% level. In contrast, both analyses indicate that hypothesis 3a—predicting that the disciplinary balance towards hard and convergent fields enhances the pace of quality management implementation—should be falsified. For the remaining hypotheses (1a-b, 2b, and 3b), neither analyses show strong and significant results for the expected relationships. I will look at these unexpected results in the case studies, which are discussed in Chapter 6.

6 Case studies

6.1 Introduction

As mentioned above, after the results of statistical analysis, I am left with a mixed situation regarding the falsification of the hypotheses. To explore these results further and to evaluate the research propositions that could not be included in the statistical analysis, case studies were carried out. In addition, to date, little in-depth empirical information has been available on quality management implementation. The way in which implementation occurs in different higher education institutions is therefore what I want to find out through the case studies. Thus, in the case studies I describe the particular features of the institutional quality management implementation. This chapter contains only a summary of each case study; the full case studies are presented in Appendix I. Thereafter this chapter ends with an overall analysis of the results of case studies in section 6.3.

6.2 Case studies

6.2.1 Budapest Tech (BT)

The picture emerging from BT was that of a state college that offered university and college level study programmes in the fields of engineering, informatics and economics (the entire case study is presented in Appendix I/a). Thus, the disciplinary balance was markedly toward hard and convergent fields. The amalgamation of institutions in 2000 heavily affected BT. The college was established by the integration of three former technical colleges, namely Bánki Donát Polytechnic, Kandó Kálmán Polytechnic and the Light Industry Polytechnic, and—together with two new faculties: the Keleti Károly Faculty of Economics and the John von Neumann Faculty of Informatics—BT had a new working structure. The evidence showed that, as a new institution, it planned to operate the new college on the principles of quality management. BT, in the dimension of complexity, can be characterised as a less complex institution because all of its faculties were situated in Budapest, and it offered study programmes only at two levels. As a state college, BT somewhat depends on the government, because around 70% of its annual income was publicly financed in 2004.

As addressed in the case study, BT started to implement a quality management mechanism after the political initiatives on the national level. The quality management implementation seemed to be quick, taking into account that

quality procedures and quality manuals were completed in 2002, the quality management system was implemented in 2003, and BT was certified in March 2004. Although as an institution BT was dependent on the government, it took the governmental Protocol into account only as complementary to other approaches and mechanisms, such as ISO 9001 and MAB expectations in developing a quality management system. The quality management system seems comprehensively focused on each core function: education, research, and service processes. Furthermore, the quality management system implemented appears to be adequate because it contains the elements of a comprehensive framework on the one hand, and works genuinely in practice—as the findings showed—on the other.

The study illustrated further reasons why this particular quality management implementation emerged. The first important reason was the support of external consultants. At the beginning of implementation, external consultants conducted training for institutional members, and then helped in developing quality procedures and a quality manual. They positively influenced the implementation process, but interviewees mentioned one problem. External consultants had a lot of experience concerning the implementation of quality management systems, but they did not know the language of higher education, which caused problems, although only at the beginning of implementation. Another reason was the commitment of leaders. The quality policy was translated into a set of guiding principles, and deployed into strategic steps, contributing to further development of quality management. Further indicators of leaders' commitment can be clearly identified, based on interviews and document analysis. Quality activities received the appropriate support and were provided with resources for doing quality work. As interviewees stated, "we could not ask anything that we would not have got concerning all kinds of resources". In addition, as the findings showed, the decision-making processes were less bureaucratic. At the beginning of implementation, new rules were developed in some areas where they were missing. At that time, however, old routines and the taken-for-granted nature of individual behaviour meant that members often went on doing what they had always done, and paid relatively little attention to the new rules. In addition, they did not blindly follow the rules all of the time; the rules were developed continuously at BT. Finally, the findings provided evidence that political elements of the decision-making process made the quality management implementation slow at the beginning. Particular problems that were identified included academics who wanted to use quality management forums for the benefit of their faculty. For example, one reason behind such manoeuvrings was that the ISO name was unpopular among older members because of the amount of extra administrative work involved.

Overall, institutional quality management implementation seemed to be quick, adequate, and has a wide scope. As the findings showed, the main positively influential factors were the commitment of leaders and the support of

external consultants, while the political feature of decision-making processes negatively supported the quality management implementation at BT.

6.2.2 King Sigismund College (KSC)

KSC was a new private college—established in 2000—which offered only bachelor-level study programmes, such as international relations, human resource management, communication-cultural management and cultural management (the case study is addressed in Appendix I/b). Thus, the disciplinary balance was markedly toward soft and divergent fields. KSC, in the dimension of complexity, can be characterised as a simple institution because it had only two buildings in the same district of Budapest and had four departments. As a private college, KSC was almost fully independent of the government. Governmental support was less than 2% of the overall institutional income in 2004.

As addressed in the case study, KSC started to implement a quality management mechanism soon after its establishment, which indicated its priority at KSC. In addition, the implementation process seemed to be quick, taking into account that a quality policy and a quality manual were already developed in 2001, the quality committee was established in the same year, and the quality management system was certified according to the ISO 9001 standard in 2002. The college did not consider the Protocol because it wanted to implement a more comprehensive quality management model. The scope of the quality management system focused on education, the organisation of education, and service and support processes, but not on research activities. Therefore, the scope of its quality management system seems to be wide. Furthermore, the quality management system at KSC also appears to be adequate because it mainly contains the elements of a comprehensive framework on the one hand, and on the other, it works genuinely in practice—as the findings showed.

The study illustrated other reasons why the particular quality management implementation emerged. The first reason was the commitment of leaders. For example, the existence of a written institutional quality policy was a clear expression of the leaders' commitment concerning quality management implementation. The quality policy was translated into a set of guiding principles and deployed into quality goals defining what the college should do and in which order. KSC was also provided with the appropriate financial, infrastructural and human resources by its owners and leaders to implement quality management. As one informant stated, "if the needs could be justified, we got them". The second important reason was that external consultants supported the whole implementation process. At the beginning, they conducted training for staff members, and then helped in developing quality processes, procedures and the quality manual, and in implementing the quality management system. As one interviewee (2005) stated, they positively influenced the quality management implementation process, and contributed to getting rid of the fears of institutional

members concerning quality management. The next reason was that the predecessor of the college was certified according to the ISO 9001 standard, and KSC wanted to renew it because of market expectations. Thus the private character of the college influenced its customer orientation. The quality management system had been implemented with the purpose of improving the education quality and customer satisfaction. In this connection not only students but also other external and internal actors were considered as stakeholders. In addition, institutional rules—defined at the establishment of the college—were set up according to quality management principles. Many times, however, rules concerning quality management implementation were informal and not bureaucratic. The continuous improvement of quality procedures also helped in enhancing the pace of quality management implementation. However, the findings provided evidence that political elements of the decision-making process slowed down the quality management implementation, according to one interviewee by twice as much. Particular problems that were identified included academics who wanted to keep the old system without the transparency and order of the new quality management system. Sometimes they were in a high position, which slowed down implementation.

KSC comprehensively embarked on a quality management programme directly after its establishment, to improve the accountability and quality of its services in a broad sense. The institutional quality management mechanism seemed to be quick, adequate, and had a wide scope. As the findings showed, the commitment of leaders, the support of external consultants, the lower complexity, and the private character of KSC—leading to a strong customer orientation—supported the quality movement positively, while the political feature of decision-making processes negatively influenced the quality management implementation process.

6.2.3 Theological College of Szeged (TCS)

The picture emerging from TCS was that of an old church-affiliated college offering university and college level study programmes in theology, religious education, and ethics. The disciplinary balance was completely toward soft and divergent fields (the entire case study is presented in Appendix I/c). The amalgamation of institutions after 2000 affected TCS only marginally. TCS, in the dimension of complexity, can be characterised as a simple institution because it had only one building and five departments, and offered study programmes at only two levels. For a church-related college, however, TCS depends heavily on the government. Governmental support was more than 95% of the overall institutional income in 2004.

TCS started to implement a quality management mechanism after political initiatives on the national level. Although highly dependent on the government, it considered the governmental Protocol only as complementary to the ISO 9004 standard in developing its quality management system. The main reason behind

this was, as the evidence showed, that the external consultant who supported the quality management implementation process in TCS did not find the Protocol appropriate. Thus instead of the Protocol, the quality management system of TCS, which was mainly developed and suggested by an external consultant, was derived from the principles of the ISO 9004 standard, and focused only on the education function. The findings also showed that TCS had an almost comprehensively planned and developed quality management system. However, only some narrow parts of it were working in practice, such as measuring the satisfaction of students and the performance of staff members. In other words, the institutional quality management system seemed to be more symbolic than genuine. Other evidence also pointed in that direction. For example, quality documents emphasised the improvement of the quality management system instead of the quality of education. It seems strange to keep improving a quality management system as a goal in itself, though of course if it serves its original goal (improving the quality of education), it should be improved continuously. Secondly, it seems strange that the quality leader emphasised that the main institutional quality management result was the controlling of the input channels for the sake of reaching potential students, which is, after all, marketing. Finally, it should also be mentioned that the college developed a quasi-expensive questionnaire for measuring the satisfaction of the owner, who was actually one person.

The study also illustrated the reasons why the particular quality management implementation emerged. The first important reason was that the external consultant only supported the quality management implementation at the beginning. The expert conducted training in the field of quality management basics for institutional members and helped to develop the quality manual. He did not help in the later implementation process. The second crucial reason was the low commitment of leaders. For example, the leaders only expressed their commitment concerning quality management implementation in the quality manual (on paper) but they did not provide sufficient resources for quality management implementation beyond student surveys and the teachers' performance questionnaire. As the findings indicated, these two factors markedly influenced the low adequacy of quality management implementation and also its slow pace (slow because TCS started quality management activities in 2002, the quality policy and quality manual were developed in 2003, but only some parts of the quality management system were implemented at the beginning of 2005).

In addition, the study also indicated some other factors that made the pace of quality management implementation slow. Firstly, the quality leader emphasised that TCS felt uncertain about its situation because of the structural reform of the college and the governmental debate on the situation of church institutions. In addition, he stated that academics from the area of theology hardly understood the usefulness of quality management, and this reduced the pace of quality management implementation. The evidence also illustrated that quality

management implementation should not be interpreted as a smooth process without conflicts and bargaining events. The starting point of the quality management activities was influenced by an ongoing policy debate inside the college. Furthermore, the college wanted to make its system transparent through quality management, but some academics hindered this because they did not want to let others see into their private business. In other words, bargaining events seemed to delay both the time of starting the quality management implementation and the pace of the implementation process. Finally, as the evidence showed, the decision-making processes in quality management implementation mainly followed the old routines and habits, and staff members rarely deviated from them. This also contributed to the slow quality management implementation because the old routines did not include procedures for quality management.

Overall, the general picture that emerged of the quality management implementation in TSC is that of an almost comprehensively developed system, but an only symbolically implemented process. The main reasons were the low commitment of leaders and that external consultants supported the implementation process only at the beginning. Other reasons, such as the bureaucratic and political features of the decision-making process and the theological background of academics, also delayed the pace of quality management implementation. Another noteworthy feature appears to be that actors in TCS had a less than complete idea of what quality management was about, and how it could be used effectively and efficiently in TCS's particular context.

6.2.4 University of Miskolc (UM)

UM was a complex university: it had seven faculties and two institutes, offered courses at four levels of education (VT, BSc MSc, PhD) and in more than 100 study programmes (the case study is addressed in Appendix I/d). However, it had only one faculty away from the centre. The merger process in Hungary at the beginning of the 2000s seems to have left the organisational structure of UM unaffected. UM had a special situation, because it integrated and expanded mainly within itself. Only one faculty—the Comenius Teacher Training College in Sárospatak—had joined UM as a result of the national integration of universities. Looking at the study programmes offered by UM, the disciplinary balance was more toward soft or divergent fields, such as law, economics, the arts, and teacher training. As a state university, UM was indeed relatively heavily dependent on the government because around 71% of its overall annual income was publicly financed in 2004.

UM started to implement a quality management mechanism after the governmental expectations were published. However, the uncertain situation where the appropriate governmental co-ordination was unclear hindered the pace of quality management implementation. Even though a relatively

government-dependent institution, they did not take the governmental Protocol into account in developing its quality management system because, as the leader of the QMO emphasised, the Protocol did not contribute to improved operations, and its parts were not compatible. Thus instead of the Protocol, the quality management system at UM, which was mainly developed by internal academics, was derived from the principles of ISO standards (9001 and 9004). UM decided to establish a quality management system according to the ISO 9004 standard, but two units (the Chemical Research Institute and the Postgraduate Institute) would be certified according to the ISO 9001 standard because the market expected it. The scope of the quality management system focused only on the education processes and a little on support processes, though the quality policy contained all of the core institutional functions. At the beginning of quality management implementation, external consultants conducted training for institutional members, such as auditor training, quality management basics, quality management system development training, and training for leaders. Then, however, UM decided to follow the quality management implementation without external consultants. Thus, internal academics have already developed the quality manual and the quality management system. It should be emphasised that the current quality management system can be seen as inadequate, because it neither addressed the design of teaching and learning processes and quality of implementation, nor carried out the meaningful part of quality policy work genuinely in practice. Furthermore, the quality management implementation process seemed to be slow, considering that the quality policy and quality manual were developed in 2000, the quality leader was appointed in 2004, and UM has not implemented a quality management system yet.

The study also illustrated further reasons for the slow quality management implementation, such as the low level of commitment of the leaders. For example, the leaders of UM expressed their commitment concerning quality management implementation, mainly in the quality manual (on paper) but they only provided the basic conditions for implementing a quality management system, and the quality issue was not at the top of the institutional priorities. As one interviewee stated, the budget of quality activities was not high and mainly included managing costs. If it was necessary, however, the institution provided it.

In addition, quality management committees worked out their operational rules, and the members of the committees followed them. One interviewee emphasised that a complex university could only function according to well-established standard procedures. As the findings showed, the quality management implementation mainly occurred according to the developed rules and procedures. Furthermore, I have found some signs of a political decision-making process, but official information was not provided.

Overall, the quality management implementation seemed to be slow, less adequate, and had a narrow scope. As the findings showed, the less committed leadership, lack of external consultants, the complexity of UM, the disciplinary

balance more toward soft or divergent fields, and the bureaucratic feature of the decision-making processes have together added up to this result. Finally, UM differs from other higher education institutions in that it defines its own special concept for students' evaluation. The goal of evaluating students was not to measure students' knowledge but to show them the results of their invested efforts. Students can then decide whether this level sufficed or not.

6.2.5 University of Pécs (UP)

UP was one of the most complex higher education institutions in Hungary: it had nine faculties and one institute, it offered courses at four levels of education (VT, BSc MSc, PhD), and in more than 350 study programmes. However, it had only one faculty outside of the centre. During the merger process at the beginning of the 2000s, only two smaller units joined the former Janus Pannonius University—the University Medical School and Illyés Gyula College of Education—which included only one tenth of the total number of students (the entire case study is presented in Appendix I/e). This merger also seems to have largely left the organisational structure of UP unaffected. Looking at the study programmes offered by UP, the disciplinary balance was toward soft or divergent fields like economy, law, humanities, the arts, and teacher training. Although a state university, UP was relatively independent from the government because only 39% of its overall annual income was publicly financed in 2004.

Quality management activities started well before the government's initiative on quality management. As the quality director stated, quality management activities started in faculties that which had a stronger connection with the market, and so the external partners expected a quality management system as well as certification. It is thus predictable that UP turned to the ISO 9001 standard. The quality leader also emphasised that UP did not consider the Protocol in developing the quality management system because it was found "unsuitable and a humbug". UP hired professionals to help with the implementation process but brought them from within the organisation's structure, creating a TQM centre. This TQM centre, and especially the quality leader, supported the quality management implementation during the whole process. The TQM centre conducted training for institutional members such as auditor training, quality management basics, training for leaders, and 'practical tools and methods of quality improvement' training. It developed the quality manuals, and helped in the implementation, pre-audits, and also in the certification processes. In addition, the quality leader suggested introducing ISO 9001 standards and to implement them in the faculties. The reason behind the latter point was that UP was too big and complex to introduce one quality management system at an institutional level. The pace of quality management implementation seems to have been slow: quality policies and quality manuals were developed in 2001, quality committees were established in the same year, and a

quality management system was implemented at only two of the ten faculties and two of the 24 clinics in 2004.

The study also illustrated a further reason for the slow quality management implementation, namely the lower level of commitment of the leaders. For example, UP decided to implement quality management systems by faculty. Deans expressed their commitment on quality management implementation mainly in the quality manual (on paper). Quality management implementation got the basic resources, but money, for example, was not supplied for some of the questionnaires that were developed.

In addition, the scope of quality management systems in UP focused on all core functions such as education, research and service. This is not surprising, because the quality leader of UP also supported the implementation of a number of quality management systems outside the university. Therefore, his knowledge and experience was the same as any external consultant in this respect. This knowledge and the support of internal experts also seemed to result in faculties having almost comprehensively developed quality management systems. However, a meaningful part of them was used only symbolically. For example, the questionnaires developed to measure the satisfaction of stakeholders were not used in practice. Consequently, it seems that UP developed and implemented a quality management system more to show to externals than to improve quality.

The evidence also indicated that the meaningful part of quality management work was developed by the TQM centre, and mainly by the quality leader. He worked mainly according to his own rules and habits. He discussed the important questions with the faculty leader and then worked out the materials alone. Furthermore, UP did not establish any new rules; therefore, the old ones controlled the institutional activities. The implementation processes thus occurred according to the old institutional rules and the habits of the quality leader and, as such, in a bureaucratic way. Lastly, I did not find signs of political decision-making processes concerning quality management implementation.

To sum up, the slow pace of quality management implementation at UP was influenced by institutional complexity, low leadership commitment, bureaucratic decision-making processes, and perhaps a lack of external consultancy. The study also indicated that the support of internal experts contributed to the wide scope and nearly comprehensive content of quality management systems. Finally, the quality management systems in UP worked in practice more symbolically—certificate oriented—than genuinely.

6.2.6 University of Veszprém (UV)

UV was a complex higher education institution: it had five faculties, and offered courses at four levels of education (VT, BSc MSc, PhD), and in more than 60 study programmes (the case study is addressed in Appendix I/f). However, UV had only one faculty away from the centre. This relatively small faculty—Georgikon

Faculty of Agriculture—was the only one to join UV as the result of the national integration of universities in 2000. Therefore, the merger process at UV seems to have left its organisational structure unaffected. Looking at the study programmes offered by UV, the disciplinary balance was more toward hard and convergent fields, such as engineering, agriculture and IT. As a state university, UV was somewhat dependent on the government because around 70% of its overall annual income was publicly financed in 2003.

UV started to implement a quality management mechanism after political initiatives on the national level. As an institution that was dependent on the government, however, it did not take the governmental Protocol into account in developing its quality management system. The reason was that UV did not find it appropriate to use as a comprehensive model for the university, because the Protocol was too general and had too narrow a focus. As the interviewees stated, UV first needed a quality management system, but the Protocol only included some elements of a quality mechanism and therefore did not provide a system for UV. Thus instead of the Protocol, the quality management system at UV was derived from the principles of the ISO 9004 standard. However, the quality management system only focused on the education processes, and therefore its scope was narrow.

In addition, the evidence also showed that the institutional quality management system seemed to be inadequate. For example, the design of the questionnaires concerning student evaluation of teaching quality was not well done, and their feedback was of little use. Moreover, the success of quality teams was not measured and there was no feedback on their performance. These all are important in contributing to the quality of education, but they are secondary compared to the basic educational processes, such as the quality of implementation and the design of teaching and learning processes, which were not included in the current quality management system. The evidence also showed that a meaningful part of the planned quality management system worked only symbolically. Furthermore, the quality management implementation seemed to be slow, considering that quality committees were established in 2001, the quality policy was developed in 2003, and UV did not implement a quality management system until the end of 2004.

The study also illustrated other reasons why the particular quality management implementation emerged. The first important reason was that the external consultant only supported the quality management implementation at the beginning. The external consultants conducted training for institutional members, but UV established their quality management system without external support. The second crucial reason was the less committed leadership. For example, the leaders only expressed their commitment concerning quality management implementation in the quality manual (on paper), but later the quality policy was not translated into a set of guiding principles. Thus its deployment into strategic steps could not contribute to the further development of quality management. The findings also showed that the quality management

activities were only provided with basic resources for doing their work. Finally, the bureaucratic and political features of decision-making processes also hindered the pace of quality management implementation. Firstly, quality management implementation occurred according to the new standard operating procedures. However, if staff members did not find appropriate ones, they sometimes went on doing—according to their 'old' routines—what they had always done. The findings provided evidence that political elements of decision-making processes slowed down the quality management implementation. Particular problems that were identified included academics who wanted to contribute to the implementation as slowly as they could, because they did not want to undertake any extra work.

To sum up, the quality management implementation seemed to be slow, and the implemented quality management mechanism was less adequate, and had a narrow scope. As the findings showed, the less committed leaders, lack of external consultants, complexity of UV, and the bureaucratic and political features of the decision-making processes, together added up to this result.

6.3 Comparative analysis

In Chapter 4, a number of hypotheses and research propositions were put forward suggesting how the different elements of the theoretical framework could be linked together to explain how quality management implementation occurred. The first section here discusses whether the six case studies support the hypotheses and research propositions. The case study analysis did not focus on institutional reputation; therefore, hypothesis 7 will not be addressed here. The second section tries to explore the reasons for the unexpected results.

6.3.1 Hypotheses and research propositions revisited

Hypothesis 1

The first hypothesis (hypothesis 1a) suggested that the less higher education institutions depended on the government, the later quality management would be implemented. The underlying argument leading to this hypothesis was that institutions—in order to survive—need sufficient resources. These resources often cannot be produced by the institutions themselves; therefore, they must interact with other organisations that control these resources, and thus they depend on them. This study particularly suggests that the more dependent institutions were on government for financial resources, the faster they implemented quality management because of government requirements.

In UP and BT, the pace of the implementation process fits this explanation rather well. UP was relatively independent from the government because only 39% of its annual income was publicly financed in 2004. In UP, quality management implementation seems to have been slow: quality policies and quality manuals were developed in 2001, quality committees were established in the same year, and the quality management system was implemented only at two of the ten faculties and two of the 24 clinics in 2004. BT, by contrast, was quite dependent on the government because governmental support represented more than 70% of institutional income in 2004. Quality management implementation in BT seems to have been quick: quality procedures and the quality manual were completed in 2002, the quality management system was implemented in 2003, and BT was certified in March 2004.

The other four institutions in the case study failed to meet expectations. UV, UM and TCS were fairly dependent on the government (their governmental incomes were 70%, 71%, and 95% respectively). However, in these three institutions, the pace of implementation was slow. In UV, quality committees were established in 2001 and quality policy was developed in 2003; yet the university had failed to implement quality management system by the end of 2004. At UM, the quality policy and the quality manual were developed in 2000, quality committees were established in 2002, and a quality leader was appointed in 2004. But a quality management system has not yet been implemented. TCS started quality management activities in 2002, the quality policy and the quality manual were developed in 2003, but only some parts of the quality management system were implemented by the beginning of 2005. In contrast to these three cases, KSC was almost independent from the government (less than 2% governmental funding). However, its pace of quality management implementation was quick: the college was established in 2000, the quality policy and the quality manual were developed in 2001, quality committees were established in the same year, and the quality management system was certified in 2002.

Concerning hypothesis 1a then, the overall conclusion for the six cases is mixed, as no solid relationship between financial dependency and pace of quality management implementation can be found. A further explanation will be provided in the following section.

In addition, hypothesis 1b stated that the less higher education institutions depend on government, the less they will follow the Protocol. The underlying logic that leads to this proposal was addressed in Chapter 2. Resource dependency theory explains that the more an institution depends on other organisations, the more it will follow their expectations. The Ministry of Education developed the Protocol to implement quality management mechanisms in higher education institutions. This means that the more a university or college relies on the government, the more likely they would follow the Protocol in their quality management implementation.

As mentioned above, UM and UV were relatively dependent on the government. However, neither followed the Protocol in the implementation process. In UV, the experts at the university found it inappropriate to use as a comprehensive model for implementation because its focus was too narrow. The Protocol included only some elements of a quality mechanism but did not provide a system for UV. UM also did not consider the Protocol when developing their quality management system because, as one interviewee stated, it did not contribute to improved operations and its parts were not compatible. These findings would suggest that the Protocol was insufficient. Instead of implementing the Protocol, both institutions turned to the ISO 9004 model.

The two independent institutions, UP and KSC, also did not use the Protocol in the same way as the previous two institutions. UP did not take the Protocol into account when developing its quality management system because, as the quality leader stated, the Protocol was "unsuitable and a humbug". KSC also did not use the Protocol because the college wanted to implement a more comprehensive quality management model. The quality leader at KSC also highlighted that the institution wanted to implement a quality management model that its stakeholders would accept. These findings also indicate that the Protocol was insufficient. Similarly, UM, UV, KSC and UP implemented an ISO model, though they used 9001 as opposed to 9004.

BT and TCS, which depended relatively heavily on the government, were examples of institutions that used the Protocol. However, their model only partly used the Protocol for their quality management implementation. Similar to the other four institutions, BT and TCS also implemented ISO standards (9001 and 9004 respectively). These findings also support the Protocol's insufficiency.

Even if some findings support this hypothesis, the common trend in the case studies is that dependency does not support the 'Protocol following'.

Hypothesis 2

Hypothesis 2a predicted that a higher complexity of higher education institutions would result in a slower pace of quality management implementation. As illustrated in Chapter 2, institutions are structurally differentiated and their units are quite independent from each other in many respects. The fundamental characteristic of institutions is their complexity, which influences the implementation of new programmes. This study supports this stance, suggesting that a more complex higher education institution can slow the implementation of quality management mechanisms.

UM, UV and UP showed clear signs of slow quality management implementation due to complexity. Both UM and UV were complex institutions: they had more faculties (UV: 5; UM: 7) and they offered courses at four levels (VT, BSc MSc, PhD) in more than 100 study programmes. It should be noted, however, that they had only one faculty located outside the centre. The pace of

their quality management implementation also matches the suggestion in Chapter 2, where it was argued that complex institutions implement programmes such as quality mechanisms slowly. For UP, the picture was similar. UP was one of the most complex higher education institutions in Hungary: it had nine faculties and one institute, it offered study programmes at four levels of education (VT, BSc MSc, PhD) in more than 350 study programmes. However, it also had only one faculty outside the centre. Based on this evidence, as I expected, the pace of implementation seemed to be slow with quality policies developed in 2001 and a quality management system only implemented at two of the ten units and two of the 24 clinics by the end of 2004. As the quality director emphasised, the quality management system was introduced separately by each faculty one after the other, which took time.

In BT and KSC, the pace of the implementation process also fits the expected tendency rather well. BT cannot be seen as a complex institution: it had five faculties, offered courses only at two levels of education and all of its faculties were in Budapest. Similarly, KSC was not a complex institution, comprising only four departments, located in Budapest and offering study programmes only at the bachelor level. In addition, as mentioned above, both institutions implemented quality management mechanisms quickly. BT developed its quality manual in 2002 and the quality management system was implemented in 2003; at KSC, the quality manual was developed in 2001 and the quality management system was quickly certified according to ISO 9001 in 2002.

These examples clearly show that the pace of quality management implementation was hindered by complexity.

At TCS, the situation differed from BT and KSC. TCS also was a simple institution. The college had only one building, five departments and offered study programmes only at two levels. According to this feature, I would expect quick quality management implementation at TCS. The findings showed, however, that the implementation process was slow. As mentioned above, TCS started quality management activities in 2002, the quality policy and the quality manual were developed in 2003, but only some parts of the quality management system were implemented up to the beginning of 2005. The quality leader (2005) provided useful insights into this unexpected result. He stated that other factors hindered TCS's implementation plan. These factors included a low commitment of leaders, resistance from the theology department because they failed to understood the usefulness of quality management, the ongoing policy debate inside the college, and the lack of consultancy help beyond the first phases of the implementation process. These additional findings demonstrated that the theoretical explanations developed in Chapter 2 remain valid. The pace of quality management implementation at TCS was influenced more by factors outside of institutional complexity.

Turning to hypothesis 2b, it stated that the higher the complexity of higher education institutions, the narrower the scope of quality management implementation. As illustrated above, UM and UV were complex institutions.

According to this feature, a narrow scope of quality management implementation would be expected. Indeed, the evidence in the two cases showed that the scope of quality management mechanisms in UM and UV narrowly focused only on education. The same result was expected in the case of UP, which, as mentioned above, was the most complex case in the study, and also one of the most complex in Hungary. However, the picture for UP was markedly different since the scope of the quality management system radiated to all of its core functions such as education, research and service processes. This result contradicts the theoretical assumptions of Chapter 2.

For the other three institutions in the study the picture was also mixed. As I mentioned above, KSC and BT were relatively simple institutions. Thus, in these cases, the theoretical framework suggests that a wider scope of quality management implementation should take place. Indeed, KSC focused on all aspects of education, including service and support, but did not touch research. BT, on the other hand, focused on all of its core functions (education, research and service). The same outcome was expected for TCS because it was also a simple institution. However, the empirical findings showed that TCS focused only on educational processes, and so the scope of implementation was rather narrow.

The results of the six case studies showed that no clear link exists between institutional complexity and the scope of quality management implementation. Explanations will be provided below.

Hypothesis 3

Hypothesis 3a posited that the more focused an institution was on hard and convergent sciences, the faster the pace of quality management implementation would be. The underlying argument leading to this hypothesis was that the distinctive academic viewpoints, values, perspectives, and definitions of quality are bound to influence the perception of quality management. Chapter 2 explained that the so-called hard and convergent sciences possess characteristics more inline with quality management; common aims, long-range planning, relatively clear standard operating procedures, and teamwork orientation all dominate the hard and convergent sciences. These shared features make quality management easier to implement. Differing values in soft and divergent fields, by contrast, make implementation more difficult. One would therefore expect hard and convergent disciplinary fields to display quicker quality management implementation.

These expectations, however, quickly break down when compared against the evidence. UV and KSC are cases in point. In UV, the disciplinary balance was more toward hard and convergent sciences. For example, the education portfolio focused more on technical sciences, agriculture and information technology. In UV, fast quality management implementation was expected based on the theoretical framework. The empirical evidence, however, showed that the pace of

implementation was slow. KSC displayed a disciplinary balance towards soft and divergent study programmes, such as international relations, humanities and communication studies. However, the findings indicated, as shown above, that the pace of quality management implementation was quick. The results countered expectations.

In the case of BT, TCS, UM and UP, it can be argued that the disciplinary characteristics support the expected result. For instance, at BT the study programmes focused strongly on the technical sciences, such as engineering and informatics. Here, the balance of the scale tipped towards the hard and convergent fields, and as expected, quality management was quickly implemented. TCS showed the same support for the hypothesis, but from a different perspective. As an organisation, it focused on the arts, offering church-study programmes. As mentioned in Chapter 4, TCS showed convergent elements in their professional outlook (pastoral care), but not in their research practices. And based on this practical operation, TCS must be characterised as a soft and divergent institution. According to the theoretical framework, these characteristics would indicate slow quality management implementation. Indeed, the pace of quality management implementation was slow at TCS. Similarly, in UM and UP the study programmes focused more on soft or divergent fields like economics, the arts, humanities, and teacher training and the pace of quality management implementation was indeed slow. These four institutions thus support the expected phenomenon outlined in Chapter 2.

Overall, for the six institutions the picture is rather mixed. I found evidence that supported and contradicted the hypothesis. Further explanation is needed to try to explain the findings, which will be provided in the following section.

In addition, hypothesis 3b predicted that the larger the hard and convergent sciences were within an institution, the wider the scope of quality management implementation. As illustrated above, the common aims of the hard and convergent sciences, relatively clear standard operating procedures and teamwork orientation can make quality management more comprehensive than in the soft and divergent fields. As a consequence, the hard and convergent disciplinary fields should show a wider scope of quality management implementation.

In UM, BT and TCS, the scope of quality management implementation fits this explanation well. As mentioned above, in the case of BT, the disciplinary balance leaned more towards the hard and convergent fields. And as such, the scope of quality management implementation was wide in BT. The study programmes in TCS and UM focused more on the soft and divergent fields and the scope of quality management implementation was, as expected, narrower. Rather than an across-the-board change to quality management, TCS and UM focused mainly on the education function in quality management. The institutions above illustrate well that the more the disciplinary balance falls on the hard and convergent fields, the wider the scope of quality management implementation.

For UP, UV and KSC, the picture was different. As mentioned above, in UV the disciplinary balance was more towards the hard and convergent fields. In this case, I would expect a wider scope of quality management implementation. However, the empirical findings did not support this theoretical expectation. At UV, the quality management system focused only on the education function. This unexpected result was also found at KSC and UP. Here, the disciplinary balance focused on the soft or divergent fields but the scope of quality management implementation was wide. None of the three institutions seemed to support this particular hypothesis.

Overall, one can detect a mixed situation for the six institutions. While three institutions supported the expected phenomenon, three others opposed it. Further explanation must be found to explain these (unexpected) findings, which will be addressed in the following section.

Research proposition 4

Research proposition 4a stated that the higher the commitment of leaders concerning quality management implementation the faster its pace. As illustrated in Part I, both general implementation and the quality management literature emphasised that many difficulties, distortions and conflicts that arose during implementation could be overcome by committed leaders, who increased the pace of implementation.

In all six institutions, the pace of quality management implementation fits this explanation remarkably well. In the case of UM, TCS, UV and UP, it can be argued that the commitment of leaders was lower than at KSC and BT. At UM, TCS and UV, the leaders expressed commitment to quality management implementation as written in their quality manuals, but they provided only the basic conditions for implementing the quality management system. At UM, as one interviewee emphasised (2005), quality issues were not a top institutional priority. At UV, the quality policy was not translated into a set of guiding principles, and the quality activities did not receive adequate and necessary support. At TCS, the leaders did not provide sufficient resources for quality management implementation beyond the cost of student surveys and teachers' performance questionnaires. At UP, the deans expressed their commitment to quality management implementation as written in their quality manual, and quality management activities were provided with the necessary resources. However, UP did not provide resources to distribute and complete some of the developed questionnaires. These findings would suggest, as explained in Part I, a slow pace of quality management implementation. Indeed, as mentioned earlier, the pace of quality management implementation was slow at all four institutions. Therefore, these institutions seem to support the expected association between leaders' commitment and the pace of quality management implementation.

For KSC and BT, the pace of quality management implementation also matches the expectations developed in Part I. At BT and KSC, the institutional quality policy can be considered a clear expression of leaders' commitment concerning quality management. Quality policy was translated into a set of guiding principles and deployed in strategic steps, contributing to further development of quality management. Furthermore, as one interviewee stated, quality activities received the appropriate support and the necessary resources were available. For example, in BT, one informant stated that "we could not ask anything that we would not have gotten concerning all kinds of resources". Similarly, at KSC, one interviewee stated that "if the needs could be justified, we got them".

The actions and policies of these institutions also supported research proposition 4a. Overall a clear tendency emerges from the empirical evidence of the six cases that the more committed the leaders were, the faster the pace of quality management implementation. In addition, research proposition 4b predicted that the higher the commitment of leaders concerning quality management implementation, the wider its scope. As explained in Part I, leadership commitment to reform in the implementation process can be linked to changes in the system as a whole. Where high commitment exists, the quality management focuses on each core institutional activity, such as education, research and community service.

At UM, UV and TCS, as mentioned earlier, the leadership commitment was relatively low. In that case, one would expect a narrow scope of quality management implementation. The empirical evidence showed that indeed all three institutions showed a narrow scope of quality management, focusing only on education.

In the case of BT and KSC, as indicated above, the commitment of leaders was high. In BT, the scope of quality management implementation focused on all of the core functions, like education, research and service. At KSC, the scope of the quality management system was also wider than at UM, UV and TCS. KSC focused on education, organising education as well as service and support processes, though they failed to reform research activities. This evidence also supports this research proposition.

The only institution where the findings contradicted the research proposition was UP. The commitment of leaders was not high; however, UP focused on all the core functions of quality management implementation. In this case, it will be necessary to seek further explanations for the wide scope of implementation. Possible reasons will be provided in the following section.

Even if the last case did not support research proposition 4b, the common trend in the other cases is that the more the leaders were committed to quality management implementation, the wider its scope.

Hypothesis and research proposition 5

Hypothesis 5a predicted that the more higher education institutions were supported by external consultants, the faster they could implement quality management. Strong support for this assumption exists in the theoretical framework. Both the general implementation and quality management literature emphasise the importance of external consultancy in quality management implementation. For example, DiMaggio and Powell (1983) point out that institutions seek blueprints or recipes by using outside consultants to implement new mechanisms. Quality management literature also emphasises that the implementation of quality mechanisms is more successful if external consultants facilitate the process. External consultants are important because they can focus administration on specific issues. Based on their experience with quality management outside higher education, they can help to avoid pitfalls, and in this way increase the pace of quality management implementation.

Turning to the case studies one can see few visible signs of external support at UM and UP. UM was supported by external consultants only at the beginning of implementation provided through quality management training sessions. UM decided to follow up the quality management implementation without involving external consultants. They chose to let staff members develop the quality manual. At UP, too, the quality management implementation process was not supported by external consultants. The TQM centre of the university conducted training sessions for institutional members, developed the quality manuals, helped in the pre-audits and in the ISO 9001 certification processes. At both institutions, the pace of quality management implementation was as expected—slow.

A similar lack of support can be found at UV and TCS. At UV, at the beginning of quality management implementation, the university invited external consultants to conduct training sessions for institutional members. But then UV decided to implement a quality management system without external support. TCS was also supported by external consultants only at the beginning of the quality management implementation process. The external quality management expert conducted training sessions on the topic of quality management basics, and he helped to develop quality policies and a quality manual. However, the external expert did not help in the later stages of the implementation. As mentioned earlier, the pace of quality management implementation was slow at UV and TCS.

For the remaining two cases, KSC and BT, the situation was the opposite. KSC was supported by external consultants through the whole quality management implementation. At the beginning of implementation, external consultants conducted training sessions for institutional members and then helped develop quality processes and a quality manual to assist with implementing the quality management system. One interviewee confirmed the positive influence of external consultants, stating that they contributed to eliminating the fears of

institutional members concerning quality management. BT was also supported by external consultants during the whole implementation process, helping in quality training sessions, developing the quality manual and assisting the implementation process. The pace of quality management implementation was quick in these two institutions, as mentioned above, which also matches the suggestions made in Part I, where it was argued that external consultancy increases the pace of implementation.

For the six institutions together, all the above-mentioned explanations support the assertion that the more an institution was supported by external consultancy, the quicker its quality management implementation.

Moving to the second part of the hypothesis (5b), it stated that the more the institutions were supported by external consultants, the wider the scope of quality management implementation. As explained above, both the general implementation and quality management literature pointed to the marked relationship between external consultancy and scope of quality management implementation. External consultants know the basic principles of quality management mechanisms and systems. They can also help find the relationship between core and support processes, and thus better focus the main stream of implementation on crucial core areas. As mentioned in Part I, the idea behind this is that the market makes demands on the university only in these core areas.

External support during the quality management implementation was quite outstanding at KSC and BT. For example, BT was supported by external consultants during the whole implementation process, providing quality training sessions and developing quality procedures and a quality manual. KSC was also supported by external consultants through the whole quality management implementation.

UP displayed similar characteristics to KSC and BT, with strong support from experts; however, the relationship between the university and their consultants differed. They hired professionals to help with the process, but brought them from within the organisation's structure, creating a TQM centre. Whether these experts are internal or external to the process, however, has little influence on the scope of quality management implementation. The knowledge consultants have of core institutional functions and the relationships of the processes hold much more importance. The TQM centre at the university, and especially the quality leader, supported the implementation of a number of quality management systems outside the university. Therefore, the knowledge and experience of the centre was the same as any external consultant in this respect.

For the three institutions then, the scope of implementation was wide. This result fits well with the theoretical assumption concerning external consultancy and the scope of quality management implementation.

For the other three institutions, the picture was similar in terms of the theoretical expectations. None of these institutions was genuinely supported by external consultants, and therefore, I would expect a narrow scope of

implementation. And indeed, UM, UV and TCS focused only on the education function. As such, their scope was rather narrow.

For the six institutions, one can detect a strong, positive relationship between the support of external consultancy and the scope of the quality management system. External consultancy seems to have played a major role in the scope of quality management implementation.

Research proposition 5c stated that the more institutions were supported by external consultants, the more adequately they implemented the quality management system. Adequate implementation, as indicated in Chapter 4, means that elements of the comprehensive framework are implemented in practice and not just followed symbolically. And because external consultants know the basic principles of quality management mechanisms and systems (as illustrated in Part I), they can help to ensure that proper implementation occurs. They can find appropriate models or elements of quality management mechanisms for higher education institutions, and help with their implementation.

As mentioned above, TCS, UM and UV were supported by external consultants only at the beginning of implementation. According to the theory, I would expect less adequate implementation of the quality management system. In TSC, as the findings showed, only some parts of the quality management system were working in practice (teaching evaluations). However, the developed quality management system seems to be comprehensive, focusing largely on the elements of the developed comprehensive framework. One reason that the system may be comprehensively developed was that a quality consultant helped with the process.

At UM, the quality management system is now mainly focused on education support activities like developing regulations, preparing diploma work and state exams, preparing accreditation materials, as well as regulating internal audits and satisfaction examinations. However, the system can certainly be seen as still inadequate. Similarly, UV was only supported by external consultants at the beginning of implementation, and only some parts of the planned quality management system were working, like teaching quality as well as staff and alumni satisfaction examinations. The above-mentioned evidence seems to support this research proposition.

UP, with its TQM centre and consultants that helped from the start of the process to the finish, at first appears as if it can differ from TCS, UM and UV. UP's faculties indeed have an almost comprehensively developed quality management system. But most of them were used only symbolically. For example, the questionnaires developed for measuring the satisfaction of stakeholders were not used in practice.

BT and KSC were supported by external consultants during the whole implementation process. As I expected, their quality management systems focused on almost all of the elements of my proposed comprehensive quality management model, and many of these elements were working in practice.

Overall, evidence from the six institutions supported the expected relationship between external consultancy and the adequacy of quality management mechanisms implemented.

Research proposition 6

Research proposition 6a predicted that the more bureaucratic the decision-making processes, the slower the quality management implementation. The underlying argument leading to this proposition was that the outputs of institutions function according to certain regular patterns of behaviour and standard operational procedures from which actions emerge. These constitute routines for dealing with standard situations, but do not constitute far-sighted, flexible adaptations to unique issues, such as quality management implementation, which are often handled slowly.

In UM and UV, quality management implementation occurred according to the developed rules and procedures, so in this sense the decision-making processes could be considered bureaucratic. The case studies showed that these two universities mainly followed the institutional rules and standard operating procedures in their decisions on quality management implementation. In this case, slow quality management implementation would be expected. The empirical evidence showed that both institutions displayed a slow pace of quality management implementation indeed.

In contrast, at KSC and BT rules were informal for much of the time, not bureaucratised, but rationally applied[46]. In other words, the decision-makers in KSC and BT did not always follow previously developed rules, or they did not have rules for some particular issues. In these two institutions, the quality management implementation occurred quickly, as I expected.

Also for UP and TCS, it can be argued that the decision-making processes supported the expected result. At UP, quality management was implemented mainly according to the rules of the TQM centre and the habits of the quality leader. At TCS, as the findings of the case study explained, the decisions and the implementation process occurred mainly according to old routines and habits. In both institutions the pace of quality management implementation was slow, as I assumed.

For the six institutions together, the findings indicated a clear support for the expected phenomenon: the more bureaucratic the decision-making process, the slower the pace of quality management implementation.

Turning to research proposition 6b, it stated that the more political the decision-making processes, the slower the quality management implementation. As indicated in Chapter 2, personal preferences on particular issues can result in institutional outcomes that are characterised by various overlapping bargaining

[46] Rationally means here that the institution did not follow 'blindly' the previously developed rules, but decided what was appropriate on an issue-by-issue basis.

games among institutional staff members. For example, they may pull and haul with the power at their discretion for outcomes that advance their conception, which can leave considerable leeway in implementation.

For BT, the findings of my case study provided some evidence for the argument that political elements in the decision-making process slow the start of quality management implementation. For example, at the beginning of implementation the members of BT Council also used quality management forums for enforcing their entrenched interests and it slowed down the implementation. In addition, sometimes faculties bargained according to their stakes when the elements of the quality management system were introduced. They wanted to implement their own mechanisms at BT because it would have made this work easier for them.

At KSC, the quality leader also emphasised that particular entrenched interests made quality management implementation around twice as slow as it could have been done without it. Particular entrenched interests were identified as the behaviour of academics who wanted to keep the old system without the transparency and system order of the new quality management system. Sometimes, they were in high positions, hence slowing the implementation.

In TCS, quality management implementation was retarded by an ongoing policy debate inside the college. Some academics hindered quality management implementation because they did not want to let others see into their private business. The older academics also discouraged quality management implementation because, as one interviewee said, "the college could operate for ages without it". This attitude made quality management implementation slow. In addition, the timing of starting quality management activities was partly a product of pulling and hauling within the college council when it decided on strategic goals.

At UV, the findings also provided evidence that the political elements of decision-making processes made quality management implementation slower. For example, the timing of different tasks was the product of reluctance, fighting over deadlines between some academics, and the institutional system. In addition, the leader of QAO sometimes struggled for more money for the quality committee. In one case he wanted to remunerate the members of quality committees and in another case there were some new works delegated to the QAO which required a greater budget.

Concerning UM, I found some signs of a political decision-making process, but official information was not provided. In UM, the pace of implementation was, as mentioned above, slow.

Finally, regarding UP, the evidence did not show political elements in the decision-making process, but quality management implementation was not quick.

Even if the last case did not support research proposition 6b, the common trend in the other cases was that the more political the decision-making processes, the slower the quality management implementation.

6.3.2 Exploring unexpected results

Altogether, the results of the case study analysis led to the following main conclusions. First, external consultancy and commitment of leaders proved to be the strongest explanatory variables. They had the largest impact on quality management implementation. Second, the analysis showed that bureaucratic and political decision-making processes and institutional complexity had the expected negative relationship on the pace of quality management implementation. Third, for hypothesis 1, which postulated that resource dependency would positively influence the pace of quality management implementation and 'Protocol following', the findings did not support this hypothesis. Fourth, hypothesis 3—which referred to the balance toward hard and convergent sciences within a higher education institution and its positive impact on the quality management implementation—was weakly supported by some findings but contradicted by others. Similarly, hypothesis 2b, which referred to complexity and its negative impact on the scope of quality management implementation, was also supported by some findings but contradicted by others.

The empirical findings thus suggested that quality management implementation, as discussed and conceptualised in Part I, seems to be influenced by other effects as well. It may be that some institutional characteristics are more strongly related to quality management implementation than others. Furthermore, alternative factors might also cause the unexpected results. This section will attempt to explain the unexpected and sometimes contradictory results with regard to the hypotheses. Possible explanations for these results will be sought in the first place in factors that were treated in the first chapters but that at the time did not seem sufficiently relevant or operationalisable to become hypotheses, such as governmental expectations or normative isomorphism, but also market orientation, semi-legal/illegal contractual practices of academics and institutional age.

As mentioned earlier, the government did not develop a clear-cut national education quality policy that higher education institutions could have used in the course of their quality management activities, and the Ministry of Education did not have a stable and well-developed long-term strategic plan. These facts were mentioned concerning UM, UV, UP and TCS. This finding may have interesting implications. First, confronting this uncertain situation, where governmental coordination was unclear, four institutions (UM, UV, UP and TCS) responded with slow implementation. However, the other two institutions, BT and KSC, confronted with the same unclear situation, reacted more quickly. This discrepancy can be explained by the fact that BT and KSC were supported by external consultants during the whole implementation process, while the other

four institutions were supported by external consultants only at the beginning. This result is in line with the theoretical expectations developed in Part I. The literature stated that the implementation of quality mechanisms was faster if external consultants facilitated the process. Thus, the role of external consultants seems to be important because the governmental policy was unclear.

Second, the evidence from this study also supported the idea that symbolic compliance combined with internal resistance to change (i.e. de-coupling) was sustainable for higher education institutions confronted with such unclear governmental policy. Institutional theorists have long argued that symbolic actions are most effective under conditions of ambiguity or uncertainty (see e.g. Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Scott, 2001). The four cases of UP, UM, UV and TCS help illustrate this point. Their implemented quality management systems were more symbolic than genuine, and these symbolic adjustments were a clear response to demands of the external environment. Convincing stakeholders of the quality of education is becoming more important, considering that the number of full-time students is continuously decreasing in Hungary. Institutions are under increasing competition to find new students and are searching in non-traditional areas, such as persons already active on the labour market. This may suggest that in the eyes of these 'post-experience' students, an ISO certification (something they see in their working environment increasingly often) suggests a guarantee of the quality of the institutional services. As mentioned in Part I, quality management mechanisms may help institutions to manage the impression that outsiders have about them. Thus, they can maintain their legitimacy by adopting designs that look acceptable to some stakeholders.

BT and KSC, however, managed to avoid only symbolically implementing their quality management systems. The continuous external support and the commitment of institutional leaders played a crucial role in their implementing quality management system genuinely not only symbolically. As the evidence showed, the commitment of institutional leaders in BT and KSC was high, and they were supported by external consultants during the whole implementation. This indicates that these two features can play a role in explaining the differences between BT and KSC, and UM, UP, UV and TCS. The general implementation and quality management literature has suggested that these two factors have crucial importance in quality management implementation processes.

The results of the case study analysis showed that all six institutions implemented ISO models, which supported a neo-institutionalist explanation of why Hungarian higher education institutions strongly tended to use ISO standards. DiMaggio and Powell (1991, p. 71) stated that the implementation of normative (professional) standards—as a source of normative isomorphism—helps to enhance legitimacy for the institutions. The implementation process then may be shaped by conformity to normative standards such as ISO standards, disseminated through individuals such as quality management experts. As the evidence showed, each institution was supported by quality consultants. These

consultants mainly worked for institutions in the industry or service field, where the majority of quality management models that they implemented use ISO standards. Thus, their knowledge and experience relating to ISO standards may have caused the high number of higher education institutions implementing ISO models.

The external consultant involvement also partly explains the mixed situation concerning the implementation of the Protocol in higher education institutions. The evidence showed that only two institutions used it to implement quality management mechanisms, and only as complements to ISO models. The other four institutions dismissed the Protocol from the beginning, and built their quality management system based on ISO standards. Another possible explanation of this evidence may be that the Protocol was insufficient. This idea was supported by my analysis of what constitutes a comprehensive quality management system for a higher education institution: the Protocol did not cover some necessary areas, such as the design of education processes, implementation quality, resource management, and quality information system (see Chapter 3).

The next factor that needs to be analysed is the market orientation. KSC, a private college, was a case where quality management was implemented soon after its establishment. One interviewee stated that the predecessor of the college, also active as a private education institution, had already been certified according to the ISO 9001 standard. This suggests that in KSC, quality management was initiated because it was demanded by the market, which of course impinges more on private colleges than on public higher education institutions.

Similar influences of market orientation could be found in UP, where quality management activities started in some parts of the university in 1997. The Quality Improvement Committee was established well before the government's initiative on quality management. As the quality director stated, quality management activities started in faculties that had a relatively strong connection to the market. The implication is that external partners expected certification. For example, the medical school and two clinics, which also operated as official health care organisations in Pécs, had already been certified.

This argument was also supported by the survey for this study. I found that all the private and foundational higher education institutions (n=6) had implemented a quality management system. The other institutions among my case studies (UM, UV, BT and TCS), also supported the above-mentioned explanations. All these public and public-funding dependent higher education institutions were much less oriented towards the market, and they initiated their quality management programmes after the government issued regulations on the matter.

All these arguments support the idea that the degree to which an institution depends on the market may be decisive in quality management implementation. As the evidence showed, more market-oriented higher education institutions and units tended to display behaviour that focused on the expectations of their customers. If universities and colleges fail to 'produce' for this market (e.g. no

clear evidence on an operating quality management system), they will be 'punished' directly by (potential) customers (e.g. contract research suppliers). This evidence also suggests reconsidering the operationalisation of the variable 'dependency'. In this study, dependency was only operationalised in relation to the government. Yet, the market as the other main source of potential external dependency seems to be relevant too. This may also explain the unexpected relationship between dependency and the pace of quality management implementation: it was not so much the dependence on governmental expectations that caused higher education institutions to react quickly, but rather the independence from market forces that allowed them to react slowly, as Clark (1970) already suggested. Thus, it may be important to include the market orientation of institutions in future research.

In addition, semi-legal/illegal contractual practices of academics may influence quality management implementation. Some empirical findings underlined this result. For example, TCS wanted to make its system transparent through quality management but as the quality leader stated, "some academics did not want to let others see into their own, private business". Similar outcomes were found at KSC, where, as one interviewee stated, "some academics could not fry their own roast if the rules are clear and transparent". The interviewee also mentioned that without these members, the quality management implementation could have occurred much more quickly, approximately twice as fast**.** The importance of this factor can be explained by the working situation of Hungarian academics, where salaries are low, as in all of Central and Eastern Europe. Consequently, academics held many jobs at the same time. As an extreme example, one professor had five 'full-time' jobs and thus five accreditation forces in five institutions at the same time (interview with the former head of the Hungarian Conference of Rectors). This example can well indicate why a law was introduced to reduce this practice. Now, academics are officially allowed to accept two full-time jobs and the MAB counts them toward the accreditation of study programmes only at one higher education institution at a time. Under the old system, academics could accept multiple positions. The transparency of a quality management mechanism, however, would prevent this. In that sense, people with these 'grey' jobs may want to hinder the implementation of quality management mechanisms. Interestingly, at UM and UP, where the implementation was slow as well, I did not find similar results about academics opposing the transparency of quality management mechanisms. Thus, the explanation provided above seems to be tentative and therefore further research on this question would be useful.

The final factor to be checked is institutional age. TCS was an old church-affiliated college and the amalgamation of institutions after 2000 affected TCS only marginally. Also at UV and UM, the merger process can be characterised as an absorption process because both institutions kept their core features and only one smaller faculty joined them. For all of these institutions, the merger process largely failed to influence their organisational structure. For UP, the study

showed a similar tendency. Only two smaller units joined the previous Janus Pannonius University—the University Medical School and Illyés Gyula College of Education—which included only one tenth of the total number of students. This merger also seems to have largely left the organisational structure of UP unaffected. For BT and KSC, on the other hand, the situation was somewhat different. BT was established in 2000 after three different institutions merged. In this sense, BT was a new institution. Similarly, KSC was also a new institution because it was established in 2000. Did these different 'historical contexts' play a role in the quality management implementation process? At BT, the evidence showed that, as a new institution, it planned to operate the new college on the principles of quality management. This could be found in the institutional quality policy developed in 2001 and updated in 2004. Similarly, KSC, a newly established college, started its quality management implementation soon after its formation. In both institutions, the pace of implementation was quick. The other four institutions, classified as old ones, implemented quality management mechanisms slowly. This suggests that institutional age may also be important for quality management implementation. As Jenniskens (1997) explained, young institutions are more eager to introduce new mechanisms than old ones: younger institutions need to get a firm position on the 'institutional map'. From another point of view, a more bureaucratic decision-making process in an institution can explain why they are slower to adapt to new challenges that do not fit old institutional procedures. Relatively new institutions may be less confronted with this problem.

In this chapter, case study analyses were presented. The next chapter, Chapter 7, will analyse the outcomes of cross-sectional and case study analyses together in order to test the hypotheses and evaluate the research propositions comprehensively.

7 Analysis of the results

In the previous two chapters, cross-sectional and case study analyses were presented. This chapter moves one step further to analyse the outcomes of both analyses comprehensively. Such a comprehensive analysis is needed to test the hypotheses and evaluate the research propositions derived from the theoretical framework. In this chapter I do not describe again in detail the evidence that underlies the results of the hypotheses and research propositions; this evidence was presented in Chapters 5 and 6. However, this chapter is the right place to present more firmly based conclusions. First, all of the hypotheses and research propositions are evaluated. Then the chapter ends with a summary of the main conclusions. This section also addresses explanations of the unexpected or contradictory results in section 7.2.

7.1 Testing the hypotheses and evaluating the research propositions

In this section the hypotheses and research propositions derived from the theoretical framework are tested and evaluated. They may be confirmed or not, based on the empirical findings. It is also possible that the evidence for falsification or support is not totally unambiguous. In that case, further explanations are suggested. They can be of two sorts. First, there may be other variables that have an impact on the particular characteristic of quality management implementation. Second, other factors not incorporated in the conceptualisation of the explanatory variables may play a significant role in the explanation of the implementation. Thus if a test fails, I can ask whether the theory is completely inadequate, needs repair and restatement, or requires a narrower scope of its explanatory claims. It is now time to test the hypotheses and evaluate the research propositions in order.

Hypothesis 1

Hypothesis 1 focused on the relationship between dependency and quality management implementation. First, hypothesis 1a was formulated as follows:

> **Hypothesis 1a.** *The less higher education institutions depend on government the later quality management will be implemented.*

The underlying argument leading to this hypothesis was that the more dependent institutions were on government for financial resources, the faster they implemented quality management because of government requirements. As a

first step, both statistical methods showed a result opposite than I expected. The cross-tab analysis showed that institutional dependency had a negative relationship (Kendall's τ_c = -0.201) with the pace of quality management, but this relationship was not statistically significant at the 5% level. Similarly, the multiple regression analysis provided the same negative relationship between dependency and pace (Beta = -0.183) but it too was not statistically significant at the 5% level[47]. These results indicate falsification for hypothesis 1a because I expected a positive relationship between dependency and the pace of quality management implementation.

In addition, the results of the case studies also pointed in the same direction. While the results for UP, which was a relatively independent institution where implementation was slow, and BT, which was quite dependent on the government where implementation was quick, fit the expected phenomenon, for the other four institutions the picture was the opposite from what was expected. UV, UM and TCS depended fairly on the government and in these three institutions the pace of implementation was slow. In KSC, which was independent of the government, the pace of quality management implementation was quick.

In sum, these findings together seem to contradict hypothesis 1a. The two statistical methods (cross-tab and multiple regression) showed the unexpected negative relationship between dependency and pace of quality management implementation and thus seem to falsify hypothesis 1a. The results of the case studies also did not support the predicted phenomenon, because we could not find a substantial relationship between financial dependency and pace of implementation.

In addition, hypothesis 1b was formulated as follows:

> **Hypothesis 1b.** *The less higher education institutions depend on government the less they will follow the Protocol.*

Resource dependency theory explains that the more an organisation depends on other organisations, the more it will follow their requirements. This implies that the more a higher education institution relies on the government, which developed the Protocol to implement quality management mechanisms, the more likely a university or college will follow the Protocol in its quality management implementation. As mentioned above, this hypothesis was analysed only by cross-tab and case study methods.

The cross-tab showed that institutional dependency had a statistically significant (at the 5% level) negative relationship with the 'Protocol following'. This unexpected result would suggest that the more higher education institutions depend on government the less they follow the Protocol.

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[47] As I mentioned earlier, because of the relatively small number of cases, I am interested more in the direction than in significant results in the case of multiple regression.

The results of the case studies showed a mixed picture. UM and UV depended relatively heavily on the government. However, they did not use the Protocol to implement their quality management systems. UP and KSC, which were independent institutions, also did not use the Protocol. BT and TCS, which were relatively heavily dependent on the government, only partly used the Protocol and rather turned to implement ISO models. These results also supported the Protocol's insufficiency.

Overall, the results of both analyses seem to contradict hypothesis 1b. In sum, neither hypothesis 1a nor hypothesis 1b was supported by the evidence. Therefore, further explanation will be provided in the following section.

Hypothesis 2

Hypothesis 2 focused on the relationship between institutional complexity and quality management implementation. First, hypothesis 2a was formulated as follows:

> **Hypothesis 2a.** *The higher the complexity of higher education institutions, the slower the pace of quality management implementation.*

As illustrated in Part I, institutional units and processes can be quite independent from each other and the complexity that results from many units and processes hinders fast implementation of new programmes. The results of both statistical and case study analyses support this explanation.

In the statistical analysis, the cross-tab showed that institutional complexity had a statistically significant negative relationship with the pace of quality management implementation (Kendall's $\tau_c = -0.293$; $p<0.05$). In addition, multiple regression analysis provided the same negative relationship between complexity and pace but it was not statistically significant at the 5% level (Beta = -0.054). Both analyses would indicate that the more complex the higher education institution the slower the pace of quality management implemented.

In addition, the case studies also showed a tendency to support the phenomenon. At the three complex institutions, the pace of quality management implementation matched the hypothesis. In two simple institutions, the pace of quality management implementation was quick. These findings clearly indicated that quality management implementation was delayed by complexity. TCS was the exception: it also was a simple institution but implementation was slow. However, the interviews made clear that the pace of implementation was influenced more by factors outside institutional complexity, so that the theoretical explanations developed in Chapter 2 remain valid.

In sum, these findings together seem to conform to hypothesis 2a. Cross-tab and multiple regression analyses (though the latter was not statistically significant at the 5% level) do not seem to falsify hypothesis 2a. In addition, five

of the six case studies also support this hypothesis while the sixth case study (TCS) was not a clear contradiction either.

Turning to hypothesis 2b, it was formulated as follows:

> **Hypothesis 2b.** *The higher the complexity of higher education institutions, the narrower the scope of quality management implementation.*

In the first step in the analysis, the statistical methods showed a mixed picture. Cross-tab analysis provided a slightly negative (Kendall's $\tau_b = -0.159$) relationship but multiple regression resulted in a slightly positive (Beta = 0.075) relationship between complexity and scope of quality management implementation, although neither of them was statistically significant at the 5% level. These results would not suggest a statistically significant relationship between complexity and the scope of quality management implementation.

In addition, the case studies also indicated a mixed situation. At two complex institutions, the scope of quality management mechanisms narrowly focused on education. The same result was expected in the case of the most complex university, where the scope, however, radiated to all of its core functions. For the other three institutions in the study the picture was also mixed. In two of the simple institutions the scope of implementation was wide. But in the third (again TCS), empirical findings showed that the scope of implementation was rather narrow. An alternative explanation was not found in this relationship; accordingly the results of the six case studies did not show a clear link between institutional complexity and the scope of quality management implementation.

To summarise: hypothesis 2b was supported by some empirical findings but other empirical results were ambiguous and the outcome of the multiple regression even seems to contradict this hypothesis. This implies that the evidence provided by the statistical analyses and the six case studies did not result in an outright contradiction of hypothesis 2b. As a consequence, further explanation will be provided in the following section.

Hypothesis 3

Hypothesis 3 focused on the relationship between the balance of institutional sciences and quality management implementation. First, hypothesis 3a was formulated as follows:

> **Hypothesis 3a.** *The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the faster the pace of quality management implementation.*

The underlying argument leading to this hypothesis was that the distinctive academic viewpoints and definitions of quality in different disciplines influence the quality management implementation. Chapter 2 explained that the so-called

hard and convergent sciences are, more than soft and divergent fields, amenable to quality management, which allows faster implementation of quality management in the former than in the latter.

These expectations, however, quickly break down when compared against the evidence. The cross-tab analysis showed that balance toward hard and convergent sciences had a slightly negative relationship (Kendall's τ_c = -0.060) with the pace of quality management, but this relationship was not statistically significant at the 5% level. In addition, multiple regression analysis provided a similar weak negative relationship (Beta = -0.093) between disciplinary balance and pace of quality management implementation, and this also was not statistically significant at the 5% level. Thus both analyses showed an unexpected negative relationship between the institutional balance toward hard and convergent sciences and the pace of quality management implementation.

The case studies also showed contradictory results. Thus, in UV the disciplinary balance was more toward hard and convergent sciences but the pace of implementation was slow. KSC's disciplinary balance tended towards soft and divergent study programmes but it showed fast quality management implementation. Nevertheless, in the other four cases I found empirical results that supported the hypothesis. Thus overall these results are mixed.

Consequently, these findings are quite ambiguous. The two statistical tests alone had a sign to falsify this hypothesis. However, they predicted only a slight negative relationship between disciplinary balance toward hard and convergent sciences and pace of quality management implementation. Similarly, two of the six cases contradicted hypothesis 3a. Thus this hypothesis does not seem to be supported by the evidence found in this study.

In addition, hypothesis 3b was formulated as follows:

> **Hypothesis 3b.** *The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the wider the scope of quality management implementation.*

As illustrated above, the characteristics of hard and convergent disciplinary fields are more in line with a more quality management implementation of a wider scope than those of soft and divergent fields. The outcomes of the two statistical methods indicated the same, expected relationship. The cross-tab analysis showed that a balance toward hard and convergent sciences had indeed a positive relationship (Kendall's τ_b = 0.150) with the scope of quality management, but this relationship was not statistically significant at the 5% level. The multiple regression analysis provided the same positive relationship (Beta = 0.203) between disciplinary balance and scope of quality management implementation but this also was not statistically significant at the 5% level. Both analyses showed that institutions with a balance toward hard, convergent sciences implemented

quality management in a wider scope but neither of them were statistically significant at the 5% level.

The case studies showed a rather mixed picture. In three cases the scope of quality management implementation fit this hypothesis well. These institutions illustrated that the more the disciplinary balance was toward the hard and convergent fields, the wider the scope of quality management implementation. However, for the other three cases the picture is different. In UV the disciplinary balance was more toward the hard and convergent fields, but the scope of quality management system was narrow. In KSC and UP the disciplinary balance focused on the soft and divergent fields but the scope of quality management implementation was wide. All three institutions did not seem to support this particular hypothesis.

Overall, the findings indicate a mixed situation for the six institutions. While findings regarding three institutions supported the expected phenomenon, three others opposed it.

Comprehensively, the evidence for hypothesis 3b was relatively weak: both cross-tab and multiple regression showed the expected relationship but neither of them was statistically significant. Furthermore, the case studies produced a mixed situation because three supported it but three were against this hypothesis. Here further explanation is needed to try to explain the unexpected results, which will be provided in the following section.

Research proposition 4

Research proposition 4 focused on the relationship between the commitment of leaders and quality management implementation. As explained earlier, research proposition 4 could only be studied in the case studies, not through my survey. First, research proposition 4a was formulated as follows:

> **Research proposition 4a**. *The higher the commitment of leaders, the faster the pace of quality management implementation.*

Both the general implementation and quality management literature, treated in Part I, emphasised that committed leaders can speed the pace of implementation. In all six institutions, the pace of quality management implementation fits this explanation remarkably well. This seems to support research proposition 4a.

In addition, research proposition 4b was formulated as follows:

> **Research proposition 4b.** *The higher the commitment of leaders, the wider the scope of quality management implementation.*

As explained earlier, with higher leadership commitment, it is expected that the quality management implementation will focus comprehensively on each core institutional function (education, research and community service).

In three cases, the leadership commitment was relatively low and these cases showed a narrow scope of quality management implementation. In two cases the commitment of leaders was high. In one of them, quality management implementation extended to all three core functions. At the other, the scope of the quality management system was also wider than in the first three, as it encompassed education as well as service and support processes, though not research activities. The only institution where the findings contradicted the research proposition was UP. The commitment of leaders was not high, yet this university implemented quality management in all the core functions.

Even if the last case did not support this research proposition, the common trend in the other cases was in line with the theoretical expectation. This seems to lend some support to research proposition 4b. It should also be emphasised that leaders' commitment proved to be one of the strongest explanatory variables in the qualitative analysis. In other words, it has one of the greatest impacts on quality management implementation, according to almost all empirical findings.

Hypothesis and research proposition 5

Hypothesis and research proposition 5 focused on the relationship between external consultancy and quality management implementation. Specifically, hypothesis 5a was formulated as follows:

> **Hypothesis 5a.** *The more the higher education institutions are supported by external consultants, the faster they can implement quality management.*

Both general implementation literature and quality management literature pointed in this direction: external consultants can increase the pace of quality management implementation.

For this hypothesis, both statistical and case study analyses provided strong support. First, the cross-tab analysis showed that external consultancy had a relatively strong statistically significant and as expected positive relationship with the pace of quality management implementation (Kendall's $\tau_c = 0.415$; $p<0.05$). Furthermore, the multiple regression analysis resulted in a similar strong and positive relationship between external consultancy and pace and it was also statistically significant at the 5% level (Beta = 0.401). Thus both quantitative analyses support this hypothesis.

In addition, the case studies equally indicated strong support for this hypothesis. In four cases, I found little external support and the pace of quality management implementation was as expected—slow. The two other cases were supported by external consultants throughout the whole quality management implementation process and in these higher education institutions the pace of quality management implementation was quick indeed.

All in all, these findings together seem to conform to this hypothesis.

Moving to hypothesis 5b, it was formulated as follows:

Hypothesis 5b. *The more the higher education institutions are supported by external consultants, the wider the scope of quality management implementation.*

As explained above, the literature pointed in the direction that external consultants can help to include in implementation all the crucial core areas.

For this hypothesis too, both statistical and case study analyses provided considerable support. First, both statistical methods (cross-tab and multiple regression analysis) provided a strong statistically significant (at the 5% level) and positive relationship between external consultancy and scope of quality management implementation (Kendall's τ_b = 0.556; Beta = 0.602). As a consequence, I concluded that statistical analysis seems to corroborate hypothesis 5b.

Strong support from the case studies was also found for this hypothesis. Support of quality experts (consultants) during the quality management implementation was quite outstanding at three institutions. For these three institutions, the scope of implementation was indeed wide. For the other three, the picture was similarly in line with the expectations. None of these institutions were intensely supported by external consultants, and indeed, their quality management scope was rather narrow. For all six institutions, we found a strong, positive relationship between the support of external consultancy and the scope of the quality management implementation.

Comprehensively, these findings together seem to conform to this hypothesis. Cross-tab and multiple regression resulted in a high positive and significant relationship between external consultancy and pace of quality management implementation and did not falsify this hypothesis. The case studies also supported hypothesis 5b.

Research proposition 5c was formulated as follows:

Research proposition 5c. *The more the higher education institutions are supported by external consultants, the more adequately they implement quality management.*

External consultants know the basic principles of quality management mechanisms, as indicated in Part I. Thus they can define comprehensive quality management mechanisms for higher education institutions, and help with their genuine implementation.

Three cases were supported by external consultants only at the beginning of implementation and indeed, in these three institutions the adequacy of quality management mechanisms implemented was low. One university was supported by internal experts and its faculties had almost comprehensively developed quality management systems. But in this case, most of them were used only symbolically, as the evidence showed. BT and KSC were supported by external consultants during the whole implementation process and as I expected, their

quality management systems were adequate. All in all, findings from the six higher education institutions seem to support research proposition 5c.

Looking back on the empirical support for all three statements on external consultants, it is worth noting that external consultancy seems to have played a major role in quality management implementation.

Research proposition 6

Research proposition 6 focused on the relationship between decision-making processes and the pace of quality management implementation. Specifically, research proposition 6a was formulated as follows:

> **Research proposition 6a.** *The more bureaucratic the decision-making processes, the slower the pace of quality management implementation.*

The reasoning underlying this proposition was that institutional routines and standard operating procedures were developed to deal with standard situations, not to provide flexible adaptations to non-standard issues. Accordingly, if standard routines dominate organisational processes, issues such as quality management implementation are often handled slowly.

In four of the six institutions in the case study, the decision-making processes concerning quality management implementation can be considered bureaucratic. And indeed, each of these institutions implemented quality management implementation slowly. In contrast, at the other two institutions the decision makers did not always follow previously developed procedures and in these two institutions the implementation of quality management occurred quickly. For the six institutions together, the findings seem to support research proposition 6a.

Turning to research proposition 6b, it was formulated as follows:

> **Research proposition 6b.** *The more political the decision-making processes, the slower the pace of quality management implementation.*

As indicated in Chapter 2, personal preferences on particular issues and bargaining games among staff members can include lack of agreement regarding implementation of quality management, which would slow down the process.

For four of the higher education institutions studied in-depth, the findings provided some evidence for this research proposition. Concerning one other case, I found some signs of a political decision-making process, which hindered the quality management implementation, but official confirmation of these indications was not provided. Finally, in the sixth case, the case study did not show political elements in the decision-making process, but quality management implementation was not quick.

In sum, even if the last case did not support this research proposition, the common trend in the other cases largely seems to support research proposition 6b.

Hypothesis 7

Hypothesis 7 focused on the relationship between reputation and quality management implementation. As explained in Part I, hypothesis 7 was only studied through my survey because the case studies did not provide further information on the variable of the institution's reputation. First, hypothesis 7a was formulated as follows:

> **Hypothesis 7a**: *Reputation can have a positive or a negative influence on the pace of implementation of a quality management mechanism; it will be more negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.*

For this hypothesis, both statistical methods provided the same, and remarkable results. As the first step in statistical analysis, in the cross-tab analysis a statistically significant negative relationship between institutional reputation and the pace of quality management implementation was found (Kendall's $\tau_c = -0.431$; $p<0.05$). Similarly the multiple regression showed a statistically significant negative relationship (Beta = -0.531). Thus, I concluded, the independence from governmental resources seems to explain this relationship rather than the increased decision-making capacity.

In addition, hypothesis 7b was formulated as follows:

> **Hypothesis 7b**: *Reputation can have a positive or a negative influence on the scope of implementation of a quality management mechanism; it will be more negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.*

Also for this hypothesis, both statistical methods indicated the same noticeable results. First, the cross-tab analysis showed that institutional reputation had a statistically significant negative relationship with the scope of quality management implementation (Kendall's $\tau_b = -0.340$; $p<0.05$). The results of multiple regression indicated a similar same statistically significant negative relationship between the two variables (Beta = -0.399). Therefore, again, independence from governmental resources seems to explain this relationship rather than increased decision-making capacity.

An additional remark must be made here. It should be emphasised that institutional reputation was one of the strongest explanatory variables. It not only

shows to be significant in all cases, but it also has one of the most substantial impacts according to the two statistical analyses.

7.2 Summary and conclusions

In this chapter, the empirical research was analysed, and the hypotheses and research propositions that had been formulated in Chapter 4 were tested and evaluated on the basis of both the statistical and case study data. In this analysis I also explored explanations for the unexpected results. The current section summarises the empirical findings of the study.

Table 7.1 sums up the findings of the hypotheses and research propositions. It presents the independent and dependent variables, methods used, and the results of the tests. Altogether, the empirical research led to the following main conclusions. First, three variables, i.e. external consultancy, commitment of leaders, and institutional reputation, proved to be the strongest explanatory variables. They not only proved to be always connected to the dependent variables in the expected direction, moreover statistically significant[48], but they also had the most substantial impact on quality management implementation. Second, the analyses showed that bureaucratic and political decision-making processes and institutional complexity had the expected negative relationship on the pace of quality management implementation. For hypothesis 1, which predicted that resource dependency would positively influence the pace of quality management implementation and 'Protocol following', the findings rather indicated a mixed picture. Hypothesis 3, referring to the balance toward hard and convergent sciences within a higher education institution and its positive impact on the quality management implementation, was weakly supported by some findings but contradicted by others. A positive impact on the scope of quality management implementation was somewhat supported, while the empirical findings falsified expectations on the influence of the pace of change. Similarly, hypothesis 2b, referring to complexity and its negative impact on scope of quality management implementation, was also supported by some findings but contradicted by others, so it could neither be falsified nor confirmed by the empirical findings of this study.

[48] Except research propositions 5c and 6a-b, which could only be studied in the case studies, not in my survey.

Table 7.1 Results of testing the hypotheses and evaluating the research propositions.

Hyp. & Rp.	Independent Variable	Dependent Variable	Method	Result
H 1a	Dependency	Pace	Cross-tab, MR, CS	0
H 1b	Dependency	Protocol	Cross-tab, CS	0
H 2a	Complexity	Pace	Cross-tab, MR, CS	++
H 2b	Complexity	Scope	Cross-tab, MR, CS	0
H 3a	Balance	Pace	Cross-tab, MR, CS	-
H 3b	Balance	Scope	Cross-tab, MR, CS	+
Rp 4a	Commitment	Pace	CS	++
Rp 4b	Commitment	Scope	CS	++
H 5a	Ext. consult.	Pace	Cross-tab, MR, CS	++
H 5b	Ext. consult.	Scope	Cross-tab, MR, CS	++
Rp 5c	Ext. consult.	Adequacy	CS	++
Rp 6a	Bur. DMP	Pace	CS	++
Rp 6b	Polit. DMP	Pace	CS	++
H 7a	Reputation	Pace	Cross-tab, MR	Mechanism through independence
H 7b	Reputation	Scope	Cross-tab, MR	Mechanism through independence

Legend, Table 7.1.

- \- : hypothesis not supported
- 0 : contradictory results; hypothesis neither falsified nor confirmed
- \+ : weak support for hypothesis
- ++ : strong support for hypothesis or research propositions

It is tempting to see if it is possible to explain the unexpected and sometimes contradictory outcomes. Alternative explanations as well as the interaction effects among my variables, which may explain the unexpected results, will be summarised below. These explanations are sometimes tentative, and although they make sense in the light of the empirical evidence of the study, new research is needed to elaborate and test the explanations.

As a first step, the lack of a national education quality policy and a stable and well-developed long-term strategic plan of the Ministry of Education slowed down the implementation in four cases. However, two institutions (BT and KSC), although confronted with the same ambiguous policy, reacted quickly. Probably, this can be ascribed to the fact that only BT and KSC were supported by external consultants during the whole implementation process. This finding adds value to my understanding on the one hand but, on the other, it is not a surprise because, based on the quality management and general implementation literature, I expected the implementation of quality mechanisms to be faster if external consultants facilitated the process.

Second, data from UP, UM, UV and TCS supported the idea that symbolic compliance was a sustainable option for higher education institutions, to convince their external environments of the quality of institutional core activities, yet coping internally with the unclear governmental policy. This is becoming increasingly important for higher education policy, because the number of full-time students is decreasing in Hungary and therefore the institutions have to find new students in non-traditional areas, such as persons already active on the labour market. These 'post-experience' students may find an ISO certification important as a guarantee of the quality of institutional services, because many have learned that in their labour practice. This explanation suggests that even only symbolically implementing quality management mechanisms may help institutions to maintain their legitimacy, as most clients and customers do not look further than the labels so that institutions may divert attention away from possibly controversial core activities.

While symbolic adjustments threaten proper implementation of quality management, the commitment of institutional leaders and the continuous external support played an important role in overcoming this problem, as the evidence showed. These two findings also added value to the theoretical framework, as they suggested that these two factors play a crucial role in quality management implementation.

Furthermore, the evidence showed that relatively many Hungarian higher education institutions used ISO models. An explanation of this tendency was found in neo-institutional theory, where it was argued that institutions incorporate elements from their environment so that they can conform to normative standards, like ISO certification, disseminated through quality management experts (normative isomorphism). Focusing on my case studies, each institution in the case study was supported by quality consultants at least to some, and this may have caused the high number of institutions implementing ISO standards.

External consultant involvement also partly explains the fact that only two institutions used the government's Protocol, and only as a complement to ISO models. The other four institutions built their quality management systems based on ISO standards. Another possible explanation for this evidence derives from my analysis that the Protocol was not a comprehensive quality management framework for a higher education institution (see Chapter 3).

Another possible explanatory factor that needs to be pursued is market orientation. The evidence indicated that at KSC, a private institution, and in some units of UP that had a relatively strong connection with the market, quality management was initiated because it was demanded by the market. My survey also supported the idea that the degree to which an institution depends on the market may be decisive in quality management implementation. Accordingly, it may be necessary to reconsider the operationalisation of the variable 'dependency'. Dependency was operationalised here exclusively in relation to the

government. Yet, the market can be seen as the other main source of potential external dependency. Market (in-)dependence could explain the unexpected sign of the relationship between dependency and the pace of quality management implementation. In this alternative explanation, it was not so much the dependence on governmental expectations that caused higher education institutions to react quickly, but rather the independence from market forces that allowed them to react slowly, as Clark (1970) already suggested.

In addition, semi-legal/illegal contractual practices of academics may influence quality management implementation. Some empirical findings at TCS and KSC underlined that academics hindered quality management implementation because a transparent quality management processes did not let them do their own private business. This can be explained by the fact that the salaries of Hungarian academics are relatively low, as in all of Central and Eastern Europe. This problem may have become even more pronounced at the time of writing than during the period studied, as recent laws have curtailed academics' rights to supplement their incomes by accepting positions at more than two different higher education institutions. The transparency of a quality management mechanism, however, would discover people's 'grey' jobs, who may want to hinder quality management implementation. Interestingly, the data regarding UM and UP did not support this explanation; therefore my interpretation needs to remain tentative and further research on this question would be useful.

The final alternative factor refers to the institutional age. As the evidence showed, the merger process in Hungary seemed to have largely left the organisational structure of four of the institutions studied in depth unaffected and in that sense they were not new institutions. They all implemented quality management mechanisms slowly. The remaining two cases, BT and KSC, on the other hand, were established in 2000, so they can be seen as new institutions. In both institutions the pace of implementation was quick. This suggests that institutional age, as Jenniskens (1997) put forward, may also be decisive in implementing new mechanisms.

Adding to this view, we might propose that older institutions have had time to develop more rules, i.e. become more bureaucratic. And a more bureaucratic decision-making process in an institution can explain their adapting slower to new challenges that do not fit old institutional procedures. Relatively new institutions are not confronted with this problem.

With this summary, Chapter 7 and Part II are ended. The final part of this study consists of one chapter, Chapter 8, in which the study is briefly summarised and reflected upon.

Part III Summary & Reflections

8 Summary & reflections

Part III concludes this study. This final chapter both summarises and reflects upon the major findings. I start with problem statement and research questions in section 8.1. In section 8.2, the theoretical framework of the study is summarised. Section 8.3 sums up the 'localisation' and operationalisation of the theoretical framework. In section 8.4, the empirical results are briefly discussed. The final section of this chapter reflects on the theoretical framework and research design. Section 8.5 also includes suggestions for additional research, since the empirical results point to elaborations and topics offering interesting and promising perspectives for further study of quality management implementation in higher education.

8.1 Problem statement and research questions

The study focused on the question of how higher education institutions responded to governmental reform, and specifically, which organisational characteristics influenced quality management implementation within them and how we can explain the differences in pace and scope of quality management implementation among higher education institutions. The concept of quality management in this study denoted designing, implementing and improving quality-based institutional goals, incorporating stakeholders' needs and satisfaction, and processes whereby an organisation aims to achieve these goals. We saw that quality management is an extremely important topic in higher education policy nowadays. Chapter 1 demonstrated that this is partly due to the expectation of enhancing efficiency, effectiveness and accountability in higher education institutions. These increasing challenges served as the starting point for this study. Therefore, I commenced the study with the problem statement:

> *Did higher education institutions implement quality management mechanisms for their education and, if so, how, and what was the role of organisational characteristics in this respect?*

Chapter 1 showed that a transformation towards a new conception of quality and a drive towards improvement of quality can be seen in many policy initiatives in Hungary since 1989, which shows that Hungary is an interesting case for my topic of study. In addition, in an international perspective, the Hungarian case could provide an interesting contrast to those countries where policy-making concerning quality has been more comprehensive. Therefore, in this study the focus was on understanding how quality management implementation occurred

within Hungarian higher education institutions. The problem statement was then divided into three research questions:

1. *Did higher education institutions implement quality management mechanisms and, if so, to what extent and in what way (e.g. different quality management mechanisms)?*
2. *Are there differences between higher education institutions in quality management implementation?*
3. *How can we explain these differences or, in other words, which organisational characteristics influenced the quality management implementation?*

Taking these empirical research questions into account, a careful development of a theory was considered to be the next necessary step to explain quality management implementation in higher education institutions. The next section summarises the theoretical framework as it was developed in Part I.

8.2 Theoretical framework

As mentioned in Chapter 1, the literature on public management reform pointed to the fact that governmental reforms may face the problems that are addressed in the organisational studies. Reform faces a number of problems: 1) financial difficulties, as the tax base diminishes and welfare state expenses rise; 2) a decline in trust in governmental organisations (see e.g. Norris, 1999); and 3) rising expectations in the quality of government services. Governments are, therefore, seeking ways to economise, restore trust, and improve the quality of services. To tackle these problems, I first turned to the approaches of resource dependency and neo-institutional theories that have proved to provide valuable insights overall as well as in higher education studies. The essence of using both perspectives was that organisations exercise strategic choice, but do so within constraints imposed by their institutional environments (Hrebeniak & Joyce, 1985; Pfeffer & Salancik, 1978). However, at this point, the framework required additional elements not central to this organisational literature. By far one of the most important of these was the individuals and their decision-making rules and habits (Sabatier, 2005). To understand the organisational adaptations that respond to governmental reform more fully, I used a model that attempted to couple actor and structure (and institutional procedure) relationships, establishing this 'missing link' from organisational theories. Allison's models provided that link, focusing on organisational decision-making processes, taking into account the political and organisational aspects of a particular organisation. The different organisational character in different fields was underplayed, however, by the above-mentioned approaches. Therefore the theoretical framework of this study incorporated some characteristics of higher education institutions that were found important by the literature to explain organisational response to

governmental reform in the higher education field. Finally, in this study, the organisational response to governmental reform was examined in the context of quality management implementation. There was thus an additional need to shed light on the characteristics of quality management mechanisms complementary to the theories outlined above developing a comprehensive quality management framework that includes the particular higher education characteristics.

The resource dependency perspective assumes that, in order to survive, organisations need a sufficient supply of resources. These resources often cannot be produced by the organisations themselves; therefore, to guarantee the flow of resources, an organisation must interact with other organisations that control these resources, and thus it depends on them. This perspective concludes that an organisation will be more likely to follow the requirements of the supplier of resources when it depends on these resources. However, it also emphasises that external control is not absolute, because organisational constraints always leave space for autonomous decision and improvisation. The 'dependency' variable was derived from the resource dependency perspective.

At this point, the study turned to neo-institutional theory, which demonstrates how organisations perceive their environments, how they act to control and avoid dependencies in order to maintain organisational discretion and autonomy of action and how they are influenced by their routines and organisational culture. It also suggests that organisations, in order to survive, adapt to norms and beliefs in their environment and incorporate them, which produces homogeneity within a certain organisational field. In addition, in neo-institutionalism, legitimacy is seen as a dominant factor securing stability and survival. However, institutional theorists have also contended that institutions facing conflicting, inconsistent demands about what practices they ought to use can maintain legitimacy by adopting symbolic designs to mask core activities that may be controversial, i.e. unacceptable to some key constituents (Meyer & Rowan, 1977). These symbolic actions are most effective under conditions of ambiguity or uncertainty. One part of the 'adequacy' variable, namely symbolic compliance, was derived from neo-institutional theory.

In addition, what received little attention in resource dependence and neo-institutional theory, but what also was identified as crucial in implementation literature, was the decision-making process within the organisation. The decision-making processes are included in this study by using Allison's two models of bureaucratic (OPM) and political (BPM) decision-making processes. According to the OPM the outputs of institutions function according to certain regular patterns of behaviour and standard operating procedures from which actions result. These constitute routines for dealing with standard situations, but they are not far-sighted, flexible adaptations to particular unique issues, which thus are often handled slowly or inappropriately. In addition, according to the BPM, the institutional staff members do not constitute a monolithic group. Rather, all persons have individual preferences and positions on a particular issue, which

may have a significant effect on institutional action. In this perspective, outcomes are seen as resulting from various overlapping bargaining games among institutional staff members, which can leave considerable leeway in implementation. In addition, deriving from the literatures on implementation and quality management, the importance of committed leaders and external consultants in quality management implementation were emphasised. From this, the variables of 'decision-making process', 'external consultancy' and 'leaders' commitment' were derived.

Although the perspectives outlined above facilitate the understanding of inter- and intra-organisation relations and interaction, still I want to have a further look at the specific characteristics of higher education institutions that may add to the understanding provided by the general theories. First, Gornitzka (1999) following upon Clark (1983) particularly emphasised the high degree of structural differentiation and complexity, which affects the capacity and capability for collective action within universities and colleges. Institutional complexity refers to the fact that institutions have separate functional groups and units, each of which is focused on separate, specialised tasks. Hall and Tolbert (2005) pointed out that the more complex an institution was, the more difficultly it implemented new programmes or models. Secondly, the cultural features in higher education institutions should be seen as important factors in the context of organisational change and adaptation. The distinctive academic viewpoints, values, perspectives, and definitions of quality are bound to have an impact on quality management. Chapter 2 discussed how these values and definitions are related to quality management implementation. In so-called hard and convergent sciences with their common aims, long-range plans, relatively clear standard operating procedures, and team work orientation, it is easier to implement the concerted action needed for quality management than in soft and divergent fields. Finally, Corley and Gioia (2000) emphasised the importance of how the reputation of higher education institutions enabled and constrained organisational operation and performance. Institutional reputation is the overall estimation in which a particular institution is held by its various stakeholders. The theory led to two possibilities. One perspective was that if an institution has a clear, well-developed reputation, it will implement quality management with a wider scope and at a faster pace. In contrast, with a strong reputation, the resource dependency approach explained, an institution was less dependent on government and need not follow the government's expectation to implement quality management quickly and widely. The study sought to evaluate empirically which path came true.

Understanding these features can be of vital importance for understanding why and how universities and colleges respond to environmental pressures, and how and why policies fail or are implemented successfully. The variables of 'complexity', 'disciplinary balance' and 'reputation' were derived from these approaches.

Furthermore, in Chapter 3, the literature on quality management in higher education provided a certain benchmark to the practices in Hungarian higher education. The intent of the analysis was to suggest a comprehensive (balanced) framework for quality management in higher education including especially education but also support processes directly connected with education. This chapter also compares the quality management models in use in Hungarian higher education with the comprehensive framework. The characteristics of quality management implementation were detailed in the variables of its pace, scope, adequacy and 'using the Protocol'. The pace and scope of implementation were derived from the literature of implementation. The 'Protocol' was developed by the Hungarian government to help establish quality management systems in higher education institutions. The 'adequacy' of a quality management mechanism implemented was derived from the quality management literature on the one hand, and is connected to neo-institutional theory (symbolic compliance), as mentioned earlier, on the other hand.

8.3 Localisation and operationalisation of the theoretical framework

8.3.1 Research model, hypotheses and operationalisation

This theoretical framework was thought to comprehensively take into account factors concerning quality management implementation. These relationships are depicted in my research model (Figure 8.1). It was based on the insights presented in the theories, and connected the independent variables on the one hand and the dependent variables on the other.

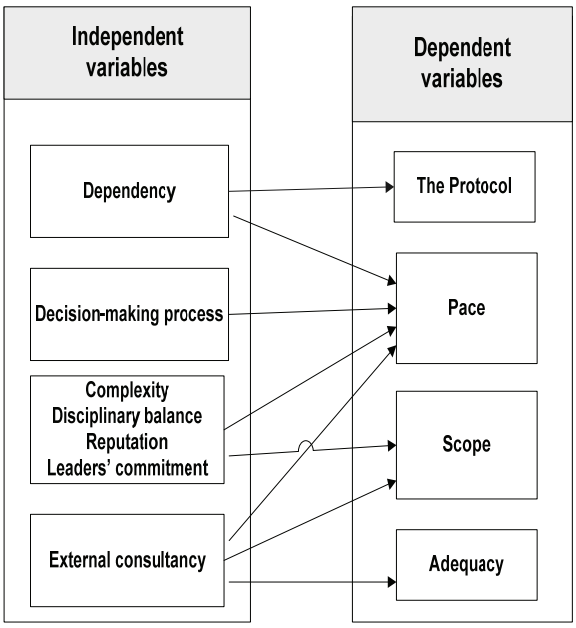
After the development of the theoretical framework and the research model, a number of hypotheses and research propositions were inferred from them. These indicated how independent variables were expected to be related to the occurrence of quality management implementation (the dependent variables). The hypotheses and research propositions are:

Hypothesis 1:
(a) The less higher education institutions depend on government the later quality management will be implemented.
(b) The less higher education institutions depend on government the less they will follow the Protocol.

Hypothesis 2:
(a) The higher the complexity of higher education institutions, the slower the pace of quality management implementation.
(b) The higher the complexity of higher education institutions, the narrower the scope of quality management implementation.

Hypothesis 3:	(a)	The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the faster the pace of quality management implementation.
	(b)	The more the disciplinary balance is toward hard and convergent sciences within higher education institutions, the wider the scope of quality management implementation.
Research proposition 4:	(a)	The higher the commitment of leaders, the faster the pace of quality management implementation.
	(b)	The higher the commitment of leaders, the wider the scope of quality management implementation.
Hypothesis 5:	(a)	The more the higher education institutions are supported by external consultants, the faster they can implement quality management.
	(b)	The more the higher education institutions are supported by external consultants, the wider the scope of quality management implementation.
Research proposition 5:	(c)	The more the higher education institutions are supported by external consultants, the more adequately they implement quality management.
Research proposition 6:	(a)	The more bureaucratic the decision-making processes, the slower the pace of quality management implementation.
	(b)	The more political the decision-making processes, the slower the pace of quality management implementation.
Hypothesis 7:	(a)	Reputation can have a positive or a negative influence on the pace of implementation of a quality management mechanism; it will be more negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.
	(b)	Reputation can have a positive or a negative influence on the scope of implementation of a quality management mechanism; it will be more negative the more reputation implies independence from governmental resources, while it will be more positive the more reputation implies actual decision-making capacity of the higher education institution.

Figure 8.1: Research model.



Looking back at the 'boxes' and 'arrows' in Figure 8.1, the major observation is that a large number of relations have been laid between independent and dependent variables. Yet there still are some 'missing arrows', i.e. possible relations that nevertheless have not been phrased as hypotheses or research propositions. The main reason for the 'missing arrows' was explained in Chapter 4: the theoretical perspectives did not allow expectations about some relationships to be formulated. Chapter 4 showed, for instance, that the 'Protocol' was only connected with 'dependency', that 'scope' was not related to 'dependency' and 'decision-making process', and that 'adequacy' was only connected with 'external consultancy'. Besides, our study did not allow the investigation of some relationships quantitatively. This was important in distinguishing 'hypotheses' from 'research propositions' because some statements were amenable to statistical testing, which were called 'hypotheses'. Others could be approached only through case studies (qualitatively) and were called 'research propositions'.

Chapter 4, in which the above steps were taken, began to operationalise the theory. It also 'localised' the theory by portraying the Hungarian higher education context and key actors in terms of quality management implementation, in particular the Hungarian government and the accreditation board (MAB). In addition, the central variables of this study were operationalised. For each of my variables, indicators were developed to allow them to be measured or observed in real life (see Table 8.1).

Table 8.1: Operationalisation of the variables.

Independent variables		Dependent variables	
Dependency	▪ To what extent institutional income is received from the government.	*Pace*	▪ The year a quality manual was developed. ▪ The year the first quality management system was implemented.
Leaders' commitment	▪ The leaders expressed their commitment in the institutional quality manual. ▪ The assurance of appropriate resources (money, time, infrastructure, and staff) for quality implementation. ▪ The position of the quality leader and the quality committee within the higher education institution.	*Scope*	▪ Quality management mechanisms more or less cover study programmes. ▪ Higher education institutions introduced a research quality management system. ▪ To what extent the organisational quality management systems contain support functions.
External consultancy	▪ The number of training hours delivered by external consultants. ▪ The areas of external support to help in doing self-assessment, developing quality policy and a quality manual and implementing a quality management system.	*The Protocol*	▪ The higher education institutions identified students, employers and staff members as stakeholders. ▪ How many quality indicators mentioned in the Protocol, in the fields mentioned in the Protocol, did the universities and colleges use?
Complexity	▪ In how many broad disciplinary fields the institutions have study programmes. ▪ The number of vertical levels of vocational training, bachelor, master, and PhD training. ▪ The number of cities where faculties are located.	*Adequacy*	▪ To what extent the organisational quality management systems include the elements of the comprehensive framework (summarised in Table 3.1). ▪ The quality management system works genuinely or symbolically in practice.
Disciplinary balance	▪ The ratio of 'hard-convergent' programmes to the total number of programmes.		
Decision-making process	More bureaucratic if: ▪ The quality management implementation occurs according to previously existing organisational routines and standard operating procedures. ▪ The institutions develop new standard operating procedures for the particular quality committees, and when. ▪ Standard operating procedures are well suited for quality management implementation. ▪ The procedures that the institutions use to inform people about e.g. the results of implementation, meetings, and decisions.		

	More political if: ▪ People assure themselves access to relevant information and decisions and use them for parochial ends. ▪ Persons struggle for more resources for quality management. ▪ Leaders requested that particular members be in particular quality management units. ▪ Overlapping interests constitute the stakes for which games are played and whether persons pull and haul for their stakes. ▪ Persons disagree on issues and fight and bargain for their own rights.		
Institutional reputation	▪ 'Application rate' of first year students within a study year. ▪ The rate of qualified academics (professors and docents) within a higher education institution. ▪ The number of study programmes of a higher education institution. ▪ The organisational age.		

8.3.2 Research design

The final section of Chapter 4 developed a research design on the basis of both qualitative and quantitative methods. I combined a statistical analysis covering all higher education institutions with a case study approach for a selected sample of institutions. First, however, a pilot case study at the University of Veszprém was made (this was not reported separately but was presented as a normal case study). Then, a statistical analysis of the survey results was conducted. The necessary information on organisational characteristics and quality management was acquired through existing statistics, studies of documents and especially by questionnaire. All accredited higher education institutions in Hungary were included in the study. In the cross-sectional analysis, bivariate cross-tabulations and multiple regression analyses were used. The bivariate analysis computed the relationships between individual independent and dependent variables. The second step in cross-section analysis was to test the whole model through multiple regression analysis. I emphasised that the conclusions in both statistical analyses must remain tentative because of the relatively low number of cases.

As a second main part of the study, a case study analysis was performed for studying quality management implementation more in-depth. The case studies also provided information on some variables that could not be obtained through

the questionnaire, namely the commitment of leaders, the decision-making processes and the adequacy of the implemented quality management system. In the case study analysis, the selection of cases should be theoretically justified (Yin, 2003a). In my study, cases based on the variation of the values of some independent variables collected in the quantitative part of the study, such as *complexity*, *disciplinary balance*, *external consultancy*, and *dependency*, were chosen in order to cope with the threats to internal validity and the possible influence of extraneous factors on the observed findings. One additional selection criterion was related to feasibility and access. In the end, six higher education institutions were selected: the University of Veszprém (UV), the University of Pécs (UP), the University of Miskolc (UM), King Sigismund College (KSC), the Theological College of Szeged (TCS), and Budapest Tech (BT).

Three methods were pursued to collect data in this qualitative part of the study, besides the information already available on the institutions through the quantitative study: 1) content analysis of documents, 2) interviews and 3) observations. Three categories of existing material were used to carry out document analysis: research publications on quality management and on the higher education institutions in question, official statistical material, and organisational documents. I also used semi-structured interviews with staff members who had been key actors in the quality management implementation and observations for explaining quality management implementation in its own context. In sum, the use of multiple methods of data collection proved very complementary, as one method almost always was able to fill the gaps left by the others.

In addition, the study covered about a half decade, from 2000 to 2005, the period in which institutional quality management came high on the political agenda for higher education in Hungary.

8.4 Empirical results

Chapter 5 started with a description of the findings in the survey. The response was quite satisfactory, as questionnaires were returned by 44 higher education institutions, which were in most respects representative of the whole population of 68 in Hungary. The most salient findings were that a majority of the higher education institutions had started implementation of quality management, especially for their education function, by 2004. The ISO 9001 and 9004 standards were very popular. Almost half of the higher education institutions had involved external consultants at least in some part of their implementation process.

Following the descriptive part, the theoretical model was tested in two stages. The first phase consisted of cross-sectional analysis (cross-tabulation and multiple regression), reported in detail in Chapter 5. The second phase was the analysis of six case studies, presented in Chapter 6. I discussed to which extent the case studies supported the hypotheses and research propositions, and I also explored

reasons for the unexpected results to the extent that the hypotheses and propositions were not fully supported by the data. Then, following the separate discussions of the two parts of the empirical investigation, the hypotheses and research propositions were comprehensively evaluated in Chapter 7. The results of the analyses were summarised in a table, reproduced here as Table 8.2.

Table 8.2: Main empirical outcomes.

Hyp. & Rp.	Independent Variable	Dependent Variable	Method	Result
H 1a	Dependency	Pace	Cross-tab, MR, CS	0
H 1b	Dependency	Protocol	Cross-tab, CS	0
H 2a	Complexity	Pace	Cross-tab, MR, CS	++
H 2b	Complexity	Scope	Cross-tab, MR, CS	0
H 3a	Balance	Pace	Cross-tab, MR, CS	-
H 3b	Balance	Scope	Cross-tab, MR, CS	+
Rp 4a	Commitment	Pace	CS	++
Rp 4b	Commitment	Scope	CS	++
H 5a	External consultancy	Pace	Cross-tab, MR, CS	++
H 5b	External consultancy	Scope	Cross-tab, MR, CS	++
Rp 5c	External consultancy	Adequacy	CS	++
Rp 6a	Bureaucratic DMP	Pace	CS	++
Rp 6b	Political DMP	Pace	CS	++
H 7a	Reputation	Pace	Cross-tab, MR	Mechanism through independence
H 7b	Reputation	Scope	Cross-tab, MR	Mechanism through independence

Legend, Table 8.2.

- \- : hypothesis not supported
- 0 : contradictory results; hypothesis neither falsified nor confirmed
- \+ : weak support for hypothesis
- ++ : strong support for hypothesis or research propositions

Table 8.2 presents the main empirical outcomes; the columns list, respectively, the independent and dependent variables, the methods of analysis used and the outcomes of the testing. It shows that external consultancy and institutional reputation are the strongest explanatory variables[49] with regard to all dependent

[49] They not only showed to be always in the expected direction and statistically significant—the latter cannot be said about research proposition 5c since that could only be studied qualitatively, in the case studies, not quantitatively, through my survey—they also had the greatest impact on quality management implementation.

variables, which were pace and scope (and, for the involvement of consultants, also adequacy) of quality management implementation. Furthermore, the case study analysis showed that leaders' commitment also has a substantial and positive effect on pace and scope of implementation of quality management. Bureaucratic and political decision-making processes, on the contrary, have negative effects on quality management implementation. Similarly, institutional complexity also negatively correlates with the pace (but not the scope) of quality management implementation. The empirical role of resource dependency remained limited: the findings neither supported nor rejected the hypothesis in which it was the independent variable.

Looking further into the role of resource dependency, I found no strong evidence for or against it. Regarding one hypothesis (1b), i.e. the relation between dependency and the government's Protocol for quality management in the higher education institutions, the far from comprehensive coverage of the Protocol on the one hand, and the uncertain situation and governmental coordination (lack of national education quality policy and appropriate quality management model) on the other may have resulted in the unexpected lack of correlation.

The explanatory role of the most higher education-specific variable, the balance toward hard and convergent sciences within a higher education institution, was weakly supported by some findings but contradicted by others. In a similar way, the evidence concerning the institution's complexity was supportive for some findings but contradictory for others.

Part II also provided alternative approaches for explaining the unexpected results. First, the role of the government was reconsidered. The lack of a national education quality policy and the lack of a stable, well-developed long-term strategic plan of the Ministry of Education created uncertainty for the higher education institutions, negatively influencing quality management implementation at four of the six universities in the case studies. The remaining two institutions reacted quickly to the same ambiguity, which may be explained by the fact that only they had support from external consultants throughout the entire implementation process.

Second, data on four cases supported the idea that symbolic compliance combined with internal resistance to change (i.e. de-coupling) was sustainable for higher education institutions confronted with vague governmental policy. Implementing quality management mechanisms only symbolically may help institutions to maintain their legitimacy by masking the underlying resistance to change. The cases also showed that next to continuous external support, the commitment of institutional leaders was crucial in implementing quality management genuinely, not only symbolically.

Third, the Hungarian higher education institutions strongly tended to use business-world models of quality management. Around two-thirds of the institutions turned to these kinds of models (i.e. ISO 9001, 9004, and EFQM). Each institution in the case study was supported by quality consultants with

experience in the business world, and this may have caused the 'normative isomorphism'.

Fourth, the findings supported the importance of the degree to which an institution depends on the market. This suggests the need to reconsider the operationalisation of 'dependency'. This may explain the unexpected sign of the relationship between dependency and the pace of quality management implementation: it was not the dependence on governmental expectations that caused higher education institutions to react quickly, but rather the independence from market forces that allowed them to react slowly, as Clark (1970) already suggested. Besides, institutional age influenced the institutional reaction: new institutions implemented quality management faster than old ones, perhaps because younger institutions need to build up their position on the 'institutional map'.

Fifth and finally, semi-legal or illegal contractual work practices of academics may have hindered quality management implementation. At the time of this writing, academics are officially allowed to accept no more than two full-time jobs, and the MAB counts them towards the accreditation of study programmes only at one higher education institution. Under the old system, which applied during much of my study, academics could accept multiple positions (to increase their meagre income), and be counted towards accreditation in each (giving higher education institutions an incentive to tolerate such practices). People with these 'grey' jobs had an interest in opposing the transparency that would come with quality management mechanisms.

8.5 Reflections

The main findings of the study will be reflected upon in the following way. First, I discuss the appropriateness of my theoretical framework and the possible biases stemming from the theoretical approach used in this study. Second, some issues concerning research design are reviewed on the basis of the results from the study. Finally, I briefly reflect on how and where the theoretical framework could be applied and the limits of the application of the study will be addressed.

8.5.1 Reflections on the theoretical framework and research model

The theoretical framework seems to be largely supported by the results of the investigations, but needs critical consideration in some respects. The empirical evidence did not fully support the theory of this study, which hints at the possibility that the weight of the variables in the model that I used was not the most adequate. Thus some of my variables seem to contribute to the explanation of the results more than others. In addition, other variables should be added to

improve the strength of the model. Below I discuss these important possible refinements of the model developed in Part I.

First, additional power of the model could be gained by changing the weight of the variables in it. As the empirical findings showed, the variables of reputation, (external) consultancy, the commitment of leaders and the decision-making processes should be emphasised more than complexity, disciplinary balance and resource dependency in quality management implementation[50].

Second, concerning particularly the dependent variables, we should also consider if there are links between them. As mentioned above, the 'adequacy' variable was only researched through case studies. Thus I could only do correlation analyses among the other three dependent variables: pace, scope, and the Protocol. I found only one relatively high, statistically significant relationship at the 5% level, namely between pace and scope (the Pearson correlation was 0.705). This would indicate that higher education institutions with faster quality management implementation also applied it to a wider scope of activities. In an elaborated research model, this relation between pace and scope should be given attention.

In addition, there is a need to study the processes of quality management implementation and not only the outcome. Quality management implementation as an outcome, observed in a short time period, hides many of the dynamic processes that should interest policymakers, experts and also academics. For example, a study could be seen not only as a study of quality management implementation (institutionalisation), but also as a study of de-institutionalisation processes. As indicated in Part I, various fads, particularly quality mechanisms in higher education, have failed (Birnbaum, 2000), and became deinstitutionalised (Oliver, 1992). Since de-institutionalisation could not be included in the time period of the study, more studies need to be done on how and why such processes occur. The fact that so much symbolic compliance was observed gives additional urgency to such a study. Therefore, the results of this study, as well as its method, underscore the importance of developments also noted in implementation studies: to study implementation over a longer term (Sabatier, 2005; Kyvik, 2005; Kogan, 2005).

Fourth and also related to the previous point, symbolic and genuine changes fuse in the quality management implementation process. As such, the evidence of this study supports that symbolic compliance while internally resisting change (i.e. de-coupling) is sustainable for higher education institutions confronted with such a policy. This result has at least two implications. First, it shows the usefulness of research designs combining quantitative and qualitative techniques when studying implementation processes. For example, in a purely quantitative

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[50] However, focusing on disciplinary balance, the findings supported the theoretical expectations that the more the disciplinary balance was toward hard and convergent sciences the more the higher education institutions implemented *research* quality management systems. Research is precisely where disciplinary effects would be expected most, if I assume that research is more at the 'heart' of the discipline than education.

design, looking at formal measures only, this study could easily have drawn the conclusion that BT and KSC just had implemented quality management mechanisms symbolically or, on the opposite side, UM, UV and TSC had implemented quality management adequately. The real meaning of the work that was taking place at the institutions would not have been captured. As Dacin et al. (2002, p. 48) have stated, there is a need to use methods that can identify processes that would have gone unnoticed by approaches focusing on the macro level, structures and models. Secondly, that symbolic and genuine implementation seem so interrelated could be seen as a consequence of the double pressure facing many higher education institutions at present, where they are expected to implement quality management systems while at the same time having a highly institutionalised internal environment. To make only symbolic adjustments as a response to external demands may convince the external environment to some degree, but can on the other hand hardly be a tool that is convincing for those who work within the institution. This implies for further research that variables such as symbolic and real quality management implementation and the external and internal judgement of the institutional quality management implementation should be included, which also provide additional explanatory power to the model.

Fifth, when looking at the actual implementation and the effects of independent variables on the way higher education institutions deal with policies directed at them, it is important to take into account the policy itself. The findings of this study suggested that the unclear national quality policy played a strong impeding role in policy implementation at many higher education institutions. This can shed more light on an interesting debate within institutional theory—how ambiguous policy goals are handled by particular institutions. There is another fact that underlines this statement. During the communist period, the communist regime clearly defined what higher education institutions had to do. Thus the name of the game was working according to standard operating procedures, but there was a lot of symbolic compliance at the time: outwardly complying without genuinely doing or believing in policies. After the political upheaval of 1989, when this coercive isomorphism disappeared, higher education institutions found themselves in a new situation. They had become accustomed to being told what to do and how they could do this without genuinely doing it, and now they seem to use their 'symbolic knowledge' in finding their own solutions to the external expectations. Thus the uncertain situation—no clear 'quality rules' in higher education—first, seemed to make the universities and colleges unsure and slow and also reinforce their symbolic compliance. Second, the lack of coercive isomorphism (clear rules) may have resulted in external consultancy playing such a crucial role in quality management implementation. This implies first that consultants are important if and only if the government (or other very strong forces, as resource dependency theory explained) does not give strong

guidance. Next, this also implies that different institutions reacted to external expectations in different ways.

Sixth, empirical findings suggested that institutional isomorphism and legitimacy are important phenomena in quality management implementation. The empirical results indicated that the majority of higher education institutions implemented or planned to implement quality management models known from industry. The survey showed that around 68% of institutions (n=30) turned to these kinds of models (i.e. ISO 9001, 9004, and EFQM). The information obtained in the case studies supports this statement further because all of my cases implemented the ISO 9001 or 9004 model to some extent. This also implies what the neo-institutional theory emphasised, namely that normative isomorphism, probably introduced through external consultancy, plays an important role in the institutionalisation process and in protecting legitimacy. These arguments make it imperative to add institutional isomorphism and legitimacy into the research model for further research.

A further issue concerns the different features of quality management (i.e. quality evaluation, quality assessment, quality assurance and accreditation, among other things). Deming (1986), Dill (1992) and Massy (2003) emphasised that the improvement of quality does not come from evaluation but from internal design and implementation of key processes. These are issues that are gaining importance but are still underrepresented in the higher education quality management literature (see e.g. Brennan & Shah, 2000). The quality management framework developed here would fill in the gap in quality management research and also shed light on what a higher education institution ought to do if it wants to improve its education quality.

Eighth, empirical evidence supported the idea that general organisational theories are highly relevant in explaining quality management implementation in higher education institutions. The evidence for disciplinary balance, which is specific to higher education, is weak, while there was much more support for generally applicable factors like institutional reputation, external consultancy, leaders' commitment and the type of decision-making process. However, as mentioned above, all the phenomena worked simultaneously, and none of them should be eliminated from the model.

Finally, another issue stems from the conclusion that institutional age and the market orientation of higher education institutions matter. The findings supported the idea that the degree to which an institution depends on the market may be decisive in quality management implementation. This evidence also suggests reconsidering the operationalisation of the 'dependency' variable because the market as the other main source of potential external dependency seems to be relevant, too. Thus, it may be important to include the market orientation of institutions in future research. In addition, the institutional age was also found to be of importance in quality management implementation, and so it would be useful to analyse this phenomenon in further research.

8.5.2 Reflections on research design

To test the hypotheses and to evaluate the research propositions a method triangulation was used, i.e. cross-sectional and case study analysis. While this strategy proved to be quite demanding, it produced satisfactory results. The hypotheses, based on the theoretical framework, first were put to two statistical tests: cross-tab analysis and multiple regression. Although both methods gave useful results, multiple regression analysis has some advantages over cross-tab. The main advantage is that it models whether some of the independent variables together are more useful than others for predicting the dependent variable and whether the variation in dependent variables can be explained adequately by the combined variations in each of the model's independent variables. In addition, it also includes the composite effects of all independent variables on the dependent variables and explores whether the model outcomes suffer from interaction effects. Thus multiple regression provided results that otherwise would not have been found.

In addition, a second methodological choice that I made was the choice for a case study approach. This brought valuable insights into the process of quality management implementation. It also provided the opportunity to identify and explain critical factors in the process of quality management implementation in their natural context, and to explore unexpected factors and new questions. Furthermore, cases studies, accompanied by in-depth interviews, provided information on the behaviour of different persons and groups in the particular higher education institutions, which was relevant for the reason that the commitment of leaders, the decision-making processes and the adequacy of the implemented quality management system could only be evaluated in this way.

A further reflection can be made upon the data collection. I used different methods of data collection for different questions. First, I used questionnaires that are suited for providing general patterns and pictures without going into the thick descriptions of, for example, the case study approach. However, the use of this survey method may bring with it an inherent tendency to order events, attitudes and actions. That may distort the 'natural unstructuredness' of ordinary and extraordinary events, processes and people. Second, I used documents and statistics for both cross-sectional and case study analysis. Finally, I also used semi-structured interviews for explaining quality management implementation in its own context. This gave the respondents the opportunity to speak broadly about particular quality management implementation processes and events, which could then be analysed and structured. I interviewed institutional staff members who had been key actors in the implementation of quality management. The richness of this information provided more insight into the actual quality management implementation, something that of course would not have been possible if the data collection method chosen had been limited to quantitative techniques. One may, however, wonder whether the interview is an appropriate

method to collect valid and reliable information. Problems that may occur have to do with, among other things, socially desirable answers, shortcomings in memory, and willingness to cooperate. In this study, these problems hardly caused any problems. First, the problem of social desirability may be less severe than one thinks because anonymity was guaranteed. Second, I gratefully acknowledge that all respondents were willing to cooperate and took sufficient time to talk to me. Finally, memory hardly distorted the answers given because, for theoretical reasons, the period between 2000 and 2005 was chosen. However, one shortcoming should be mentioned. During some interviews, I obtained signals about elements of a particular phenomenon (political decision-making processes) but I was not provided with in-depth data, notwithstanding my efforts to probe by asking follow-up questions. In such cases, to get better data, more observations could solve this problem. In sum, however, the use of multiple methods of data collection proved very complementary (data collection triangulation), as one method almost always was able to fill the gaps left by the others.

Finally, the operationalisation of some variables needs additional consideration. Not only because they were developed with a particular policy implementation in mind (quality management), but also to develop the concepts further as useful theoretical abstractions. In this research, considerable effort was devoted to a proper operationalisation. The current indicators seem to work relatively well, in particular for the concepts of reputation, complexity, leaders' commitment, decision-making processes and external consultancy. However, the indicators of dependency and the balance of disciplines blurred the measurement a bit. For example, I used the number of study programmes to indicate the balance of disciplines; however, the number of students and research projects would be of additional value in that respect. In addition, dependency focused only on financial dependency; however, as the findings showed, a clear and unambiguous quality policy also proved an important element with regard to dependency on the government. Moreover, dependency on the market was not included in the operationalisation but proved to be of importance as well. Thus a more refined and balanced operationalisation of these variables seems justifiable. Note that these improvements are suggested to refine and strengthen the model; the improvements will—most probably—not change the results of other hypotheses and research propositions.

8.5.3 Reflections on further applications

One could argue that the hypotheses and research propositions derived from the theoretical framework only pertain to a small part of reality in higher education. The strength of the theoretical framework can be increased by applying it (in improved form) in another context. Furthermore, the limits of the application and reach of the study will be addressed in this section.

An obvious context to apply the theoretical framework would be an international setting. Because the present study took into account the impact of quality management initiatives in one country setting, other questions—such as what would have happened if government (or the main stakeholder) demanded other policies and reactions—cannot be answered. According to Eckstein (1975) it is fruitful to look for 'most likely' and 'least likely' cases in international comparisons. In that way, the impact of different expectations and initiatives in other contexts can be compared. For instance, one Hungarian specific concept—namely the Protocol—should then be replaced by the quality assurance model implied by the different national expectations. Specifically, it may be interesting to apply the framework to situations where the tradition of higher education quality is similarly rooted in communist ideology on the one hand, and also e.g. in a Western European context, to compare different governmental policy approaches. Thus, in some Western European countries the 'supervisory state' (Van Vught, 1989) and the 'evaluative state' (e.g. Neave, 1998) are concepts with a much longer tradition than in Central and Eastern Europe. Or a comparison can be made with other international contexts on the dimension of the stakeholder society concept: do we for instance see differences with regard to market orientation in higher education institutions depending on the positions of stakeholders and does that have consequences for quality management implementation? In that respect, the previous communist states would be the similar cases (the least likely cases concerning the stakeholder concept), and e.g. the United States or the United Kingdom, among others, would be most likely cases regarding the stakeholder society concept.

Another context would be quality management implementation for the research function in higher education institutions. However, the corresponding operationalisation of the concept of a comprehensive quality management framework for this area should be done first, and in a discipline-specific manner, taking into account the different disciplinary characteristics. Discipline may be a more important explanatory factor in research than it proved to be in the current study, so it needs to be investigated anew here.

A further context, sticking to quality management implementation concerning education as the subject of the investigation, could be at the study programme level. This could be done in national and international contexts as well. A study, with a similar research design as the present study, could prove the tenability of the theoretical framework. In such a study, all variables would have to be operationalised anew, and their weights may be different from studies at the institutional level.

A brief remark about the political and bureaucratic decision-making process models of Allison. These models were originally developed for explaining governmental behaviour during the Cuban missile crisis, but the empirical evidence of this study suggest that they can also be made to fit the context of higher education.

In addition, on a very ambitious level and in relation to the previous reflection, the comprehensive quality management framework developed in this study seems useful for application in various countries. This study provides an initial and necessary framework for synthesising existing knowledge regarding quality management models, and suggests valuable directions for related research. As the current study contains only the first application of this framework, these ideas should be further developed, explored and elaborated.

Finally, the current study also has its limitations. This relates to the fact, for instance, that quality management implementation was applied and tested in the homogeneous context of Hungarian higher education. Studying one country means that it is not possible to address the influence of differences between countries and cultures. This poses limitations to the generalisability of the findings of this study. There are particular routes of development, history, culture and traditions that are specific to my empirical context. Some idiosyncrasies could be attributed to the Humboldtian tradition of Hungarian higher education and the mark of four decades of communism. However, the institutional characteristics and their relationship with external influencers (i.e. the government, accreditation body) that I have found in the Hungarian higher education institutions surrounding the quality of their activities have many aspects that are of a general kind and reflect general principles of influencing institutional work. From that perspective, the findings of my study can be generalised to other national systems.

Closing remarks

Looking back on the results of this study, it can be concluded that organisational characteristics in policy implementation matter. External consultancy and institutional reputation prove to be the strongest explanatory variables. External consultancy has a strong positive relationship with the pace, scope and adequacy of quality management implementation, while institutional reputation has a strong negative relationship with the pace and scope of quality management implementation based on the empirical evidence. In addition, the leaders' commitment has a substantial positive effect, while bureaucratic and political decision-making processes have negative effects on quality management implementation. A characteristic particular to higher education institutions, namely the disciplinary balance, was found to be less important than expected, and general organisational theories seem to explain implementation of quality management more fruitfully. Used as a conceptual lens, the theoretical framework developed in this study can help to illuminate reality and grasp the underlying influential characteristics. Through this lens, the study also made it clear that an unambiguous political message that improving institutional quality is a priority for the Hungarian government would have helped a number of higher education institutions to increase the value of quality indeed, not only to

result in the symbolic reactions observed now. As it is, the study has shown how important the symbolic dimension is in the recent policy implementation.

Having arrived at the very end of this book, I hope that my study has lifted a tip of the veil of the complex and sometimes unclear concept of quality and its management in higher education.

Nederlandstalige samenvatting

Probleemstelling en onderzoeksvragen

De studie 'Kwaliteitsmanagement in het Hongaarse hoger onderwijs: Organisatorische respons op overheidsbeleid' draaide om de vraag welke organisatorische kenmerken de implementatie van kwaliteitsmanagement in hogeronderwijsinstellingen beïnvloedde en hoe verschillen tussen de instellingen kunnen worden verklaard. Onder 'kwaliteitsmanagement' begreep deze studie het ontwerpen, uitvoeren en verbeteren van instellingsdoelen gericht op kwaliteit, waaronder begrepen de behoeften en tevredenheid van belanghebbenden ('stakeholders'), alsmede de processen waarmee de organisatie deze doelen poogt te bereiken. In hoofdstuk 1 zagen we dat kwaliteitsmanagement een belangrijk onderwerp is in het hoger onderwijs, mede als gevolg van de verwachtingen in de samenleving van efficiëntie, effectiviteit en rekenschapsaflegging. De probleemstelling luidde daarom:

> *Hebben Hongaarse hogeronderwijsinstellingen mechanismen ingevoerd voor kwaliteitsmanagement, zo ja, hoe, en welke rol speelden organisatorische kenmerken in dit opzicht?*

In hoofdstuk 1 is tevens aangetoond dat Hongarije een interessante casus is voor dergelijk onderzoek, intern vanwege het overheidsbeleid voor hoger onderwijs sinds 1989, en comparatief als contrast met landen waar kwaliteit een grotere rol speelde in de beleidsvorming.

De probleemstelling werd uitgewerkt in drie onderzoeksvragen:

1. *Hebben Hongaarse hogeronderwijsinstellingen mechanismen geïmplementeerd voor kwaliteitsmanagement, zo ja, hoe en in hoeverre (bijv. verschillende mechanismen voor kwaliteitsmanagement)?*
2. *Zijn er verschillen tussen hogeronderwijsinstellingen in implementatie van kwaliteitsmanagement?*
3. *Hoe kunnen we deze verschillen verklaren of met andere woorden: welke organisatorische kenmerken beïnvloedden de implementatie van kwaliteitsmanagement?*

Theoretisch raamwerk

Hervorming van publiek management stuit op problemen, zo werd in hoofdstuk 1 betoogd, met name vanwege: (1) budgettaire problemen, (2) afnemend vertrouwen in de overheid en (3) stijgende verwachtingen met betrekking tot de

kwaliteit van overheiddiensten. Om deze problemen beter te begrijpen, richtte ik mij in hoofdstuk 2 in eerste instantie op theorieën over afhankelijkheid wegens hulpbronnen ('resource dependency') en op neo-institutionele benaderingen, die ook in eerdere studies in het hoger onderwijs vruchtbaar bleken. De essentie om beide benaderingen te gebruiken, was dat organisaties strategische keuzen kunnen maken, doch slechts binnen randvoorwaarden opgelegd door hun institutionele omgeving. Het theoretisch raamwerk had echter aanvullende elementen nodig die niet centraal staan in dergelijke organisatorische theorieën. Een van de belangrijkste daarvan betrof besluitvormingsregels en –gebruiken van individuen. Daartoe gebruikte ik een model dat actoren en structuren (en institutionele procedures) kon relateren, namelijk die van Allison. Zijn modellen belichtten de organisatorische besluitvormingsprocessen en hun politieke dan wel bureaucratische karakter. De literatuur tot hier toe betrof organisaties in het algemeen; voor hogeronderwijsinstellingen konden daar op grond van de literatuur in hogeronderwijsstudies veldspecifieke factoren aan worden toegevoegd. Ten slotte werd gebruik gemaakt van de literatuur met betrekking tot kwaliteitsmanagement, leidend tot de ontwikkeling van een omvattend raamwerk voor kwaliteitsmanagement dat rekening houdt met de specifieke kenmerken van hogeronderwijsinstellingen.

Het 'resource dependency' perspectief gaat ervan uit dat organisaties voldoende hulpbronnen nodig hebben om te overleven. Die hulpbronnen kunnen vaak niet door de organisaties zelf geproduceerd worden; interactie met andere organisaties die deze hulpbronnen wel hebben is dan nodig en de organisatie is dan van die andere afhankelijk. Daarom ontstaat er een grotere kans dat de organisatie eisen van de leverancier van hulpbronnen opvolgt. Er blijft echter ruimte voor autonoom handelen. Aan dit perspectief werd de variabele 'afhankelijkheid' ontleend.

Neo-institutionele benaderingen tonen hoe organisaties hun omgeving percipiëren en hoe zij pogen afhankelijkheid te vermijden om discretie en autonomie te handhaven en hoe zij daarbij beïnvloed worden door hun routines en organisatiecultuur. Zij suggereren ook dat organisaties, om te overleven, zich aanpassen aan normen en overtuigingen in hun omgeving, wat leidt tot homogeniteit in een organisatorisch veld. Bovendien zien neo-institutionele benaderingen legitimiteit als een dominante factor met betrekking tot overleving en stabiliteit. Neo-institutionalisten maakten ook duidelijk dat instituties die zich geconfronteerd zien met conflicterende, inconsistente eisen, legitimiteit kunnen handhaven door symbolisch gedrag dat potentieel controversiële kernactiviteiten (d.w.z. die onacceptabel zijn voor sommige belanghebbenden) kan maskeren. Een deel van de variabele 'adequaatheid', namelijk symbolische volgzaamheid, werd uit neo-institutionele theorieën afgeleid.

De door de organisatorische studies onderbelichte besluitvormingsprocessen werden in deze studie opgenomen door middel van twee modellen van Allison, namelijk het Organisatieprocesmodel (OPM) en het model van bureaupolitiek (BPM). Volgens het OPM resulteren uitkomsten van instituties uit bepaalde

terugkerende patronen van gedrag en standaardprocessen. Zulke routines fungeren goed in standaardsituaties, maar bieden geen vooruitziende, flexibele aanpassingen aan unieke situaties, die dan ook vaak traag en op onjuiste wijze worden afgehandeld. Daar voegt het BPM aan toe dat de leden van de organisatie geen homogene groep zijn, maar individuele preferenties en posities hebben, wat de activiteiten van instituties terdege kan beïnvloeden. In dit model zijn uitkomsten de resultante van diverse, overlappende onderhandelingsspellen tussen leden van de organisatie, waardoor aanzienlijke speelruimte kan ontstaan bij implementatie. Mede gelet op het belang dat wordt gehecht in de literatuur over kwaliteitsmanagement aan betrokken leiders en aan externe consultants, werden uit dit alles afgeleid de variabelen 'besluitvormingsproces', 'externe consultants' en 'betrokkenheid van leiders'.

Tot de specifieke kenmerken van hogeronderwijsinstellingen behoort in de eerste plaats hun grote mate van structurele differentiatie en complexiteit, die de capaciteit voor collectieve actie in hogeronderwijsinstelling kan beperken. Institutionele complexiteit betreft de verdeling van instellingen in afzonderlijke functionele groepen en eenheden, met elk hun eigen gespecialiseerde taken. Hoe complexer een institutie, hoe moeilijker het is om innovaties te implementeren, zo werd in de literatuur gesteld. Ten tweede kunnen de specifieke perspectieven, waarden enz. in een academisch veld implementatie van kwaliteitsmanagement beïnvloeden. In harde en convergerende disciplines met hun gedeelde doelen, plannen, relatief heldere standaardprocedures en oriëntatie op teamwerk, zou kwaliteitsmanagement gemakkelijker van de grond komen dan in zachte of divergerende disciplines. Ten slotte werd het belang van de institutionele reputatie van hogeronderwijsinstellingen (de algemene waardering van een instelling door de diverse belanghebbenden) besproken; de theorie leidde tot twee mogelijkheden. Het ene perspectief was dat een instelling met hoge reputatie uitgebreider en sneller kwaliteitsmanagement zal implementeren, omdat reputatie samenhangt met werkelijke besliscapaciteit. De andere mogelijkheid was dat een instelling door een hoge reputatie minder afhankelijk is, zodat ze verwachtingen van de overheid met betrekking tot kwaliteitsmanagement minder snel behoeft op te volgen. In deze studie werd nagegaan welke van deze mogelijkheden empirisch bewaarheid werd.

Uit de literatuur over hogeronderwijsinstellingen werden als variabelen afgeleid: 'complexiteit', 'disciplinair evenwicht' en 'reputatie'.

De literatuur over kwaliteitsmanagement werd in hoofdstuk 3 geanalyseerd om te komen tot een omvattend raamwerk voor kwaliteitsmanagement in hogeronderwijsinstellingen, met name gericht op onderwijs maar ook op ondersteunende processen in verband met onderwijs. In dit hoofdstuk werd verder een vergelijking gemaakt van dit omvattende model met de modellen voor kwaliteitsmanagement die in het Hongaarse hoger onderwijs in omloop zijn. Dit leidde tot de variabelen 'snelheid', 'reikwijdte', 'adequaatheid' en 'gebruikmaking van het Protocol'. Het 'Protocol' was ontwikkeld door de Hongaarse overheid om

hogeronderwijsinstellingen te helpen afdoende kwaliteitsmanagementsystemen in te voeren.

'Localisatie' en operationalisatie van het theoretische raamwerk

Onderzoeksmodel, hypothesen en operationalisatie

Het onderzoeksmodel van figuur 8.1 vat de uit de theoretische benaderingen afgeleide relaties tussen de onafhankelijke en afhankelijke variabelen samen. De hypothesen en onderzoeksproposities die daarmee in verband staan, zijn samengevat in tabel 1.

Tabel 1: Hypothesen en onderzoeksproposities.

Hypothese 1:	(a)	Hoe minder hogeronderwijsinstellingen afhankelijk zijn van de overheid, hoe later zij kwaliteitsmanagement zullen implementeren.
	(b)	Hoe minder hogeronderwijsinstellingen afhankelijk zijn van de overheid, hoe minder zij het Protocol zullen volgen.
Hypothese 2:	(a)	Hoe complexer hogeronderwijsinstellingen zijn, hoe langzamer zullen zij kwaliteitsmanagement implementeren.
	(b)	Hoe complexer hogeronderwijsinstellingen zijn, hoe kleiner de reikwijdte zal zijn van kwaliteitsmanagement die zij implementeren.
Hypothese 3:	(a)	Hoe meer de disciplinaire balans in hogeronderwijsinstellingen is op harde en convergente disciplines, hoe sneller zullen zij kwaliteitsmanagement implementeren.
	(b)	Hoe meer de disciplinaire balans in hogeronderwijsinstellingen is op harde en convergente disciplines, hoe groter de reikwijdte zal zijn van kwaliteitsmanagement die zij implementeren.

Onderzoekspropositie 4:	(a)	Hoe hoger de betrokkenheid van leiders, hoe sneller zullen hogeronderwijsinstellingen kwaliteitsmanagement implementeren.
	(b)	Hoe hoger de betrokkenheid van leiders, hoe groter de reikwijdte zal zijn van kwaliteits-management die hogeronderwijsinstellingen implementeren.
Hypothese 5:	(a)	Hoe meer hogeronderwijsinstellingen worden ondersteund door externe consultants, hoe sneller zullen zij kwaliteitsmanagement implementeren.
	(b)	Hoe meer hogeronderwijsinstellingen worden ondersteund door externe consultants, hoe groter de reikwijdte zal zijn van kwaliteitsmanagement die zij implementeren.
Onderzoekspropositie 5:	(c)	Hoe meer hogeronderwijsinstellingen worden ondersteund door externe consultants, hoe meer zal het kwaliteitsmanagementsysteem dat zij implementeren adequaat zijn.
Onderzoekspropositie 6:	(a)	Hoe bureaucratischer de besluitvormings-processen, hoe trager hogeronderwijsinstellingen kwaliteitsmanagement zullen implementeren.
	(b)	Hoe politieker de besluitvormingsprocessen, hoe trager hogeronderwijsinstellingen kwaliteits-management zullen implementeren.
Hypothese 7:	(a)	Reputatie kan een positieve of negatieve invloed hebben op de snelheid van implementatie van kwaliteitsmanagement; ze zal negatiever zijn naarmate reputatie meer onafhankelijkheid van hulpbronnen van de overheid impliceert, terwijl ze positiever zal zijn naarmate reputatie werkelijke besliscapaciteit van de hogeronder-wijsinstelling impliceert.

(b) Reputatie kan een positieve of negatieve invloed hebben op de reikwijdte van implementatie van kwaliteitsmanagement; ze zal negatiever zijn naarmate reputatie meer onafhankelijkheid van hulpbronnen van de overheid impliceert, terwijl ze positiever zal zijn naarmate reputatie werkelijke besliscapaciteit van de hogeronderwijsinstelling impliceert.

Deze hypothesen en onderzoeksproposities betreffen niet alle mogelijke verbanden tussen de onafhankelijke en afhankelijke variabelen. De belangrijkste reden voor de 'missende' verbanden werd besproken in hoofdstuk 4: de gebruikte theoretische perspectieven deden er geen uitspraken over. Daarnaast bleek het in deze studie niet mogelijk alle hypothesen kwantitatief te onderzoeken en daarmee aan statistische tests te onderwerpen; de verbanden die alleen in de case studies kwalitatief onderzocht konden worden, zijn 'onderzoeksproposities' genoemd. Daarna werden de variabelen verder geoperationaliseerd tot op indicatorniveau (zie tabel 8.1).

In hoofdstuk 4 werd verder de theorie 'gelocaliseerd', door een overzicht te geven van den de Hongaarse context en belangrijkste actoren in termen van kwaliteitszorg in het hoger onderwijs, met name de nationale overheid en de accreditatiecommissie (MAB).

Onderzoeksontwerp

De laatste paragraaf van hoofdstuk 4 beschreef het onderzoeksontwerp, bestaande uit kwalitatieve en kwantitatieve methoden. Ik combineerde een statistische analyse van een vragenlijst aan alle geaccrediteerde Hongaarse hogeronderwijsinstellingen met case studies van zes geselecteerde instellingen. Daaraan ging een pilot studie vooraf aan de Universiteit van Veszprém (die uiteindelijk werd opgenomen als een van de zes case studies). De statistische analyse van de vragenlijst vormde het eerste deel van het hoofdonderzoek. Vragenlijstgegevens werden gecombineerd met bestaande statistieken en documentanalyse om een beeld te krijgen van de organisatorische kenmerken en van het aanwezige kwaliteitsmanagement. In bivariate analyses werden vervolgens relaties tussen afzonderlijke onafhankelijke en afhankelijke variabelen geanalyseerd. In een multiple regressie werd, ter afsluiting van dit deel van de analyse, het gehele onderzoeksmodel getest. Wegens het voor statistische toetsen lage aantal cases moeten de conclusies met betrekking tot beide statistische analyses tentatief blijven.

De case studies beoogden dieper inzicht te geven in de implementatie van kwaliteitsmanagement. Daarnaast verschaften zij informatie over enkele varia-

belen die zich niet gemakkelijk via vragenlijsten lieten onderzoeken, zoals de betrokkenheid van leiders van de instellingen, de besluitvormingsprocessen en de adequaatheid van het kwaliteitsmanagementsysteem. De selectie van cases werd beargumenteerd; gestreefd werd naar voldoende spreiding op de waarden van enkele onafhankelijke variabelen zoals complexiteit, disciplinaire balans, externe consultants en afhankelijkheid teneinde de interne validiteit te vergroten en mogelijke invloed van storende externe factoren op de bevindingen zoveel mogelijk uit te sluiten. Een bijkomend selectiecriterium betrof uitvoerbaarheid en toegang. De zes geselecteerde cases waren: de Universiteiten van Veszprém (UV), Pécs (UP) en Miskolc (UM), het Koning Sigismund College (KSC), het Theologisch College van Szeged (TCS) en Budapest Tech (BT).

In dit kwalitatieve deel van het onderzoek werden drie methoden gebruikt, naast de informatie afkomstig uit het kwantitatieve deel: (1) inhoudsanalyse van documenten (onderzoekspublicaties over de instelling, officiële statistieken en interne documenten), (2) semi-gestructureerde interviews met belangrijke actoren in het proces van implementatie van kwaliteitsmanagement en (3) observaties van het kwaliteitsmanagement in zijn context. De drie methoden bleken complementair, zodat 'gaten' in de data gelaten door de ene methode via andere methoden gevuld konden worden.

Ten slotte moet nog worden opgemerkt dat de data de periode 2000 tot 2005 betroffen, juist de periode waarin kwaliteitszorg hoog op de agenda van het hoger onderwijs stond in Hongarije.

Empirische uitkomsten

Hoofdstuk 5 begon ik met een beschrijving van de uitkomsten van de enquête. De respons was zeer bevredigend (44 van de 68 geaccrediteerde hogeronderwijsinstellingen in Hongarije) en in de meeste opzichten representatief voor het totaal. Tot de belangrijkste bevindingen behoorde dat in 2004 de meerderheid der instellingen begonnen was met implementatie van kwaliteitsmanagement, vooral voor de onderwijsfunctie. De populairste modellen waren de ISO 9001 en 9004 standaarden. Bijna de helft van de instellingen had externe consultants gebruikt voor ten minste een deel van hun implementatieproces.

Op het beschrijvende deel volgde de toets van het model in twee delen. De kruistabellen en multiple regressie werden gerapporteerd in hoofdstuk 5; de case studies werden in hoofdstuk 6 geanalyseerd. Ik bediscussieerde in welke mate de cases de hypothesen en onderzoeksproposities ondersteunden en exploreerde oorzaken voor onverwachte resultaten waar dat niet (volledig) het geval was. Een totale evaluatie van de analyseresultaten vond plaats in hoofdstuk 7 (zie tabel 2).

Tabel 2: Belangrijkste empirische uitkomsten.

Hypothese / O'z'propos.	**Onafhankelijke variabele**	**Afhankelijke variabele**	**Methode(n)**	**Resultaat**
H 1a	Afhankelijkheid	Snelheid	Kruistabel, Multiple regressie, Case	0
H 1b	Afhankelijkheid	Protocol	Kruistabel, Case	0
H 2a	Complexiteit	Snelheid	Kruistabel, Multiple regressie, Case	++
H 2b	Complexiteit	Reikwijdte	Kruistabel, Multiple Regressie, Case	0
H 3a	Balans	Snelheid	Kruistabel, Multiple regressie, Case	-
H 3b	Balans	Reikwijdte	Kruistabel, Multiple regressie, Case	+
O'p 4a	Betrokkenheid	Snelheid	Case	++
O'p 4b	Betrokkenheid	Reikwijdte	Case	++
H 5a	Externe Consultants	Snelheid	Kruistabel, Multiple regressie, Case	++
H 5b	Externe Consultants	Reikwijdte	Kruistabel, Multiple regressie, Case	++
O'p 5c	Externe Consultants	Adequaatheid	Case	++
O'p 6a	Bureaucratisch besluitvormings-proces	Snelheid	Case	++

O'p 6b	Politiek besluitvormings-proces	Snelheid	Case	++
H 7a	Reputatie	Snelheid	Kruistabel, Multiple regressie	Mechanisme via onafhan-kelijkheid
H 7a	Reputatie	Reikwijdte	Kruistabel, Multiple regressie	Mechanisme via onafhan-kelijkheid

Legenda tabel 2

-	:	Hypothese niet ondersteund
0	:	Tegenstrijdige resultaten; noch gefalsifieerd, noch bevestigd
+	:	Zwakke steun voor hypothese
++	:	Sterke steun voor hypothese of onderzoekspropositie

Tabel 2 laat zien dat externe consultants en institutionele reputatie de sterkste verklarende variabelen zijn voor alle afhankelijke variabelen,[51] te weten snelheid en reikwijdte (en, voor wat betreft externe consultants, ook adequaatheid) van implementatie van kwaliteitsmanagement. De case studies toonden bovendien aan dat de betrokkenheid van leiders van hogeronderwijsinstellingen ook een substantieel positief effect heeft op snelheid en reikwijdte van implementatie van kwaliteitsmanagement. Bureaucratische en politieke besluitvormingsprocessen, daarentegen, hebben negatieve effecten op de implementatie van kwaliteits-management. Ook institutionele complexiteit correleert negatief met snelheid (maar niet met reikwijdte) van implementatie van kwaliteitsmanagement.

Kijkend naar de misschien minder opvallende uitkomsten, bleek het empirische belang van 'resource dependency' beperkt. Met betrekking tot hypothese 1b, over de relatie tussen afhankelijkheid van de overheid en gebruikmaking van het Protocol, kan het onverwachte gebrek aan correlatie mogelijk mede geweten worden aan enerzijds de verre van alomvattende reikwijdte van het Protocol en anderzijds aan de onzekere situatie en het gebrek aan coördinatie door de overheid (geen helder nationaal onderwijskwaliteits-beleid en geen toepasselijk model voor kwaliteitsmanagement).

Het belang van de meest onderwijsspecifieke variabele, de disciplinaire balans (nadruk op harde en convergente disciplines in een hogeronderwijsinstelling), kreeg zwakke steun van sommige bevindingen maar werd weersproken door sommige andere. Iets dergelijks gold voor de bewijsvoering rond institutionele

[51] De verbanden met deze variabelen waren niet alleen steeds van het verwachte teken en statistisch significant—dit laatste geldt natuurlijk niet voor onderzoekspropositie 5c die alleen kwalitatief werd onderzocht in de case studies, niet kwantitatief in de enquête—ze hadden ook de grootste invloed op de implementatie van kwaliteitsmanagement.

complexiteit, ook die werd gesteund door sommige gegevens maar weersproken door andere.

In deel II gaf ik ook enkele alternatieve benaderingen om onverwachte resultaten te verklaren. Ten eerste bezag ik de rol van de overheid opnieuw. Het gebrek aan een nationaal onderwijskwaliteitsbeleid en aan een stabiele langetermijnstrategie van het Ministerie van Onderwijs schiep onzekerheid voor de hogeronderwijsinstellingen, die in vier van de zes cases negatieve invloed uitoefende op de implementatie van kwaliteitsmanagement. De andere twee instellingen reageerden snel in de onzekere situatie, wat daardoor verklaard kan worden dat dit de enige twee instellingen waren die gedurende het gehele implementatieproces door externe consultants werden ondersteund.

Ten tweede suggereerden data in vier cases dat symbolische opvolging in combinatie met intern verzet tegen verandering (d.w.z. ontkoppeling) een lang vol te houden optie was voor hogeronderwijsinstellingen in de ambigue beleidssituatie. Symbolische invoering van kwaliteitsmanagement kan genoeg zijn om de legitimiteit van instellingen te handhaven omdat het het onderliggende verzet tegen verandering maskeert. De cases toonden bovendien aan dat naast continue ondersteuning door externe consultants de betrokkenheid van instellingsleiders cruciaal was om kwaliteitsmanagement werkelijk—en niet enkel symbolisch—te implementeren.

Ten derde tendeerden Hongaarse hogeronderwijsinstellingen sterk (rond twee derde) naar kwaliteitsmanagementsystemen bekend uit de zakenwereld (ISO 9001, 9004 en EFQM). Alle instellingen in de case studies werden ondersteund door consultants met ervaring in het zakenleven, wat dit 'normatieve isomorfisme' mogelijk heeft veroorzaakt.

Ten vierde ondersteunden de bevindingen het belang van de mate waarin een instelling afhankelijk was van de markt. Instellingen reageerden niet snel omdat zij van de overheid afhankelijk waren, maar konden het zich permitteren langzaam te reageren omdat zij van de markt onafhankelijk waren. Het concept 'afhankelijkheid' dient daarom in het vervolg anders te worden geoperationaliseerd. Daarnaast bleek de reactiesnelheid van instellingen samen te hangen met hun leeftijd: nieuwe instellingen implementeerden kwaliteitsmanagement sneller dan oude, mogelijk omdat zij nog een reputatie als instelling dienen op te bouwen.

Ten slotte kunnen semi-legale of illegale werkpraktijken van academici de implementatie van kwaliteitsmanagement gehinderd hebben. Ten tijde van het schrijven van dit boek was het academici toegestaan maximaal twee voltijdse banen te hebben en voor de MAB tellen zij slechts bij de accreditatie van één opleiding mee. Onder het oude systeem, dat gold gedurende het grootste deel van de bestudeerde periode, konden academici meer banen aannemen (om hun magere inkomen aan te vullen) en telden zij in alle banen mee voor de accreditatie (wat hogeronderwijsinstellingen een aansporing gaf om zulke praktijken te tolereren). Betrokkenen bij dergelijke 'grijze' praktijken hadden er

belang bij de transparantie die met kwaliteitsmanagement gepaard zou gaan te vermijden.

Reflectie

Reflectie op theoretisch raamwerk en onderzoeksmodel

Het theoretisch raamwerk wordt grotendeels door de uitkomsten van het onderzoek ondersteund, maar behoeft kritische overweging in sommige opzichten. Ten eerste zou de verklarende kracht verhoogd kunnen worden door het gewicht van de variabelen te variëren. Reputatie, inzet van consultants, betrokkenheid van het leiderschap en de gang van zaken in besluitvormingsprocessen zouden meer nadruk moeten krijgen dan de overige onafhankelijke variabelen. Ten tweede dienen de onderlinge correlaties tussen de afhankelijke variabelen onderzocht te worden. Die tussen snelheid en reikwijdte bereikte een grenswaarde van onderlinge afhankelijkheid (Pearson correlatie 0.705).

Verder zou niet alleen de uitkomst van het implementatieproces onderzocht moeten worden, maar ook het proces zelf, wat een langere tijdsschaal impliceert, zoals in de implementatieliteratuur vaak wordt aanbevolen. Dan zouden, in navolging van bijvoorbeeld Birnbaum (2000) en Oliver (1992) aspecten van mislukte implementatie en institutionalisering/de-institutionalisering kunnen worden bestudeerd. De ontdekking in deze studie van veel symbolische implementatie maakt deze suggestie urgent.

Symbolische implementatie en daadwerkelijke verandering bleken overigens in elkaar over te lopen. Ontkoppeling (symbolische opvolging maar intern verzet tegen verandering) bleek een houdbare optie in deze studie. Dit toont, in de eerste plaats, aan hoe nuttig het was diverse onderzoeksmethoden te combineren; was de studie op een enkele methode gebaseerd, dan zouden in diverse cases verkeerde conclusies zijn getrokken in dit opzicht. In de tweede plaats lijkt de samenhang tussen symbolische opvolging en daadwerkelijke verandering te duiden als een gevolg van de diverse invloeden waaraan hogeronderwijsinstellingen bloot staan. Wat voldoende is om externe belanghebbenden tevreden te stellen, kan onvoldoende zijn voor interne belanghebbenden. Opname in volgend onderzoek van deze aspecten zou het model meer verklarende kracht geven.

Een volgende overweging voor volgend onderzoek betreft het ambigue overheidsbeleid, met relevantie voor de neo-institutionele discussie over hoe instituties reageren op ambigue beleidsdoelen. In de Centraal-Europese situatie krijgt dit extra pregnantie, omdat tijdens het communistische regime symbolische volgzaamheid, toepassen van standaardprocedures zonder interne overtuiging, aan de orde van de dag was. Die 'symbolische kennis' lijkt sinds 1989 ook in nieuwe ambigue situaties te worden toegepast. Daarnaast kan het precies het

gebrek aan duidelijkheid in het overheidsbeleid zijn geweest wat externe consultants de ruimte heeft gegeven om een zo cruciale rol te spelen bij de implementatie van kwaliteitsmanagement.

Meer aandacht dient bovendien te worden geschonken aan de rol van legitimiteit en van normatief isomorfisme. Twee derde van de hogeronderwijsinstellingen in Hongarije volgden voor hun kwaliteitsmanagement een model overgenomen uit de zakenwereld (ISO, TQM, EFQM), mogelijk mede als gevolg van de inschakeling van externe consultants die juist deze modellen kenden. Er zou nader onderzocht moeten worden of dit navolgen van bij belanghebbenden bekende modellen vooral was om legitimiteit te bereiken.

Een volgend onderwerp betreft de diverse functies van kwaliteitsmanagement (evaluatie, afleggen van rekenschap, accreditatie, enz.). Diverse auteurs benadrukken dat evaluatie niet automatisch leidt tot kwaliteitsverbetering, maar dat daarvoor daadwerkelijke verandering van belangrijke processen nodig is. Het raamwerk voor een adequaat kwaliteitsmanagementsysteem ontwikkeld in deze studie zou voor nadere studie daarvan een belangrijke rol kunnen spelen.

Opvallend was dat algemene organisatorische variabelen van groter belang bleken in de verklaring van implementatie van kwaliteitsmanagement dan specifieke hogeronderwijsvariabelen. Niettemin zou geen van de onafhankelijke variabelen gemist kunnen in het model, zo gaf de multiple regressie aan.

Ten slotte zouden de variabelen 'afhankelijkheid' en 'leeftijd' in heroverweging moeten worden genomen. Afhankelijkheid bleek meer in termen van de markt te moeten worden gegoten, terwijl de leeftijd van een instelling van groter belang zou kunnen zijn dan alleen als een van de indicatoren voor institutionele reputatie.

Reflectie op onderzoeksontwerp

Het toepassen van diverse, kwantitatieve en kwalitatieve, methoden was veeleisend maar de moeite waard. Kruistabellen, multiple regressie en case studies (met daarbinnen documentanalyse, interviews en observaties) vulden elkaar aan. Niettemin dient een tekortkoming in de dataverzameling te worden genoemd: in enkele gevallen gaven interviews indicaties dat er politieke elementen zaten aan besluitvormingsprocessen, maar bleken respondenten niet bereid meer gedetailleerde informatie te geven. Meer observatie zou hier, met veel tijdsinvestering, aanvullende informatie hebben kunnen opleveren.

De operationalisatie van enkele variabelen zou heroverwogen kunnen worden, mede om deze variabelen beter als theoretische concepten te kunnen ontwikkelen. De gekozen indicatoren voor reputatie, complexiteit, betrokkenheid van leiders, besluitvormingsprocessen en externe consultants leken goed te werken. Die over afhankelijkheid en disciplinaire balans zouden verbeterd kunnen worden. Over afhankelijkheid heb ik het hierboven reeds gehad (markt naast of in plaats van overheid). De meting van disciplinaire balans zou verfijnd

kunnen worden door het gewicht van de disciplines in termen van studenten of budgetten uit te drukken.

Dergelijke verfijningen zouden de onderzoeksuitkomsten in termen van steun voor hypothesen waarschijnlijk niet beïnvloeden.

Reflecties over verdere toepassingen

Het onderhavige onderzoek betrof slechts een klein deel van de empirie in het hoger onderwijs. De kracht van de gebruikte theoretische aanzetten kan verder worden getest door (verbeterde) tests in andere contexten.

De studie zou kunnen worden uitgebreid naar een internationale vergelijking van 'most likely' en 'least likely' cases. Het belang van de benadering van beleid door de overheid zou bijvoorbeeld duidelijk kunnen worden in een Europese Oost-West vergelijking. Evenzo zouden de consequenties voor de implementatie van kwaliteitsmanagement van verschillen in de posities van belanghebbenden ('stakeholder society') via internationale vergelijking van voormalig communistische landen tegenover bijvoorbeeld de Verenigde Staten of het Verenigd Koninkrijk onderzocht kunnen worden.

Een andere context zou kwaliteitsmanagement voor de onderzoeksfunctie van hogeronderwijsinstellingen kunnen betreffen. Het concept van een adequaat kwaliteitsmanagementsysteem zou daarvoor opnieuw geoperationaliseerd dienen te worden. De rol van disciplinaire balans zou dan wel eens veel groter kunnen zijn dan in deze studie. Ook onderzoek van kwaliteitsmanagement op het niveau van opleidingen zou een ietwat andere context voor mijn theoretische raamwerk opleveren (nationaal of internationaal; met nieuwe operationalisaties).

Het hier ontwikkelde model van een omvattend kwaliteitsmanagementsysteem zou bovendien—een ambitieus voorstel—in andere landen getest kunnen worden dan in de Hongaarse context waarvoor het in eerste instantie werd ontwikkeld.

Dit brengt me tot de beperkingen van mijn studie. Het empirisch onderzoek vond plaats in één land en in de vrij homogene context van het Hongaarse hoger onderwijs. De generaliseerbaarheid van de resultaten is daarom beperkt. De kenmerken die van als verklarende variabelen van belang bleken waren echter grotendeels van een algemene aard en weerspiegelen algemene, theoretische principes; vanuit dat gezichtspunt zouden mijn bevindingen toch vrij goed generaliseerbaar kunnen blijken te zijn.

Slotopmerkingen

Terugkijkend op deze studie kan geconcludeerd worden dat kenmerken van organisaties belangrijk zijn voor de implementatie van beleid. Externe consultants en institutionele reputatie (in de betekenis van onafhankelijkheid van de

overheid) bleken de sterkste verklarende variabelen ten aanzien van snelheid, reikwijdte en (voor consultants) adequaatheid van kwaliteitsmanagement. Daarnaast had betrokkenheid van leiders een belangrijk positief effect, en hadden bureaucratische en politieke besluitvormingsprocessen een negatief effect op de implementatie. Algemene organisatorische theorieën bleken voor de implementatie van kwaliteitsmanagement belangrijker dan specifieke variabelen voor hoger onderwijs (zoals disciplinaire balans). Gebruikt als conceptuele lens kan het theoretische raamwerk dat ik in deze studie ontwikkelde helpen om de werkelijkheid en de onderliggende invloeden te belichten. Via deze lens maakte mijn studie duidelijk dat een ondubbelzinnige politieke boodschap dat kwaliteitsverbetering in het hoger onderwijs een prioriteit voor de Hongaarse overheid is een aantal hogeronderwijsinstellingen zou hebben geholpen om kwaliteit daadwerkelijk een hogere status te geven en niet alleen, zoals nu, symbolisch te reageren. Hoe belangrijk de symbolische dimensie in implementatie van recent beleid is, is hiermee echter eveneens duidelijk geworden.

Appendix I: Case studies

Introduction

Through the case studies, I examine the way in which quality management implementation occurs in different higher education institutions. Each case begins with a brief introduction of the institutional history and some general characteristics. Then a short summary follows with the main findings on the institution's accomplishments in quality management implementation. The following section describes and evaluates the quality management implementation processes; including an institutional mission statement, quality policy, quality committees, and quality management training. Then the institutional quality management system, highlighting its operating parts, will be presented. I proceed to an assessment of whether and to what extent, the institutional decision-making processes focusing on the bureaucratic and political elements influence quality management implementation. I conclude with a brief summary of the results of quality management implementation drawn from the case study. The sections with conclusions were also included—partly in other words—in Chapter 6.

The following higher education institutions were part of the case study analysis, and their case description can be found in the appendix in this order:

- Budapest Tech (BT)
- King Sigismund College (KSC)
- Theological College of Szeged (TCS)
- University of Miskolc (UM)
- University of Pécs (UP)
- University of Veszprém (UV)

Appendix I/a: Budapest Tech (BT)

History and institutional characteristics

Budapest Polytechnic was established 1 January, 2000 by the integration of *Bánki Donát Polytechnic*, *Kandó Kálmán Polytechnic* and the Light Industry Polytechnic in accordance with the LII Hungarian Higher Education Act of 1999 that refers to the transformation of institution systems of higher education. In 2004, after the full integration of the three former Polytechnics, the institution changed its name to Budapest Tech (BT). All these institutions became new faculties in BT, and two new faculties were established. The integrated institutions are introduced briefly in the following pages.

At *Bánki Donát Polytechnic*, education ran in the following study programmes: mechanical engineering, organisation and informatics, technical informatics, technical management, engineering pedagogy, technical lecturer, and safety techniques. The legal predecessor of the Polytechnic was the State Middle Industrial School of Budapest, opened in 1879, and from 1969 known as the Mechanical Engineering Polytechnic.

At *Kandó Kálmán Polytechnic*, education ran in the study programmes such as electrical engineering, technical informatics, safety techniques, engineering pedagogy, technical lecturer, and technical management. The Hungarian Royal State Mechanical and Heavy Industry Technical School, the legal predecessor of the Polytechnic, was founded in 1898 and from 1969 operated as *Kandó Kálmán Polytechnic*.

Light Industry Polytechnic trained engineers in study programmes light industrial engineering, safety techniques engineering, and technical management. From 1998, two direction groups were developed inside the light industrial study programme, including quality control education. The direct legal predecessor of the Polytechnic was the Higher Light Industry Technical School, established in 1962. The roots of light industry technical expert instruction date back to the last decades of the 19th century, for example the Industrial and Commercial School for Women established in 1873.

Keleti Károly Faculty of Economics is one of the new faculties, which was made of chairs and institutions of the former polytechnics (where economic education continued). Finally, *John von Neumann Faculty of Informatics* is the first informatics profiled faculty of Hungary, formed on the base of informatics professional training of the predecessor polytechnics.

Different cultures and traditions were intended to melt together into a single institution located in Budapest. BT is a state college, with a strong emphasis on disciplines and subjects within the field of technological sciences and related subjects. In the formation of contents of training, the tech strives for equilibrium between durable fundamentals and knowledge, helping direct preparation for

practical life, as well as emphasising foreign language teaching for students. More than 12,000 students study in its five faculties. The institution offers courses in more than 25 study programmes at two levels, such as vocational training and BSc. The total number of academics is 424; the number of qualified academics (including docents and professors) is 213.

As a state higher education institution, BT receives state funding. In 2004, this amounted to around 4.5 billion HUF (18 million euro) with additional own income of about 1.8 billion HUF (7.2 million euro). Accordingly, state support made up a bit more than 70% of the overall institutional income. It is fair to claim that the college is relatively dependent on the government. The following sections review the quality management implementation process.

Findings of quality management implementation

The integrated BT aspired to reach the objectives from its strategic plans through comprehensive development projects. Building auditoriums, lecture rooms, and laboratories, as well as new educational buildings, was necessary to modernise education programmes and to start new programmes. The planned mobile investments, the education technical and library developments, and the modernising of internal informatics, communication networks and quality management systems, were indispensably necessary for high-level education.

BT declared its commitment concerning the implementation of the quality management system, developed its mission, quality policy, and value-declaration, established quality control commission, and the owners of different regulation areas were determined in 2001. In December 2001, the Institutional Council accepted the concept of the quality management system and reinforced it in June 2002 so that it fulfilled the expectations of the Protocol, MAB, and the ISO 9001 standard, emphasising an 'as little extra administrative work as possible' principle concerning quality management systems, and approved the plan for implementation.

An external quality consultant group completed a SWOT analysis and started to elaborate the quality procedures and quality manual. It organised training programmes on the subject of quality management basics for all members of the institution, and provided further training (internal auditor training, problem solving techniques, and measuring of partner-based working and stakeholder satisfaction) for members who participated in quality management implementation.

The rectorate applied for support from the Ministry of Education to set up a quality management system, and received 20 million HUF for these activities. By the end of 2002, quality procedures and the quality manual were completed, and the institution began work for certification based on the ISO 9001 standard. In February 2003, a Quality Directional Council was established, and the system documentation mentioned came into force. BT was certified in March 2004. The study now looks in detail at quality management implementation.

Quality management implementation process

Maybe the strongest point of the quality management system is the regulation that supports, modifies, and transforms the weak areas with its particular quality tools and methods for the entire institutional working area. BT started developing its quality management system in 2001. The BT Council accepted the long-term (institutional development plan), the medium-term (quality management strategy) and the short-term (one-year) goals, and published them. These documents and quality management organisation were developed according to the Protocol, MAB requirements, and the expectations of the ISO 9001 standard. The remainder of this section addresses the details of the quality management implementation.

By going through central documents and talking with informants at BT, it was hard to identify any significant institutional initiatives concerning the quality management implementation and quality of teaching and learning at the different colleges and schools before the merger in 2000. This however, does not mean that quality was not on the agenda during these years, but rather that the work on quality was a responsibility bestowed upon the various basic units in the different institutions. For instance, it is also possible to identify initiatives related to student evaluation of teaching at various study programmes at the former colleges before the merger in 2000, and quality control education was included in the light industry study programme.

The first institutionally based initiative concerning the quality management implementation that might be interpreted as a result of decisions taken by BT Council, emerged very quickly after the integration. It is useful to point out the apparent importance of the commitment of institutional management clearly stated in the quality manual. First, the management of BT stated its commitment concerning quality management in principle by way of a declaration. The management assured the effective working of a quality management system with its behaviour, participation, and submission of expected resources. As one informant emphasised "We could not ask anything that we would not have got until now"; the institution released a considerable sum in the institutional calculation to reward the participants in the implementation process. Similarly, as another interviewee mentioned (2005), all participants in the quality management implementation process were rewarded in 2004. The management achieved the following by 2005: defining the institutional mission, quality policy, and strategic goals; developing, operating, and improving organisational structure; assuring resources, infrastructure, and working environment; assuring the information of getting acquainted with demands of stakeholders and laws; and continuously improving the institutional processes. To achieve these goals, the college also applied for governmental support for setting up a quality management system, and received 20 million HUF. BT also applied for a further 5 million and received 4.1 million HUF for quality management implementation. Informants also

highlighted the fact that higher education institutions in Hungary could hardly find any tenders concerning quality management implementation in higher education. Consequently, the quality management implementation at BT can be considered one of the central issues after the integration, that the management was committed to and provided appropriate resources.

As a guiding light of the institutional operations, BT developed a mission statement that portrayed itself as a human institution ensuring lifelong attachment and study, which builds its national and international competitivity for the application of modern instruments and methods, and living in harmony with its social and economic environment. BT also planned to protect the traditions of the three establishing colleges and to reinforce the results of integration. In addition, BT was to:

> *…realise the competitive and flexible, high-level college training, being renewed continuously and adjusting to changes of economic and social life. Additional objects: to create a stimulating study environment for the development of abilities, as well as for many-sided development of the personalities of students in the field of technical, economic, and pedagogic sciences, as well as in the course of their practical application; to form harmonious personalities of strong character, possessing proper self-knowledge and self-expressive, connection, creating skills and to reinforce the critical, open thought, initiative skills, tolerant, empathic behaviour, a sense of vocation, and the consciousness of national affiliation (www.bmf.hu; 10.01.2005).*

One of the conditions of achieving these goals is the development and operation of a quality management system (quality manual, 2004). As one informant stated (2005), "…the institution needs a quality management system that unifies the positive traditions and initiatives of the integrated institutions, complementing the elements of modern organisational and controlling methods". These indicate that central features of BT's institutional identity consist of protecting the traditions of the establishing institutions and providing students with state-of-the-art knowledge and learning environment. To achieve these goals, BT emphasised the importance of implementing a quality management system.

The institution developed a quality policy that provided the backbone of its quality management system. Developed in 2001 and updated in 2004, the policy was initiated by the new rector. The comprehensive goals of quality policy provide a framework to determine and check quality goals. The management of BT regularly reviews the quality policy and its fitness for the relevant purposes. The quality policy identified the following items as essential to accomplish the institutional mission (quality manual, 2004, p. 6):

> *…improving the satisfaction of stakeholders (emphasising the continuous improvement of the marketability and preparedness of graduates) and institutional reputation; emphasising the development of human resources (e.g., scientific and*

further vocational training) and efficient using of existent resources; increasing the subsidy and income of Budapest Tech and improving the personal and material conditions of education and research; creating a harmony of personal and communal interests, improving the democratic atmosphere, the internal communication and the harmony between the individual responsible direction and the democratic decision-making; improving the motivation of students, the extension of foreign part-training, the universalization of co-operative training and the enlargement of foreign language teaching to improve the thorough grounding and marketing of graduates; its activities being in harmony with relevant laws, decrees, official regulations, national and international standards and other expectations; being suitable for the expectations of quality management, improving continuously its institutional culture and the commitment of staff concerning quality.

Two considerations are important concerning the institutional quality policy. First, BT implemented a quality management system that focuses on the education, research, and service functions. Second, the quality management system focuses on the demands and satisfaction of stakeholders, including students, academics, and external regulators among others.

BT established two quality management committees to achieve these goals. First, the Quality Directional Council (QDC) established the BT Council at the beginning of 2003. Among the main intentions behind this establishment was that work on quality at the college in this way would become more regulated and adjusted, and thus contribute to making the institutional quality management implementation more effective. Functional regulation of BT was made by the QDC, submitted to the rector by its leader, and then approved by the rector. The QDC annually gives an account of its work to the BT Council, and evaluates its activity every third year in accordance to law. The BT provides about 3 million HUF as annual working expenses for the QDC. It consists of a maximum of 10 permanent members. The number of members in 2005 was seven, who were working part time. The rector fulfils the institutional supervision of the QDC. Its tasks are:

…to prepare quality strategy; to prepare the Annual Quality Business Project on the basis of the proposal of the Quality Directional Manager; to express an opinion on Institution Development Strategy (Education Development, Human Politics and Scientific-development PR Strategy); to prepare documentation for the annual board examination (settlement of pointers, documents and reports describing the functioning of quality directional system of faculties, request of shortage substitution from the faculties); to express an opinion on changes ensued in execution and procedures, to put forward a proposal for modification of documentary material of quality directional regulation to the Quality Directional Manager. If all of these require the revision of other regulators and documents, the

Quality Directional Manager puts forward a proposal to Secretary-general of Budapest Tech (www.bmf.hu; 10.01.2005).

The quality directional manager directly controls the work of the quality management system co-ordinator. In addition to such operative tasks of the quality management system, the co-ordinator is also responsible for information support for the quality directional system; systematic organisation and arrangement of external and internal communication on quality issues; co-ordination of team work; active participation and analysis in systematic evaluation; following and operative support of competitions related to quality management; and continuous attention and monitoring concerning the harmony of internal regulations as well as continuous account to the quality directional manager. Consequently, the QDC fulfils the operative tasks of quality management implementation and further improvement.

Second, in 2001 BT brought into existence a special commission with a view to the continuous supervision of education and research activities. The Quality Control Commission (QCC) functions as an advisory body of the BT Council, working closely with it. The BT Council elects its president and members for a term of three years. The number of staff consists of 10 persons, delegated by Faculty Councils (five members) and a Student Union (five members). The QCC evaluates annually: the success of qualification requirements; the quality of further vocational training begun within the institutional sphere of authority, and the quality of accredited professional training; the personal and material conditions; and last but not least, it summarises the results of education and cultural activity. It should be mentioned that the QCC only advises the BT Council; it does not control the QDC.

The QCC has to make an annual report and measure proposals for the BT Council. The BT Council report, made on the basis of a survey by the QCC, is sent along to the QDC for reporting. The QCC does this job according to expectations of MAB and the Ministry of Education (OM), as well as on the grounds of the strategic aims of the institution. In addition, at least once a year there is a discussion between the managers of the QCC and the QDC where they revise the realisation of the actual MAB and OM expectations and the realisation of the ISO 9001 standard. In the event of differences, the task of the QDC is to form the system elements efficiently and in harmony with the expectations. In sum, the QCC functions as an advisory body of the BT Council, while the QDC fulfils the operative work concerning quality management.

The QDC was also authorised to organise training for the institutional members to improve their insight into the principles of quality management. The quality management training programme started with a presentation for all staff members. They were provided with basic information concerning quality management, and participation was compulsory. Then the internal auditors were provided with tools and mechanisms during a three-day training course (interview techniques, content of ISO 9001 standard) to help them understand the

processes of auditing and promote effective work. The audit team included academics who normally work as teachers at different levels; they worked on the different parts of the audit process. The team was tasked with evaluating different procedures of BT. In 2004 they audited together with one of the external auditors (senior audit), and then did the audit on their own. Finally, the leaders of BT participated in a three-day training course, also provided by the same consultancy firm. BT then organised quality forums to discuss several issues concerning quality management. Participation was free; participants could make themselves familiar with particular areas of the quality management system, and actual problems could be discussed during the forums. The training provided the basic information for staff members and leaders concerning quality management.

After significant staff training on quality management principles and tools, the institution decided on implementing the ISO 9001 standard in 2002. In addition to the work of the two quality committees, BT decided on working with external consultants. The principle behind this was, as one informant mentioned (2005), "…external consultants are independent from the institution, so they are more credible and 'marketable' for our staff members". The consultants began with a SWOT analysis, including evaluation of teaching and learning, research, and service quality in academic departments. The external consultants also supported the entire implementation process. However, as one interviewee (2005) stated, it took some time before the consultants learned the 'language of the institution'. This hindered the implementation process at the beginning. I now turn to the main features of the implemented quality management system.

Quality management system

The QDC identified and planned the processes, their order, and their interaction (Figure 9.1). The system embraces a balanced emphasis among the different core functions of the higher education institution, and provides the basic non-academic functions of successful implementation and working. It also has a special part containing a three-cycle evaluation and development element, explained under the heading of ME[52]-10 quality procedure. These are continuously monitored and analysed to achieve the expected goals and support further improvement. The quality management system also includes the existing institutional rules, processes, and procedures of a quality management system. Quality management procedures were developed 'process-centric' i.e., one procedure contains a single institutional working area. We therefore proceed with our discussion of procedures according to the following grouping: management process, central processes, and support processes.

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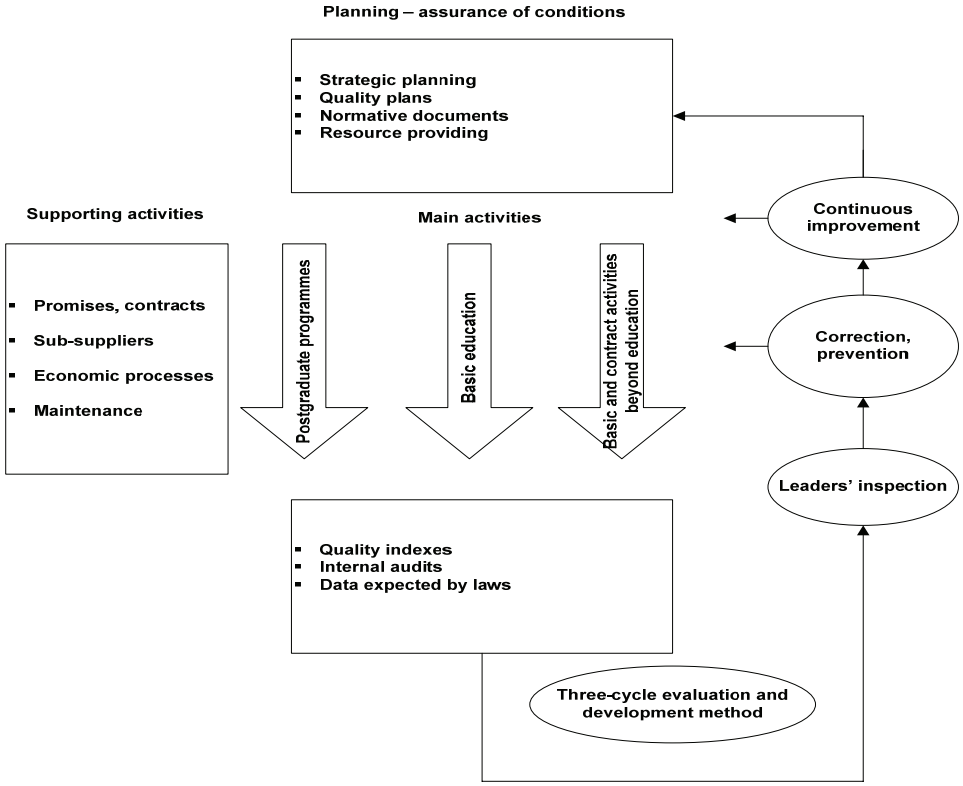
[52] ME: quality procedure.

The only procedure concerning the management process is the *ME-01 Leaders' responsibility*. The goal is to establish process control that includes the decision and 'interest-harmonising' mechanisms; regulating internal communication; elaborating quality organisation; strategic planning; leaders' investigation; and institutional goal determination. This procedure assures the comprehensive control and governance of institutional working, and the commitment of leaders regarding development and improvement of quality.

Figure 9.1: The connection of processes (quality manual, 2004).



The first central process is the *ME-03 being 'partner centred' in education, research and other services*. This procedure contains the BT regulations concerning the promises given to all of the institutional partners. The procedure includes giving out and following the institutional promises. BT identified its partners as students, institutional staff, the labour market, national bodies (OM, MAB, and professional ministries), other educational institutions, competition announcers, and users of research, service, and material resources (mainly renters of buildings

at BT). This clearly indicates that BT focuses on the wide range of its stakeholders and their demands.

The second central process is the *ME-04 Planning and developing of teaching processes*. This procedure defines the expectations of course foundation, course and sub course commencement, curriculum and programme planning, and developing in favour of the educational processes being realised on the strength of the expectations of legal and partners' demands and opinions. The resource frame for development is ensured according to the annual improvement plan.

The third central process is the *ME-05 Basic education processes*. This procedure assures the accomplishment of basic education according to the plans. It includes the annual and half-year planning and realisation of the basic education processes, preparing and completing of students' examinations, identifying and conducting the evaluations assuring its quality, managing the non-conformities, talent caring, and managing the professional practices of students.

The following central process concerning the education is the *ME-06 Post-graduate and post experience processes*. It refers to all of the academic and non-academic staff members who participate in a particular programme and includes realising the post-graduate and post experience processes, preparing and completing students' examinations, identifying and conducting the evaluations assuring its quality, and managing the non-conformities.

Concerning the education processes, it should be emphasised that the college regulates the qualification requirements, curriculum design, design of teaching and learning processes, student evaluation, and their implementation. In addition, the institutional quality management system also focuses on resource management. Taking into account the teaching and learning quality management processes and procedures, the quality management system seems to be comprehensive in terms of the framework developed in Chapter 3.

The last central process is the *ME-07 Research and development activities, basic activities beyond education and additional profit oriented activities*. This procedure controls the scientific and research-development activities of faculties; expectations referring to preparing lecture notes and books, library, renting, professional consultancy and services in laboratories; planning and following up of these activities; co-ordinating and stimulating national and international competition activities; and stimulating the wide variety of publications of scientific results. This indicates that the college controls the basic research and service processes. The core functions of the college (education, research, and service) seem comprehensively regulated.

Finally, concerning the support processes, the first quality process is *ME-02 Quality management system*. The quality management system includes the regulation of elaborating, approving, distributing, changing, maintaining, and archiving documents, data, and records. It should be emphasised that BT also focuses on designing and maintaining the quality management system itself.

The second support process is the *ME-08 Obtaining and developing material resources.* This procedure contains the necessary activities concerning the 'quality performing' of education; dispositions referring to obtaining, taking over, and storing material tools, intellectual products, and matters; selection and evaluation of suppliers; assuring and maintaining technical conditions of education; planning, fulfilling, and evaluating the economic processes; and modifying and developing economic rules. It identifies that the college controls the processes regarding the usage of material resources to enhance the quality of education, research, and service.

The third support process includes the *ME-09 Human resource management*. This procedure includes the identification of necessary human resources concerning the 'quality performing' of education; assuring internal or external qualified human resources concerning a particular work; determining the expectations referring to jobs; evaluation of education and other works; as well as human resource development[53]. In addition, the institution also emphasises the participation of its academics on different forums, and at national and international conferences.

The next support process is the *ME-11 Student life*. BT treats students as a main partner (stakeholder). This procedure contains the interpretation of the student legal relationship, the regulation of internal communication with students, the Student Council, self-motivated circles, student hostels, scientific student circles, and sports activities. It comprehensively represents BT's focus on students from educational to non-educational activities; from the very beginning to their possible post-graduate study.

The last support process is the *ME-10 Measuring, analysing and improvement*. The college wanted to assure the continuous improvement of the quality management system and its controlled activities with the aid of quality tools. A further institutional goal is the realisation of obtaining, collecting, and evaluating the information necessary for the evaluation of the efficiency and conformity of the institutional processes, and for continuous improvement based on this data. The conformity of institutional activities is controlled through a multi-level measuring system, whose parts are based on each other. This measuring system adjusts the following three items. First, the specific nature of education is adjusted. BT evaluates the educational success according to a 'three-circle' evaluation system that includes 1) alumni satisfaction (student career, course, and programme improvement); 2) final evaluation of the students (diploma and state exam) (curriculum improvement); and 3) and the improvement of education processes (student examinations, education methodology). Second, the legal framework is considered. It helps in realising the accreditation expectations (self-assessment). The results of external evaluations, audits, and accreditation

[53] The internal teaching system of BT ensures the appropriate training of new and older staff in professional and quality fields. The annual plans for training are developed by the independent economic units considering the institutional development plans. They contain the content of training courses, the names of participants, and the frequency of training courses.

procedures refer to the opinion of the supervision, accreditation, and certifying bodies. Finally, the human service nature of the processes is adjusted. BT uses a multi-directional evaluation system because the processes contain many subjective elements, such as quality indexes, student satisfaction, staff satisfaction, external evaluations. These clearly indicate that the college uses a comprehensive measuring system to analyse and improve its quality and quality management system. The empirical findings, such as clear procedures, operating elements in practice, and improving activities, also show that the institutional quality management system genuinely worked.

Without going into too much detail, I now come to a brief description of the important tools of measuring system. First, BT wanted to conclude students' opinions, not only from indirect signs (complaints, spontaneous comments), but also from direct, structured questionnaires that help in comparing the results. The *student satisfaction evaluation* is multi-dimensional and aimed at capturing student feedback in different stages of their study. Three main elements can be distinguished. In the first, the evaluation by students provides valuable information concerning teachers and education processes. Teaching evaluation based on the student feedback programme was introduced to all faculties after the integration aimed at continuously improving the quality of course delivery and measuring teachers' performances; a common practice throughout the BT. This questionnaire is intended as part of the tech's quality management system to improve the quality of teaching. Students comment on the teaching performance of an individual lecturer and all teaching activities carried out by them. The questionnaire, comprising 14 questions, provides student feedback with respect to overall satisfaction of teaching received; delivering subject knowledge; caring teacher's subject knowledge; evaluation methods of teachers; teachers' promises and expectations; teachers' connection with students; and free student feedback. The questionnaires are administered by the teachers at the end of the semesters. It can be said that student evaluation of teaching works as a common model for teaching evaluation. BT takes into account the opinion of students in general, and students' evaluation concerning teaching quality is a part of it.

In the second instance, recent graduates are asked about their opinion of the whole education process at the end of the state exam. The questionnaire expects answers referring to teachers' performances, educational infrastructure, course and programme performance, education support tools, and organisation of education. Finally, alumni are asked about the possibility of being employed, and the market relevance of their knowledge and skills. This measuring system was under construction at the time of writing, so further details cannot be given at present. In summary, the three parts of students' satisfaction evaluation indicate that BT measures these comprehensively.

In addition to measuring the opinion of students, BT decided to ask institutional *staff* about their *satisfaction* to improve the quality of the working environment. Questionnaires resulted in initial information about staff

satisfaction in January 2004. It solicited responses from all of the academic and non-academic staff, at one faculty in one year. The components of the staff satisfaction survey include questions concerning overall satisfaction; opinions about jobs; motivation; ratio of performance and income; departmental environment, and collegial relations among staff, as well as perceived opportunities for promotion or advancement. Furthermore, one interviewee emphasised that the results should be analysed, and that it should be intervened at faculty level. However, nothing had happened at the time of writing.

BT also developed procedures to monitor and report the quality evaluation of *teaching quality*. The evaluation of teaching quality[54] is multi-dimensional, capturing student feedback (mentioned above), peer evaluation of the lectures, and self-improvement plans. There are two self-improvement plans: one-year and four-year plans developed together with departmental leaders. The one-year plan contains the formulated goals, the planned methods of implementation, the resources expected, and timetables in the areas of publications, research and development, educational methodology, and self improvement. Evaluation occurs at the end of each year through a discussion with the head of a particular department. The fulfilled activities in these areas are evaluated at the end of each four-year period. These indicators showed the relative position of each staff member in relation to the values prescribed, together with their leaders. Teaching quality is measured and controlled extensively in BT.

Finally, quality indicators were developed in 2004 as part of the measuring system. In the case of some indicators, MAB expectations were taken into account as target values, and in some other cases the development of threshold values will be the work of the next 2-3 years in the function of quality policy. The areas of quality indicators were determined from the institutional strategic goals, including the following:

The ratio of submitted and gained competitions; renewing the contents of subject matters; incoming money for a research place; research place/teacher; falling away of courses per semester; the number of diplomas; student career; basic income, additional income in the cases of all of the members (per year); faculty economic working; Neptun[55] availability; number of publications; teachers' mobility; economic information reaching to the target people (under how many days?); how many students learn according to the model curriculum; appeals from students per semester; staff and student satisfaction; precision of implementation of a resolution; money spent on institutional improvement (private/other); ratio of placement in student hostels; price of places in student hostels; and ratio of persons being in debt to student hostels (quality co-ordinator, 2005).

The purpose of the indicators was to monitor their values and trends continuously, and to intervene if necessary. BT developed quality procedures for

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54 The external and internal teachers are equally evaluated (interviewee, 2005).

55 Neptun is an educational IT system developed specifically for higher education institutions.

all indicators that contain the rationale of the indicators, the target values (expectations), sources of information, who is responsible for collecting the information, the calculation of indicators, and evaluation and intervention. The indicators seem to be measurable and relevant for fulfilling the institutional strategic goals.

Decision-making process

As other features of BT, the institutional decision-making processes have also exerted influence on the implementation of quality management. As a starting point, the BT Council found the quality issue important, and the secretary-general took direct responsibility for quality implementation. After cleaning up the institutional long-term goals, a quality director[56] was appointed and a quality policy was developed. The position of the quality director in the institutional hierarchy made it possible for him to talk directly with the rector, secretary-general, and the BT Council. In addition, the final decision to implement ISO 9001 standard was also made in the BT Council, but details of the implementation—that is, the path from the general decision to the actual appearance of elements of quality management at BT—were delegated to appropriate institutional committees and groups. The implementation however, was conducted according to the continuously improved rules. As the quality co-ordinator highlighted (2005), "…we are continuously improving our rules and work. If something is wrong, we do not stick to our stupidity, but we correct it". Moreover, the QDC and the QCC sorted out their working rules, and the BT Council accepted them. Some were created during the implementation process, and caused problems at the beginning of implementation. As the quality co-ordinator stated (2005), "…people sometimes worked according to the old routines and faculty traditions and not according to the new ones". Furthermore, teamwork was used previously at BT; accordingly, it has experience concerning this mode of work. BT had some routines for such activities because "…the development of curricula and programmes expected it before" (quality co-ordinator, 2005). However, the implementation of a quality management system made the teamwork an institutional routine (interviewee, 2005). It seems that the continuous development of routines enhanced the pace of quality management implementation.

An understanding of why the pace of the present quality management system and procedures emerged at BT requires careful attention to the occurring political process, as well as that by which the implementation of quality management took place. Bargaining games determined the pace of the implementation process.

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[56] The quality director is one of the most acknowledged quality experts in Hungarian higher education, and he managed the work at BT.

The members of the BT Council sometimes perceived many faces of some important issues, framed for them by their faculties' characters and stakes. After the merger, general fights could be seen within the college. This happened mainly when the BT Council decided on institutional long-term goals, and particularly on financial issues. The process by which this occurred was a story of pulling and hauling. As one informant emphasised (2005), "…sometimes there was a 'bloody' debate in the BT Council, mainly when the distribution of money was the topic". At the beginning of the implementation process, the members of the BT Council also used quality management forums for enforcing their stakes, and this slowed down the implementation. During the BT Council discussions, the rector could somehow calm these people down, but in their own faculty councils, they could sometimes really hinder the decisions and slow the implementation process (interviewee, 2005). Moreover, there was opposition mainly on behalf of the older academics because of the ISO name. "They thought of something that is only suitable for industry, and needs lot of additional administrative work" (interviewee, 2005). Sometimes faculties bargained according to their stakes when the elements of quality management system were introduced. They wanted to implement their mechanism at BT because it would have been easier work for them. As the quality co-ordinator mentioned, however "…some of them were implemented, but some were not accepted by the other four faculties". Finally, one informant (2005) mentioned that sometimes individual stakeholders tried to hinder the implementation process, but the rector did not let them. Further details were not provided. These findings claim that the decision-making processes concerning quality management implementation were less bureaucratic on the one hand, and political elements hindered the implementation process on the other.

Conclusions

The picture emerging of BT was of a state college that offered university and college level study programmes in engineering, informatics and economics. Thus, the disciplinary balance was markedly on hard and convergent fields. The amalgamation of the institutions in 2000 heavily affected BT. The college was established by the integration of three former technical colleges—*Bánki Donát Polytechnic*, *Kandó Kálmán Polytechnic* and the Light Industry Polytechnic—and together with the two new faculties—Keleti Károly Faculty of Economics and John von Neumann Faculty of Informatics—BT had a new working structure. The evidence showed that, as a new institution, it planned to operate the new college on the principles of quality management. In the dimension of complexity, BT can be characterised as less complex because all of its faculties are in Budapest, and it offers study programmes only at two levels. As a state college, BT somewhat depends on the government, because around 70% of its annual income was publicly financed in 2004.

BT began to implement a quality management mechanism after the political initiatives on the national level. The quality management implementation seems to be quick, taking into account that quality procedures and quality manuals were completed in 2002, the quality management system was implemented in 2003, and BT was certified in March 2004. Even though as an institution BT was dependent on the government, it considered the governmental Protocol only as it was complementary to other approaches and mechanisms, such as ISO 9001 and MAB expectations in developing a quality management system. The quality management system seems to be comprehensively focusing on each core function, education, research, and service process. Furthermore, the quality management system implemented appears to be adequate, because it contained the elements of a comprehensive framework on the one hand, and it worked genuinely in practice—as the findings showed—on the other.

The study illustrated further reasons why this particular quality management implementation emerged. The first important reason was the support of external consultants. At the beginning of implementation, external consultants conducted training for institutional members, and then they helped in developing quality procedures and a quality manual. They positively influenced the implementation process, but interviewees mentioned one problem. External consultants had a lot of experience concerning the implementation of quality management systems, but did not know the language of higher education, which caused problems however, only at the beginning of implementation. The following reason was the commitment of leaders. The quality policy was translated into a set of guiding principles and deployed into strategic steps, contributing to further development of quality management. Further indicators of leaders' commitment can be clearly identified based on interviews and document analysis. Quality activities got the appropriate support and received the resources for doing quality work. As interviewees stated "we could not ask anything that we would not have got concerning all kinds of resources". As the findings showed, the decision-making processes were less bureaucratic. At the beginning of implementation, new rules were developed in some areas where it was missing. That time however, old routines, taken-for-granted nature of individual behaviour, stressed that members often went on doing what they had always done, and paid relatively little attention to the new rules. They did not blindly follow the rules all the time; the rules were developed continuously at BT. Finally, the findings provided evidence that political elements of the decision-making process made the quality management implementation slow at the beginning. Particular problems included academics who wanted to use quality management forums for the benefit of their faculty. For example, one reason behind these manoeuvrings was that the ISO name was unpopular among older members because of its amount of extra administrative work.

Overall, the institutional quality management implementation seems to be quick, adequate, with a wide scope. As the findings show, the main positively

influential factors were the commitment of leaders and the support of external consultants, while the political feature of decision-making processes negatively supports the quality management implementation at BT.

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Appendix I/b: King Sigismund College (KSC)

History and institutional characteristics

KSC[57] is an officially accredited and state acknowledged college that opened its doors in 2000. TANORG Ltd, with more than 30 years experience in education and adult teaching, established the college. Therefore, it is a private higher education institution with a strong emphasis on discipline and subjects within the field of social science and related subjects. The institutional study programmes are described below. In February 2001, three hundred students started their studies; in September[58], about 1400 students began studying. In the 2004/2005 academic year, the college had more than 4900 students[59], including part-time students. This rapid increase in student numbers appears to have contributed to the institution reaching critical mass. The teaching staff is made up of professors in the field, accompanied by several young assistants. The total number of full time academics is 35, and the number of qualified academics (including docents and professors) is 18. In addition, there are about 130 part-time teachers and guest lecturers with fixed teaching assignments. They are full time academics in other institutions, or experts from the industry, who mainly participate in teaching specific subjects.

As a private foundation, KSC receives minimal state funding. In 2004 this amounted to around 10 million HUF (40 thousand euro), less than two percent of the overall institutional income. Consequently, most of the students pay tuition fees. It is fair to claim that the college is almost fully independent of the government. The credit system was introduced in 2001 - at the beginning of the institutional operation. These considerations clearly indicate that KSC exists and functions in a market where maintaining a permanent external focus directed towards customers and stakeholders has become a part of the institutional orientation.

With the admission of Hungary to the European Union, all programmes offer thorough studies concerning its history, economic and security policy, and education system and activities. In addition, the institution provides students with professional knowledge related to the specific areas (www.zskf.hu; 20.01.2005):

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[57] The name-giver Sigismund of Luxembourg, Apostolic King of the Hungarian Kingdom and Emperor of the Holy Roman (German-Roman) Empire, founded the country's second university in Óbuda (Old Buda) in 1395. Although the university only existed for short time, its founding reflects Sigismund's respect of intelligence, expressed in his saying: "I may dub 1000 men in a day for knights but I can't create a doctor in 1000 days".

[58] September is the normal start of the school year in Hungary.

[59] About 100 students out of 4900 are studying as “state-supported”.

> *Modules form the basis of the education system, enabling great transferability with other institutions. During the first semesters of the academic programme, a solid background of economic sciences, with informatics and quantitative methods, as well as social sciences, is provided for the students, with a certain introduction to specific subjects. During their senior academic years, intensive specific subjects are studied, with placement opportunities to several different companies.*

KSC offers courses in four study programmes only at bachelor level for students: international relations, human resource management, communication-cultural management, and cultural management. The *International relations* degree provides students with the opportunity to examine international affairs in economic and political fields of study with opportunities to examine the impact of global politics upon national politics. The *Human resource management* degree offers students a general understanding of issues related to organisational change, recruiting, the role of training in an organisation, and legal awareness of the related issues. The *Communication-cultural management* degree offers knowledge of communication and media issues as well as organising events, conferences, and training and Public Relations. The students get special skills for holding a job as communication manager or spokesman of governmental, non-governmental, social, or commercial sphere. The *Cultural management* degree offers sound knowledge of communication and media issues as well as organising events, conferences and training, cultural institutions, adult education, and Public Relations. These clearly indicate that KSC offers mainly business study programmes, very popular in Hungary during the last decade.

Finally, as one informant stated, everything serves the undisturbed preparation of the students, as the institutional goal is to train professionals to be efficient participants on the labour market. Supporting it, the institution has a library with almost 30,000 volumes (plus 80,000 volumes accessible through the database), with the most important periodical titles, e-journals, and internet access. The following sections review the implementation and further development of an institutional quality management system.

Findings of quality management implementation

KSC declared its commitment to the implementation of a quality management system in 2001, soon after its establishment. The college developed its mission, strategy, and quality policy, and established a quality management committee in 2001. Quality management was a priority from the beginning of institutional operation. In 2001, the Institutional Council accepted the concept of a quality management system that fulfils the expectations of both the MAB and the ISO 9001 standard.

An external quality consultancy group started to work out the quality procedures and quality manual in 2001. It organised training programmes in the field of quality management basics for all of the members of the institution, and

provided further training in different topics for specific members. An additional goal of the training was to relieve the fears of the institutional members. "They thought that quality management would mean lots of documentation and extra work and that these mechanisms are only fit for industry" (interviewee, 2005). Here it should be emphasised that the college did not apply for external financial support for setting up quality a management system; it alone provided all of the costs of implementation.

At the beginning of 2002, quality procedures and the quality manual were completed, and the institution received the certification based on the ISO 9001 standard on 15 March 2002. From that time, the institution has continuously improved its quality management system, and in 2003, appointed a quality leader. The study now looks in detail at the implementation of quality management.

Quality management implementation process

The institutional quality management activities involved developing a quality management system to enable KSC to fulfil its vision of achieving university status in the future. The institution started developing its quality management system soon after its establishment. The aims of the quality management implementation centred on the task of reconciling the tension between the demands of external and internal bodies and participants. The predecessor of the institution experienced the advantages of a quality management system because the organisational processes were in order among others, and the college also wanted to improve its market position. This posed a considerable challenge in terms of the introduction and reengineering of institutional processes, procedures, and the quality management system. These were developed according to the legal requirements and the expectations of the ISO 9001 standard. The institution did not take into account the Protocol because, as one interviewee states (2005), "…the college already exceeded its expectations". The predecessor of KSC already had a quality management system and the Protocol only includes some parts of it. The remainder of the study addresses the details of quality management implementation.

In an account of quality management implementation at KSC, I begin by pointing out the apparent importance of the commitment of institutional management clearly stated in the quality manual. Primarily, this emphasises the responsibility of the institutional leadership for initiating and stimulating institutional development processes, especially concerning the introduction, operation, and continuous improvement of the quality management system. The identification of the institutional mission, quality policy, and quality goals are emphasised as central elements. Among further elements were the development, operation, and continuous improvement of a quality management system based on ISO 9001 and institutional procedures and processes, the assurance of

resources and infrastructure to this, the assurance of the adherence to laws, and the satisfaction of stakeholders, planning the processes concerning education and organising of education, and planning measures, evaluations, and further improvements. The owners of the college provided the appropriate resources for quality management implementation, and were committed to ensuring further resources if necessary. "They found the quality issue very important, and assured the resources for the college" (interviewee, 2005). They financed everything, and the interviewee highlighted that higher education institutions in Hungary could hardly find tenders concerning quality management implementation in higher education. In addition, private institutions could not participate in quality tenders until 2003. Consequently, the quality management implementation at KSC is a central issue; the leaders were committed to it, and provided the appropriate resources.

As a central guiding principle of the institutional operation, the college developed a mission statement in 2001. First, the college considered its most important role to be turning out highly qualified people with excellent professional skills.

> *With the EU membership of Hungary from May 2004, we aim to widen the knowledge horizon of our students by making them familiar with the Union's history, its institutions, its legal system, its different policies in economy, agriculture, regional development, environment, education and more. The institution provides professional knowledge related to the specific areas that are fitted for European norms and the actual Hungarian laws as well. During the education period, the college puts the emphasis not only on the professional skills, but also on moral values (www.zskf.hu; 20.01.2005).*

Furthermore, the college wants a stable, acknowledged market position in the short term and to be a professional Hungarian university in the medium and long term. Facing the Bologna process of higher education reform that brings about many changes in the Hungarian higher education system, the college already prepares university master programmes to provide the second tier in the planned linear system of higher education. In addition to the student exchange programmes, KSC also considers the mobility of its teaching staff important, to enrich its educational programmes by acquiring international experience. Finally, the college, although new to the Hungarian higher education arena, underlines the importance of international relations. These show that central features of KSC's institutional identity consist of its international and strong market orientation, and its aim of being a university.

The institution developed a mission statement that provided the backbone of its strategic goals. The institutional strategy outlined that KSC should

> *conform to Hungarian laws and European norms, accomplish education and training that reflects a high professional and scientific level, reach the commitment*

> *of institutional members for quality management and for making them conscious of the demands of institutional stakeholders by means of training, employ qualified teachers for the institutional programmes, and develop and continuously maintain the human and infrastructural resources for implementing quality goals (www.zskf.hu; 20.01.2005).*

It should be mentioned here that this strategy seems to be 'standard' and rhetorical, rather than specially developed for the characteristics of the college.

In addition, as a starting concept of the institutional quality management implementation, the college developed a quality policy in 2001. The comprehensive goals of the quality policy provide a framework for the determining and checking of quality goals. The quality policy identified the following items as essential to accomplishing the institutional mission (www.zskf.hu, 20.01.2005):

> *Our goals are:*
> *Accomplishing education and organising of education activities and supporting a quality management system that are partner-focused, helping in accomplishing the individual goals of students, and in performing the market demands of being suitable for the relevant Hungarian and European laws and integration processes.*
>
> *Accomplishing education and organising of educational activities that make the college suitable for collaborating with higher education institutions in both Hungary and the European Union.*
>
> *Coming to these goals, the institution introduced a quality management system based on ISO 9001:2000 that treated the economic and strategic question. …*
>
> *Establishing a stable quality of institutional operation and services, and assuring and improving the trust and legal security of stakeholders (students, academics, employers and partner institutions). …*
>
> *Satisfying the harmonised external and internal quality demands and expectations and asserting them in the implementation and continuously improving study programmes and assuring competitive knowledge, diploma of stable value and life long learning for graduate students and employees. …*
>
> *Introducing the continuous measurement of teachers' performance, the evaluation system of students' satisfaction in harmony with the career plan, and mobility of institutional members.*

During the determination of quality policy and quality goals, the institution considered the previous goals and their accomplishment; feedback from students

and other stakeholders, and their evaluation; conceptions for professional development; experience of external and internal reviews and audits; the evaluations of preventions, corrections, and further developments; defined goals for each member of at least departmental level; numerical goals, if possible; and the goals compared with the actual performance.

Concerning the institutional quality policy, three considerations are important. First, KSC implemented a quality management system that focuses on education, service, and secondary functions, though not on research. Second, the quality management system focuses comprehensively on the demands and satisfaction of stakeholders. This fact ought to affect the institutional work on quality improvement positively. Finally, KSC developed a system for measuring teachers' performance, but has not developed numerical quality indexes yet.

To make the quality policy operative, the college established the Quality Management Committee (QMC) in 2001. Among the main intentions behind this establishment are the review of the quality manual, processes, and procedures, thus contributing to make the quality management implementation more effective. However, the committee worked informally. "There are no formal rules concerning the work of the QMC, and it works according to informal rules. Sometimes we don't come together but decide only after a phone-around" (interviewee, 2005). The four members of the committee are appointed part-time, and include the secretary-general (the quality leader), deputy economic director-general, the internal auditor, and one teacher. The Student Body is not represented in the committee. In practice, the quality leader was responsible for:

> *establishing, operating and reviewing the quality management system; developing institutional rules; making sure that institutional members know and understand the demands of stakeholders, know the importance of their work and understand their role in fulfilling the quality goals; and paying attention to the realisation of quality goals and determining the possibilities for further improvements (Quality Manual, 2004, p. 15)*

The committee was also authorised to design and organise training for the institutional members, and was supported by the management. The following training is assured for staff: introductory training on particular issues (mainly skill improvement training) for new members or for members in new positions; internal auditor training; internal professional further training; and training for management. The leaders also realised that KSC needs to improve its members' insights into the principles of quality management. The institution wanted each member to be familiar with the quality management system, the satisfaction of stakeholders' demands, and the positive and negative consequences of their activities (interviewee, 2005). Therefore, as an overall activity at the college, all members of the institution received information concerning the quality management system, quality procedures and methods, and the importance of the whole quality management system by an external consultancy firm during a

three-day training programme. The opinion on the usefulness of the training was positive. In addition, "…one of the most important goals of the training was relieving the fears of the members" (interviewee, 2005).

One committee member works as an internal auditor, and received the appropriate tools and mechanisms, such as interview techniques and content of ISO 9001 standards through auditor training to help him in the internal audits. He is a sociologist who normally works as a teacher. He audited all procedures and processes of KSC. The institution accomplishes internal audits more than once per year, and external audits yearly. Nowadays, the internal auditor also takes the training for staff members. "The training for members in the field of process description was already held by him" (interviewee, 2005). The training helped staff understand the practical usefulness of quality management.

The institution requested re-certification of its system according to the ISO 9001 standard in 2001. In addition to the QMC, an external consultant was invited to support the quality management implementation. After significant staff training on quality management principles and tools, the external consultants helped in developing the quality manual, processes and procedures, and implementing the quality management system. The principle behind this was the fact that "…the institution knew the firm and trusted in its experience" (interviewee, 2005). The institution received the certificate in March 2002. Furthermore, one informant mentioned that in 2003 the college cancelled almost half of the procedures (among others records of students left the institution, enrolling papers and list of accepted suppliers) after the internal audit, because they were found to be unnecessary. "We were continuously improving the system, sometimes cancelling something from the system, sometimes putting new things into it" (interviewee, 2005). This indicates that institutional members and external consultants together developed and improved the quality management system. I now address the main features of the implemented quality management system.

Quality management system

Owner TANORG Ltd already had an ISO 9001:1994 certificate; the establishers and leaders decided that a renewal would be requested for the follower (KSC). They re-planned the processes, order, and interaction. The owner provided the resources needed to attain the goals. The certificate contains the following: education, improving of education, and organisation of education. The quality management system includes the existing institutional rules as well. Furthermore, these are continuously being improved to reach the expected goals and the higher level of satisfaction of the stakeholders. The college introduced a specific information system, planned directly for KSC, and all kinds of data can be accessed for various statistics. Our discussion continues with the institutional quality management procedures.

MF[60]*-01 Managing documents, data and records*. The goal of this procedure is to regulate how the institution manages the external and internal documents and data concerning quality management system; and identifies, stores, and maintains the records and documents. It includes the following activities: managing internal documents (quality management system process descriptions, statements, formal expectations and subject matters, preparing, approval, distributing, modifying, withdrawing and storing them); managing external documents (laws, professional directives); and also managing and storing quality documents and records.

MF-02 Entering into a contract. This procedure describes the inspection of customers and students' contracts to make sure that the institution performed their expectations according to legal demands. It contains: managing general offers (entering guide, professional bulletin, and newspaper advertisement); students' contract (entry-form, entrance examination, registration, and financial contract); individual contacts with service providers, private persons; fulfilment and modification of contracts; and managing customer complaints.

The first two procedures regulate the institutional secondary support processes.

MF-03 Supplying and evaluation of suppliers. This procedure describes how the technical equipment for education and organising of education and the evaluation and acceptance of suppliers are managed. It contains: supplying contracts with teachers; evaluation of teachers[61]; supplying education technical equipment; identification of supplying demands; evaluation of suppliers[62]; modification of contracts and orders; and complaints toward suppliers. This procedure comprehensively regulates the evaluation processes, from input to output.

MF-04 Education, organising and controlling of education. The goal of this procedure is to regulate the institutional work, methods, procedures, and responsibility of education, and organising and controlling of education. This includes the following: setting up programmes (laws, MAB expectations, qualification, and examination requirements); preparing study programmes (study programmes, curriculum, time-table, order of examinations) taking into account the legal demands, students, employers, institutional staff and employers who send a group of students; inspection of study engagements; organising the examinations and the final examination; managing documents concerning the results of examinations; implementation of study programmes (lectures and seminars, quality of the curriculum, quality of teaching and managing non-

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60 MF: Quality procedure

61 The main elements of the evaluation are professional skills, the gift of teaching, innovativeness and creativity, development, reliability, commitment, results of students' opinion, examination results of students and fulfilment of study programmes.

62 The new suppliers are evaluated according to the available information, and the others according to the following points of view: quality of service or product, reliability, flexibility, availability, quality management system, deadline, guarantee services and price.

conformity); modification of study programmes and curriculum; identification, ensuring, and maintenance of education materials; and evaluation of study programmes and student satisfaction examination.

MF-05 Education development. The final procedure identifies the methods and tools that assure that the development activities satisfy the expectations and criteria of the College Council. It contains: planning and organising of education (taking into account the expectations of the Ministry of Education and the market); identification of starting data concerning development; planning of development (development plan contains the order of activities, procedures concerning fulfilment, deadline of work, documents of fulfilment, who is responsible for a particular task, necessity of involvement of externals, and personal, material, and infrastructural conditions[63]); inspection, justification, and approval of planning; and modification of the development plan.

Concerning the education processes, it should be emphasised that the college regulates the qualification requirements, the curriculum design, student evaluations, and their implementation. However, it does not concern the design of teaching and learning processes, especially methods of teaching and learning. In addition to the education processes, the institutional quality management system also focuses on resource management, quality information systems, and external influences. Taking into account the institutional quality management processes and procedures, the quality management system seems to be nearly comprehensive in terms of the framework developed in Chapter 3. In addition, the empirical findings showed that a meaningful part of the institutional quality management system worked in practice.

The following is a brief description of the important tools of the measuring system. First, *teaching evaluation,* based on a student feedback programme, was introduced to the whole institution, and aimed at improving quality of course delivery and measuring teachers' performance continuously. The evaluation questionnaire is intended to be used as part of the institutional quality management system to improve the quality of teaching at the college. Students comment on the teaching performance of individual lecturers and all teaching activities carried out by them. The questionnaire, comprising nine questions, is designed to provide student feedback with respect to the level of education; satisfaction with teachers; conformity of education technical equipment; educational circumstances; organising of education; and students' proposals for improving them.

The questionnaires are administered by the institutional uniform study system. During the examination period of six weeks, students can fill in the questionnaire and send it back by e-mail. This assures rapid data evaluation (within two to three weeks after the end of examination period) and anonymity of

[63] The development plan contains the determination of resources. It includes the following: buildings, education tools, hardware and software, IT tools, and curriculum provision.

the respondents. However, the institution found this data of questionable value because of its relatively low response rate (12-15%). The college introduced a new rule, which emphasises that each student has to fill in the questionnaire, or declare that he or she does not want to fill it in before registration for the new semester. After this regulation, the response rate was much higher (around 45-50%). One informant found both the new procedure and the value of the evaluation very useful, both for academics and for institutional management. The institution planned that from 2006, 20% of the teachers' salary will be distributed according to the results of students' satisfaction. "But the KSC wants to take steps to avoid 'cheap' popularity" (interviewee, 2005). The student evaluation of teaching works as a common model for teaching evaluation, and the relatively high response rate may provide reliable information on teaching quality. In addition, the leaders take the results of the evaluation seriously, which will positively influence the evaluation process and education quality.

Second, in addition to the teaching evaluation, KSC planned to measure the *satisfaction of staff members*. The procedure and the content of staff satisfaction examination were under construction in spring 2005, so it is too early yet to say anything about the possible results. In addition, the institution planned to use the results of measuring the reactions of alumni as well, but only later, because the first students only graduated in 2004 (interviewee, 2005).

Third, the institution invites external leaders from industry and service to chair the state *examination committees* for each study programme. They are high-level managers, and give an expert opinion of, and suggestions for, the performance of students. This is part of taking into account the demands of employers.

Finally, *quality indexes* were developed from 2004 onwards. The institution wants to use factual numbers in evaluating the different performances wherever possible. Concerning the threshold values of indexes, the differences of various disciplinary areas are going used as target values, and the development of these indexes and their values will be the work of the next one to two years. "The leaders of the college found them important, but they should be developed carefully because of the huge institutional resistance concerning the transparent institutional processes and individual performance" (interviewee, 2005). These institutional activities indicate that KSC comprehensively measures the quality of education, while the following section describes how, for instance, this resistance influenced others concerning the quality management implementation.

Decision-making process

The institutional decision-making processes also exerted influence on the implementation of quality management. The owners and leaders of KSC found the quality issue important, and took direct responsibility for it (interviewee, 2005). The secretary-general provides the work of quality leader, which made it possible for him to talk directly with the rector and KSC Council. The quality

leader does not have a reporting duty to the KSC Council. He also mentioned that he was interested in the quality issue, and that he had previously performed this work. He was not appointed to quality leader before 2003 because the institution was too small for that position. However, he did quality work at that time as well. Furthermore, one informant emphasised that the QMC does not have written rules. The decisions and the work within the quality committee are quite often informal, and the quality leader co-ordinates the work of the QMC according to which tasks emerge.

> *Sometimes we decide after a phone-round, sometimes we meet in the corridor and decide there, and sometimes I call them or only a part of the committee together, and decide after a real meeting (quality leader, 2005).*

The institution developed a quality policy after cleaning up the institutional mission and strategy. The owners and leaders found that quality management could help in making order in daily work, transparency, and rationalisation. The final decision to implement the ISO 9001 standard was made by the owners and institutional leaders, and the details of the implementation—that is, the path from the general decision to the actual appearance of elements of quality management at college—were delegated to appropriate institutional places. The development and establishment of institutional rules and processes were based on the experiences of the previous company, so the quality management principles could be built into the institutional norm, routines, rules, and quality management system (interviewee, 2005). Additionally, KSC is continuously improving them.

The quality leader also highlighted that quick implementation work was possible because informal decisions are possible in the case of co-ordinating a small number of staff who are at the same place. Therefore, this kind of institution (new, and with a single faculty) can function according to informal procedures.

Teamwork was applied at KSC to develop a quality management system and its procedures. Teams were set up to manage these processes. Involvement in quality management implementation and improvements was further cascaded down through the institution, using quality action teams. They worked as ad hoc teams, with experts of particular areas asked to participate in them.

An understanding of why, with this present pace, the quality management system and procedures emerged at KSC, requires careful attention to the concurrent political process, as well as how the implementation of quality management took place. Some bargaining games determined the pace of the implementation process.

The institutional members sometimes perceived different faces of quality management, framed for them by their own stakes. This happened when the college wanted to make its system transparent and objective through quality management (interviewee, 2005). This process contained some political elements.

As one informant mentioned (2005), "…some academics could not cook their own roast if the rules are clear and transparent". Furthermore, they had problems with the standardisation and regulation of the pace of results of examinations, and the content and quality of the curriculum. Some academics also put their interests before those of students, and that is in contradiction with institutional goals and ethics. As one interviewee stated (2005):

> *…unfortunately, in some cases these people were in a high position, and have power as well. The college does not need people behaving like this, and the ones who made the quality management implementation much slower, got the push.*

The quality leader also emphasised that without these members, the quality management implementation could have occurred about twice as quickly. In addition, the quality leader was sometimes successful in obtaining extra money for the quality committee. He wanted to buy e.g., new software and infrastructure, and once when he wanted to create a position to employ an extra staff member that required additional budget, the quality leader struggled to obtain it. His policy was "…if one person can accomplish the work of two people, that means that he is working superficially. He caused more a state of being a loser, than the annual payment of one extra member." So the quality leader achieved the development of a new status, and appointed a new staff member.

Finally, there was opposition mainly on behalf of the older members, but of some other academics as well, because of the ISO name, but "…these people were not in high positions, and they were not 'loud' "(interviewee, 2005). The institution could solve these problems with the help of training and friendly chats. These findings claim that the decisions concerning quality management implementation occurred mainly in an informal way on the one hand, while political elements hindered quality management implementation on the other.

Conclusions

KSC was a new private college—established in 2000—which offered only bachelor-level study programmes, such as international relations, human resource management, communication-cultural management and cultural management. Thus, the disciplinary balance was markedly on soft and divergent fields. KSC, in the dimension of complexity, can be characterised as a simple institution because it had only two buildings in the same district of Budapest, with four departments. As a private college, KSC was almost fully independent of the government. The governmental support was less than 2% of the overall institutional income in 2004.

As addressed in the case study, KSC started to implement a quality management mechanism soon after its establishment, which indicated its priority. In addition, the implementation process seemed to be quick, taking into account that a quality policy and the quality manual had been developed in 2001, the

quality committee was established in the same year, and the quality management system was certified according to the ISO 9001 standard in 2002. The college did not consider the Protocol because it wanted to implement a more comprehensive quality management model. The scope of the quality management system focused on education, organising of education, and service and support processes, but not on research activities. Therefore, the scope of its quality management system seems to be wide. Furthermore, the quality management system at KSC also appears to be adequate, because it mainly contained the elements of a comprehensive framework and worked genuinely in practice—as the findings showed.

The study illustrated other reasons why the particular quality management implementation emerged. The first reason was the commitment of leaders. For example, the existence of a written institutional quality policy was a clear expression of the leaders' commitment concerning quality management implementation. The quality policy was translated into a set of guiding principles and deployed into quality goals defining what, and in which order, the college should act. Owners and leaders also provided KSC with the appropriate financial, infrastructural, and human resources for performing quality management implementation. As one informant stated, "…if the needs could be justified, we got them". The second important reason was that external consultants supported the whole implementation process. At the beginning, they conducted training for staff members and then helped in developing quality processes, procedures, the quality manual, and implementing the quality management system. As one interviewee (2005) stated, they positively influenced the quality management implementation process, and contributed to getting rid of the fears of institutional members concerning quality management. The next reason was that the predecessor of the college was certified according to the ISO 9001 standard, and KSC wanted to renew it because of market expectations. Thus, the private character of the college influenced its customer orientation. The quality management system was implemented with the purpose of improving the education quality and customer satisfaction. In this connection, not only students, but also other external and internal actors were stakeholders. In addition, institutional rules—defined at the establishment of the college—were set up according to quality management principles. Many times however, rules concerning quality management implementation were informal and not bureaucratic. The continuous improvement of quality procedures also helped enhance the pace of quality management implementation. However, the findings provided evidence that political elements of the decision-making process slowed down the quality management implementation, according to an interviewee twice as slow. Particular problems identified included academics who wanted to keep the old system without the transparency and order of the new quality management system. Sometimes they were in a high position, which slowed down implementation.

Comprehensively, KSC embarked on a quality management programme directly after its establishment, to improve the accountability and quality of its services in a broad sense. The institutional quality management mechanism seems to be quick, adequate, and has a wide scope. As the findings showed, the commitment of leaders, the support of external consultants, the relative simplicity, and the private character of KSC—leading to strong customer orientation—supported the quality movement positively, while the political feature of decision-making processes negatively influenced the quality management implementation process.

Literature

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Appendix I/c: Theological College of Szeged (TCS)

History and institutional characteristics

TCS is a church college in Szeged. Its beginnings are beyond the present borders of Hungary. Before the First World War, the See of the Roman Catholic Diocese of Csanád was located at Temesvár (Timisoara in Romania); there it had a diocesan seminary, a post-secondary school for educating the clergy. After the Treaty of Trianon, the Diocese and the seminary were expelled from Romania. The See was re-established in Szeged, and the Inter-diocesan Major Seminary of Szeged was established in 1930. The Holy See entrusted its academic administration as well as the education of its students, to the Jesuits.

In 1950 most Roman Catholic schools were taken over by the Communist Regime, members of religious communities were deported, and their institutions were confiscated. The Jesuits were forced to abandon the major seminary and their own school of theology. However, the agreement reached between the regime and the Conference of Hungarian Catholic Bishops allowed, although not without frequent harassment, the continued functioning of the inter-diocesan seminary. During the early seventies, the faculty mounted a correspondence programme in theology for lay students. This undertaking was the first of its kind in Hungary. By the end of the decade, this programme had to be suspended because of pressure from the regime, though it was later allowed to resume. When Pope John Paul II issued an Apostolic Constitution on Catholic higher education, *Ex Corde Ecclesiae* in 1990, institutional autonomy was challenged. The document delineated the Vatican's vision for higher education and provided guidelines, or General Norms, to facilitate implementation (Lavelle, 1994).

With the return of the democratic political system in 1990, its regular programmes also became available for lay students. At the same time, the student members of the Franciscan Order from Hungary and Transylvania joined the college. In 1991, the Vatican Congregation for Education conducted a visit to the school, and approved the developments. A few years later, the process of accreditation by the Hungarian Accreditation Committee began. In this process, the Hungarian Jesuits' School of Theology was integrated with the institution. Since then, the college has operated under its current name: the Theological College of Szeged. This change was completed by an agreement between the Diocesan Bishop and the Provincial Superior of the Hungarian Jesuits in 1996. In 1995, the college entered into an affiliation with the Theological Faculty of the Pázmány Péter Roman Catholic University in Budapest. Because of this agreement, the ecclesiastical bachelor degree may be granted to lay and clerical students of the college who fulfil the requirements stipulated by the Theological Faculty. The Vatican Congregation of Education approved this affiliation.

In 1991, TCS became a founding member of the University Federation of Szeged. This enabled it to enter into co-operative agreements with the Teachers' College and the József Attila University of Arts and Sciences. By virtue of these agreements, TCS is able to offer its study programmes and diplomas to students from the institutions who intend to obtain diplomas for religious education at primary and secondary school level. In the fall of 2000, it began admitting students into a newly established department within the Faculty of Arts at the University of Szeged. Study programmes offered at the college are available for its students, and vice versa. Thus, a general impression of the decade is that of directing efforts towards networks with other higher education institutions.

Considering demographic trends and a diminishing need for teachers on all levels however, the college expects a reduction in the number of students. It is also expected that most of its Franciscan students will join the newly established Sapientia College. This reduction in student numbers may create serious financial difficulties. As the quality leader (2005) mentions, this was one of the reasons for quality management implementation. In 2004, the college had only around 350 students. The academic staff amounts to about 30 full- and part-time employed with the following qualifications: 12 full time academics, five qualified academics (including docents and professors), and about 15 part time teachers. Concerning financial resources, TCS almost fully depends on the government, although they are owned by the Church. Governmental support was more than 95% of the overall institutional income in 2004. The Church plays a role in appointing teachers and evaluating the content of study programmes.

Towards the beginning of the 2000s, TCS organised its studies into three areas: study programmes in theology, religious knowledge, and post-graduate training. *Studies in theology* lead to a bachelor degree, granted through the Theological Faculty of Pázmány Péter Catholic University. The diploma is given by TCS, but only to students preparing for ministry in the Roman Catholic Church. *Studies in religious education* are carried out at university and college level as well. The degree at the first level is again granted by the Pázmány Péter Catholic University, and qualifies for teaching religious knowledge at a secondary school level. The college level religious studies diploma qualifies for teaching religion at the primary school level. In addition, the college offers *post-graduate training* for ethics teachers at primary and secondary school levels, which is a new pillar of the institutional study programme's feature. The credit system was introduced in 2003, allowing permeability between educational programmes and career modification at different institutions. The following sections review the implementation of the institutional quality management system.

Findings of quality management implementation

The college decided to implement a quality management system in co-operation with other two theological colleges in 2002. The consortium applied for and received governmental money for quality management implementation. TCS's

Quality Assurance Group (QAG) was established in 2003, and a quality leader had already been appointed at TCS in 2002 for organising and guiding these issues. The leaders of the college defined clear expectations concerning the QAG in the operational regulations of the group.

In 2003, TCS developed its quality policy and quality manual as a framework co-ordinating the institutional quality management implementation. The college decided to establish a quality management system according to the ISO 9004 standard, because this standard also focuses on the stakeholders, not only on customers. An external consultant provided training programmes in the field of quality management basics to all the staff members, and helped develop the quality policy and quality manual. However, he was not involved in the later implementation process.

The college worked out an evaluation system for teaching quality using feedback from students concerning academics and the curriculum in 2004. Further questionnaires to gauge alumni, employers, staff, and owner satisfaction were also developed, but the college did not have the money to use them. In addition, TCS worked out mechanisms (open days, brochures, posters, etc.) to attract more students. The study now looks in detail at the quality management implementation.

Quality management implementation process

TCS embarked on a programme of developing and implementing a quality management system in 2002 to assure and improve teaching and learning quality. The institutional quality management system only concerns the education activities. The college used the Protocol, the experiences of the Comenius[64] model, the EFQM model, and the ISO 9004 standard for developing its quality management system. Thus, the quality management system also satisfies the expectation of the ISO 9001 standard. The focus of the operating of a quality management system is on continuous improvement, based on measuring the satisfaction of stakeholders, and takes into account the effectiveness of the quality management system and the options of improving the operation of TCS (Quality manual, 2003). The remainder of this section addresses the details of quality management implementation.

It is useful to start by pointing out the commitment of institutional leaders that showed in the document analysis and interviews. The leaders stated their commitment concerning quality management in the quality manual (p. 25). To implement and continuously improve the quality management system, the leaders did the following: publicly stated the importance of the satisfaction of stakeholders (including national and Church laws); developed a quality policy and quality goals; and promised the appropriate resources. Concerning the last

[64] Comenius quality management model was developed for elementary schools.

point, TCS has a good relationship with other two theological colleges (Theological College of Pécs and Veszprém) and together they applied for governmental support for setting up a common quality management system, specifically for theological higher education institutions. They were given 10 million HUF for these activities, and the share for TCS was about 3.5 million HUF. TCS used this money mainly for common institutional meetings, training, and developing questionnaires. The quality leader (2005) mentioned however, that the college assured only the basic resources needed for using and evaluating the questionnaires of students' satisfaction. Furthermore, he highlighted that higher education institutions in Hungary could hardly find tenders concerning quality management implementation in higher education, which in his opinion shows the low priority for quality in Hungary. Consequently, the quality management implementation at TCS cannot be considered one of the central issues, and the leaders provided only the basic resources for it.

As a central principle of TCS's operation, the General Directives for Higher Education for the Roman Catholic Church (Sapientia Christiana, Vatican, 1979) defined the mission statement. The mission statement emphasises (www.theol.u-szeged.hu, 13.03.2005):

> *The [academics and] Student Body of our college constitute a community motivated by the desire to study Theology. This joint effort employs tools of critical reasoning used in Biblical, Historical, Systematic, and Practical Theology. It is expected, that this collaborative work deepen our students' faith, as well as the awareness of their specific mission in the Church and in Hungarian society. The members of the [college] are committed not only to the intellectual and spiritual formation of the students, but also to scientific research. They have to keep abreast of the development of their discipline, so they could meet the expectations of religious and cultural needs of contemporary society.*

These needs make the pursuit of theological studies, research, and interdisciplinary undertaking necessary. Therefore, its mandate requires close cooperation with the academic, the political, and the ecclesiastical communities. The Vatican Congregation for Education endorsed this when it stated that historical changes made the university community of teachers and students increasingly independent from the Church, which originally provided the cultural and organisational context for it. These show that central feature of TCS's mission consists of its strong theological orientation, without stating any thought of quality management.

Although the institutional mission does not mention quality management, nevertheless the strategic decision of leaders was to develop, operate, and continuously improve its quality management system. The college plans and implements the quality management system, taking into account the following (Quality manual, 2003, p. 15): institutional goals, demands of society, past results and the institutional culture and structure. The college planned to identify the

demands of stakeholders—students, academics, the Church, secondary schools, and society—effectively to compare these expectations with their target values, and satisfy the requirements of stakeholders in accordance with the institutional target value. It should be mentioned that the college is actually only measuring the demands and satisfaction of students and the performance of academics. For achieving these goals, TCS developed its quality policy (Quality manual, 2003, p. 26-27), which provided the backbone of its quality management system for educating skilful, even-tempered clerics and professionals with deep beliefs, substantial theological knowledge, and general literacy, who are sensitive to spiritual problems and able to:

- fulfil their ministerial work at a high level, effectively fostering people's spirituality and bringing out the best of the Church;
- teach students for the rights of belief at a high level, to help to ministers fostering people's spirituality and bringing out the best of the Church;
- fulfil their professional work at a high level, effectively fostering the cultural rise of Hungary and the humanity.

The institutional quality manual also emphasised that leaders should develop measurable quality goals for each course and institutional unit for the sake of fulfilling its strategic goals and quality policy. During the determination of quality goals, leaders should consider the following aspects (quality manual, 2003): market expectations, the demands of TCS, the results of leaders' review, the quality of education, the satisfaction of stakeholders, the results of self-evaluations and benchmarks, improvement possibilities, and resources. To realise the quality goals, the leaders planned to elaborate them for individual staff members, continuously review, and modify them if required. These quality goals seem to be quite comprehensive; however, during the site visit I noticed that the system of quality goals was not working at all.

The school established a Quality Assurance Group (QAG) in 2003 for managing the institutional quality management implementation and putting quality policy into operation. While the quality manual mentioned two quality management committees (Quality Evaluation Committee and Quality Assurance Committee), in practice, only the QAG exists and it does the work of both committees. QAG consists of six persons (the quality leader appointed in 2002 as the representative of institutional leadership, and five other academics) and for all members it represents a part-time task. The QAG operates in an ad hoc way, and its work is limited to managing and evaluating the questionnaires sent to students. TCS evaluates teaching quality and the satisfaction of students once a year, (in February) and a working group is set up from the QAG for fulfilling this particular work. After finalising the work, the members retire, and it is constituted again next year. The QAG only administers and evaluates the questionnaires, and the leaders of the college decide based on the results. The

director-general directly fulfils the institutional supervision of the QAG. The QAG annually gives an account of its work and of the operation and improvement necessities of the quality management system to the director-general. TCS provides about 100 thousand HUF as annual working costs for quality management activities, which assures only the basic operation. "The annual budget assures members of the QAG only for visiting some conferences and printing out questionnaires" (interview with quality leader, 2005). In addition, the quality leader was responsible among other things for

> *…managing the institutional quality management activities and continuously improving them; …advising the director-general and evaluating his decisions from a quality management point of view; participating in development of the institutional vision, and in defining and fulfilling quality goals and strategy; …managing the quality training of staff members; representing TCS and its interests in questions of quality with partners like OM, MAB and other quality bodies; managing and co-ordinating development, maintenance and improvement of institutional external and internal quality documents; managing the measurement and evaluation of demands and satisfaction of partners (students, staff members, secondary schools and the Church) and maintaining contacts with them; and managing the tenders and projects concerning quality management (QAG, Operation rule supplement, TCS, 2005).*

Furthermore, he can recommend activities for institutional leaders and departmental leaders concerning the elimination of non-conformities and specific improvements. During the evaluation of institutional documents, it appeared that the requirements of the quality manual and institutional working rules concerning the duties of the QAG and the quality leader differed in some areas. The quality manual however, declared that the QAG continuously measure the demands and satisfaction of students, owners, leaders, staff members, alumni, the employers (secondary schools, parishes and charity services), the Church, the supervision bodies and society. However, in practice the institution measured only the satisfaction of students, and evaluated only the quality of teaching.

The quality leader was also authorised to organise a quality management training programme. Training programmes included quality management basics for all of the staff members during a three-day training course. The school invited an external consultant to provide this training and he helped develop the quality goals and the quality manual. However, he did not help in the later implementation processes. Because of this evidence, the external consultant only helped at the beginning of the quality management implementation. Let us turn to address the main features of the institutional quality management system.

Quality management system

The three higher education institutions decided to develop a common quality management system, fitted particularly for theological colleges. They invited an external quality management expert who developed the quality manual for the colleges. Basically, the elements of quality management systems and quality manuals across the three colleges are the same, but there are differences concerning some institutional features. The remainder of this section first addresses the elements of the quality manual. After this, the operating parts of the quality management system will be discussed.

TCS decided to implement a quality management system for at least of two main reasons (interview with quality leader, 2005). The first reason was the European and Hungarian higher education trends in quality management. The college wanted to conform to these trends and be compatible with other institutions. Second, the college wanted to improve its internal processes. Although the institutional quality management system only concerns the education processes, the documentation system based on the ISO 9004 standard contains the quality policy, quality manual, procedures, recording templates, and forms. The quality manual follows the structure of the ISO 9004 standard, and includes the documented procedures and their references and the processes of quality management system and their networks. Now I turn to introduce the elements of the quality manual and quality management system.

TCS has taken into account the requirements of the Protocol, the Excellence Model, the ISO 9004 standard, and the Comenius model. The quality manual was developed in 2003, and covers the following processes and areas. First, it handles the documents and records for effective operation of the quality management system. TCS is also committed to design, implement, and maintain, a documented quality management system. The quality manual declared that the college was going to implement a quality management system only for education, and to improve it with the aim of fulfilling quality goals continuously. In addition, the college focuses on its stakeholders, and identifies the following: students, employers, staff members, the owner, the Church and society. TCS planned to measure their demands and satisfaction, and transform them into institutional requirements. The general impression of the above-mentioned evidence is that TCS comprehensively identified its stakeholders, and its quality management system only focuses on education activities.

Furthermore, the institutional quality management system comprehensively handles and manages resources, such as assuring, maintaining and developing human resources, infrastructure, working environment, information, and financial resources. The system also handles selection and qualifying of staff members, their training, the assurance of infrastructure concerning education, and financial management.

Concerning the core activity of TCS, the education processes include the management of quality goals concerning education; qualification requirements; legal demands; stakeholders and contracts; planning of the education system (establishing and starting study programmes); recruitment of students, planning and improvement of the curriculum; implementation of education; and handling of measurement tools for university and state exams. The institutional quality management system also measures and analyses the satisfaction of stakeholders, including the evaluation of the teaching process, internal audits; collects and measures the quality costs, includes self evaluation, measures the processes of the quality management system and the outcomes of education processes, handles the non-conformities (students, staff members and curriculum) and evaluates this information. Finally, TCS declared that it would continuously improve its quality management system by means of a quality policy, quality goals, reviews by leaders, internal audits, satisfaction of stakeholders, data analysis, corrections, and preventive arrangements. It should be emphasised that the college almost comprehensively regulates the education processes in terms of the framework developed in Chapter 3. The only shortages seem to be the lack of regulating the students' learning environments, and using a quality information system as a support process.

The developed quality management system seems to be close to comprehensive, but it should be emphasised that it is only a policy on paper. As the findings showed, only some parts of the quality management system were working in practice. For example, quality goals seem to be quite comprehensive, but the system of quality goals was not working at all. According to quality leader, the main reasons for the slow implementation were as follows. The first reason is insufficient financial support. The quality management committee and quality management activities were not provided with appropriate financial resources, and they worked only on a voluntary input basis. The second reason is the uncertainty of the labour market. The demand for graduate students with church diplomas was decreasing, and "the students are here because of their hobby, not because of the demands of the labour market. It is hard to require anything from them" (quality leader, 2005). In addition, the institution felt uncertain about its situation because of the new higher education law, the new study programme structure (Bologna process), the structural reform of the college, and the governmental debate on the situation of church institutions. Finally, TCS was only supported by external consultants at the beginning of implementation. I now look at the parts of the quality management system that were actually in operation.

TCS began its quality management activities by measuring the demands and satisfaction of stakeholders, because other institutions (European, Hungarian) that were 'benchmarked' also started with this activity (interview with quality leader, 2005). The college measured the demands and satisfaction of students and staff members, and built these results into its quality management system. The questionnaires to measure the demands and satisfaction of other stakeholders

were developed as well, but the college did not have the money to use them. Furthermore, the quality leader (2005) emphasised that quality management helped inform the stakeholders about the institutional study programmes. Cooperation and contracts with universities concerning common study programmes and the study programmes of TCS are in the brochures and publications of these universities; taking the expectations of the labour market into account in developing study programmes; and organising open days, visiting secondary schools and developing posters and brochures of its study programmes. TCS consciously controls these channels for the sake of reaching potential students.

In addition, the institutional leaders developed, maintained, and improved internal audit processes to evaluate the weaknesses and strengths of the quality management system, its effectiveness and efficiency. TCS developed audit plans and requirements and aimed to fulfil internal audits twice a year. TCS chose auditors, and audits were made in such a way, that the objectivity of the audit processes could be assured. The audits would be controlled according to the procedure of '*ME*[65] *8/2. Audit processes'*. TCS planned to correct and improve the areas where the audits would find non-conformity. However, internal auditors have not been appointed yet, and internal audits have not been held at TCS.

Furthermore, concerning students' satisfaction, TCS developed an evaluation system in 2003. This system was two-dimensional, and aimed at capturing student feedback during different stages of their study. The evaluation system rests on two pillars: students' evaluation of teachers and curriculum, and the opinion of alumni.

Evaluation by students provided information concerning teachers and education processes. Teaching evaluation based on the student feedback programme was introduced throughout the whole institution in 2003, aimed at continuously improving the quality of course delivery by measuring teachers' performance. This questionnaire was intended as a part of the institutional quality management system to improve the quality of teaching. TCS asked students to comment on the teaching performance of an individual lecturer, and stress their overall satisfaction. They developed a 'long-list' of 74 questions (52 for overall satisfaction, and 22 for teachers' performance and teaching quality). The QAG selected from the questions concerning overall satisfaction, depending on interests of the teachers. Students were asked to stress their overall satisfaction through about 20 questions, and evaluate the teaching quality through the 22 questions, once per year (before the beginning of the spring semester).

The first part of the questionnaire, comprising about 20 questions per year (the same for all courses in a particular year), was designed to measure the overall satisfaction of students. It included questions concerning study programmes and curriculum, lecturers and seminar leaders, examinations, teaching tools, library

[65] ME: quality procedure

service, the Student Council, and other programmes (sport, etc.). The second part of the questionnaire, comprising 22 questions, assessed the levels of teaching quality along the dimensions of the importance of curriculum, the state-of-the-art level of the curriculum, the methods of examination, the objectiveness of evaluation, lecture notes, teachers' connection with students, the commitment of teachers, and the overall picture of academics. The questionnaires filled out were sent to a quality working group, which analysed and evaluated them. The results were forwarded to institutional leaders, and they decided on the following steps. The quality leader stated (2005) that the response rate was more than 50% in 2004, and though some problems (e.g., with the infrastructure and particular courses) were discovered through the questionnaire, they were subsequently resolved.

In addition, TCS developed a questionnaire concerning the performance of its staff members. This measurement started in 2004, and evaluated the following areas: individual work, departmental work, institutional work of individual academics and their networks with other institutions. The academics can summarise the results, and TCS planned to organise a meeting to discuss the problems emerging from the questionnaire. The quality leader (2005) mentioned that the main goal of this evaluation has been toned down: academics should be provided with information on their performance, and they could compare and develop their performance individually.

The requirements of a quality manual were fulfilled only in these fields. The measuring of demands and satisfaction of other stakeholders and quality costs, assuring the appropriate resources for quality management, and motivating people was not operating in these fields at TCS. Thus, a general impression of the institutional quality management system is that it is an almost comprehensively planned and developed quality management system but only some narrow, though important parts of it, are working in practice.

Decision-making process

The college leaders decided to implement a quality management system in 2002. One of the main reasons behind this decision was to make the college compatible with other European and Hungarian higher education institutions (interview with quality leader, 2005). Furthermore, the institution felt uncertain about its situation because of the delay of the new higher education law, the new study programme structure (Bologna process), the structural reform of the college, and the governmental debate on the situation of church institutions. Confronted with this uncertain situation, TCS's actions were slow. The leaders of TCS and the Theological College of Veszprém initiated cooperation among the three theological colleges, and applied for governmental support for setting up a common quality management system specifically for theological higher education institutions. The QAG with the quality management committees of the two other colleges, together with an external consultant, developed the quality manual in 2003.

The decision to implement a quality management system was made by leaders in 2002, but the details of the implementation were delegated to the QAG, working closely with the College Council. The QAG and its working regulations by law should have been established first, because there were no procedures to implement quality management at TCS. The development of working rules was achieved by institutional habit, so the members of the QAG worked out the rules in 2003. Then the College Council accepted them, with some small adjustments. According to its working regulations, the quality leader annually writes a report to the College Council, and regulations let him report directly to director-general. The quality management activities however, occurred mainly according to the old routines and habits. For example, the main annual work concerning quality management—that is, working in practice—is coordinating and evaluating questionnaires. The quality leader invited the members of the QAG to do this work. Therefore, a quality working group forms each February, and evaluates the questionnaires. After finishing this work they disperse, and during the rest of the year they worked according to their old routines.

An understanding of why with this pace of the present quality management system and procedures emerged at TCS requires careful attention to the concurrent political process by which the implementation of quality management took place. Some bargaining games determined the pace of the implementation process. First, the college wanted to make its system transparent through quality management, but "…some academics did not want to let others see into their own, private business" (interview with quality leader, 2005). In addition, others – mainly church academics—opposed the implementation of quality management because it neither fit the culture of theological education, nor their academic autonomy (interview with quality leader, 2005). As the quality leader said, this did not cause problems for non-church academics. The older academics also discouraged quality management implementation because "…the college could operate for ages without it" (interview with quality leader, 2005). In addition, the interviewee highlighted that the private career (doing research) was more important for all academics than quality management, and in the case of additional work needed for the QAG, he could not find volunteers to help him. The quality leader emphasised that without these issues the quality management implementation could have occurred quicker.

The timing of starting the quality management activity was also a bit of a product of pulling and hauling within the College Council when it decided on strategic goals. The college had to decide on whether "…it would operate as a college or as Christian" (interview with quality leader, 2005). It took time because about one third of college members supported the 'Christian' direction, and they had some power. Thus, it made the decision slower, but finally the college decided on operation more as a college than as 'Christian'. TCS then introduced non-church study programmes, because the market demand concerning theologians decreased. The starting point of the quality management activity was

thus influenced by ongoing policy debate inside the college. I must emphasise that although the research did not lead me to more details, the quality leader estimated that a meaningful part of decisions concerning quality management occurred in a political way.

Consequently, decisions concerning quality management implementation occurred according to the developed standard operating procedures and old routines. Political elements of the decision-making process also hindered both the starting point of quality management and the quality management implementation process.

Conclusions

The picture emerging of TCS was that of an old church college offering university and college level study programmes in theology, religious knowledge, and ethics. The disciplinary balance was completely on soft and divergent fields. The amalgamation of the institutions after 2000 affected TCS only marginally. TCS, in the dimension of complexity, can be characterised as a simple institution because it had only one building and five departments, and offered study programmes at only two levels. For a church college however, TCS depends heavily on the government. The governmental support was more than 95% of the overall institutional income in 2004.

TCS started to implement a quality management mechanism after political initiatives on the national level. Although highly dependent on the government, it considered the governmental Protocol only as complementary to the ISO 9004 standard in developing its quality management system. As the evidence showed, the main reason was that the external consultant who supported the quality management implementation process in TCS did not find the Protocol appropriate. Instead of the Protocol, the quality management system of TCS was mainly developed and suggested by an external consultant, derived from the principles of the ISO 9004 standard, and focused only on the education function. The findings also showed that TCS had an almost comprehensively planned and developed quality management system. However, only some narrow parts of it were working in practice, such as measuring the satisfaction of students and the performance of staff members. The institutional quality management system seems to be more symbolic than genuine. Other evidence also pointed in that direction. For example, quality documents emphasised the improvement of the quality management system instead of the quality of education. It seems strange to keep improving a quality management system as a goal in itself, though of course if it serves its original goal (improving the quality of education), it should be improved continuously. Second, it seems strange that the quality leader emphasised that the main institutional quality management result was the controlling of the input channels for the sake of reaching potential students, which is, after all, marketing. Finally, the college developed a quasi-expensive

questionnaire for measuring the satisfaction of the owner, who was actually one person.

The study also illustrated the reasons why the particular quality management implementation emerged. The first important reason was that the external consultant only supported the quality management implementation at the beginning. The expert conducted training in the field of quality management basics for institutional members, and helped develop the quality manual. He did not help in the later implementation process. The second crucial reason was the low commitment of leaders. For example, the leaders only expressed their commitment concerning quality management implementation in the quality manual (on paper) but did not provide sufficient resources for quality management implementation beyond student surveys and the teachers' performance questionnaire. As the findings indicated, these two factors remarkably influenced the low adequacy of quality management implementation, and also its slow pace (slow because TCS started quality management activities in 2002, the quality policy and quality manual were developed in 2003, but only some parts of quality management system were implemented at the beginning of 2005).

The study also indicated some other factors that made the pace of quality management implementation slow. First, the quality leader emphasised that TCS felt uncertain about its situation because of the structural reform of the college and the governmental debate on the situation of church institutions. In addition, he stated that academics from the area of theology hardly understood the usefulness of quality management, and this reduced the pace of quality management implementation. The evidence also illustrated that quality management implementation should not be interpreted as a smooth process without conflicts and bargaining events. The starting point of the quality management activities was influenced by the ongoing policy debate inside the college. Furthermore, the college wanted to make its system transparent through quality management, but some academics hindered this because they did not want to let others see into their private business. In other words, bargaining events seem to delay both the time of starting the quality management implementation, and the pace of the implementation process. As the evidence showed, the decision-making processes on quality management implementation mainly followed the old routines and habits, and staff members rarely deviated from them. This also contributes to the slow quality management implementation, because the old routines did not include procedures for quality management.

Overall, the general picture that emerged of the quality management implementation in TSC is that of an almost comprehensively developed system, but an only symbolically implemented process. The main reasons were the low commitment of leaders, and only initial implementation process support by external consultants. Other reasons, such as the bureaucratic and political features

of the decision-making process and the theological background of academics, also delayed the pace of quality management implementation. Another remarkable feature appears to be that actors in TCS had an incomplete idea of what quality management was about, and how it could be used effectively and efficiently in TCS's peculiar context.

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Appendix I/d: University of Miskolc (UM)

History and institutional characteristics

The institution that today is the University of Miskolc (UM) was established in 1949. Owing to the previously existing faculties of mining and metallurgy, UM at the centre of the north-eastern industrial zone of Hungary had a two-and-a-half-century-long history. In 1735, the Court Chamber of Vienna founded a school of mining and metallurgy to train specialists according to the requirements of the burgeoning industrial revolution, and upgrade precious metal and copper mining in Hungary. In the Hapsburg Empire, the school of Selmecbánya was the first school founded by the state operating under non-ecclesiastical control, and the first technical 'college' in the world. In 1867, with the Austro-Hungarian Compromise, the academy became a Hungarian state institution, named the Hungarian Royal Academy of Mining and Forestry. From 1904, it operated as a College of Mining and Forestry, with teaching in four study programmes: mining engineering, non-ferrous and ferrous metallurgical engineering, and forestry engineering.

The departments of mining and metallurgy operated in this organisation until 1949, when they became faculties of the Technical University for Heavy Industry in Miskolc. In 1969, the scope of the university increased with the creation of the College for Metallurgy in Dunaújváros, and in 1970 with the College for Chemical Industry and Automation. Thus until that time UM had a relatively strong profile with regard to heavy industrial engineering.

Compared to the previous activities, some new subjects were added during the next decades. In 1981, the training of lawyers began, and this became the Faculty of Law in 1983. The training of economists—that has been going on since 1987—transformed into an independent faculty in 1990. The university got its current name in the same year. Thus, in addition to the technical faculties, the social sciences became established at the university in the past two decades. Today the university can boast of three technical faculties (*Faculty of Earth Science and Engineering, Faculty of Materials and Metallurgical Engineering and Faculty of Mechanical Engineering*) and three faculties for the humanities (the *Faculty of Law,* the *Faculty of Economics and* the *Faculty of Arts*). With the establishment of the new faculties, the aim of Miskolc University was to:

> *…broaden the scope of training in as many fields as possible (its main ambition is developing a unique university in Hungary) by providing students with various new courses. The other main goals of the university are to continue its research with an international reputation and prepare students for the requirements and needs of a new era, which seems to be inevitable and crucially important in meeting*

> *high academic standards, as well as in catching up with Europe and the latest scientific achievements of the world (www.uni-miskolc.hu; 05.02.2005).*

These point out is that UM "…has always been committed to the spirit of permanent renewal, which has led organically to the ever-expanding university of the present day" (www.uni-miskolc.hu; 05.02.2005). In the last decade, UM has further expanded its number of students, the number of study programmes, and the number of subjects taught. This is also related to UM's merging with other education institutions. As one interviewee (2005) mentioned however, UM was in a special situation because it integrated and expanded mainly within itself. However, some three-year colleges also play a significant role with regard to the teaching palette. One of them is the *Comenius Teacher Training College in Sárospatak* – 90 km from Miskolc, which has become its partner as a result of the national integration of universities. The other is the *Bartók Béla Music School,* where the academic level training of music teachers is carried out. The School operates within the framework of an institute of UM. A new specialisation is represented by the college-level training of nurses, for which the University of Debrecen has provided academic support. However, the university hopes that from the academic year 2005/2006 the training will be run by its independent *College of Health-Care Studies*. UM also has a research unit, the Research Institute of Applied Chemistry, a major centre of both research and education. There are three types of research activities: basic, applied, and research for development. In 2000, the college faculty in Dunaújváros split from UM.

Together these units provide various professional and vocational educations, next to traditional university-like studies. The institution offers courses in more than 100 study programmes, at four levels (VT, BSc MSc, PhD). UM is a large educational institution by Hungarian standards, with more than 13,000 students and a staff of more than 1000, occupying various academic and administrative locations. Table 9.1 summarises the total number of students and academics at different faculties.

The balance of UM is toward soft and divergent sciences. As a state university, UM receives state funding. In 2004 the governmental support was about 6.8 billion HUF, and the own income was about 2.74 billion HUF. Thus UM is fairly dependent (around 71%) on the government.

To enhance the educational environment but also the institutional reputation, the UM improves the following areas. The development of the educational infrastructure is financed by a grant of nearly 7 billion HUF from the Hungarian governmental fund for the development of higher education. Out of this, 1.2-1.3 billion HUF is already being used for the modernisation of information technology. Because of the programme, new lecture halls, a library, as well as some 10-15 computing and technical-research laboratories are planned. Nearly all the lecture halls and seminar rooms will be modernised and refurbished. For the improvement of the living conditions within the campus, a programme involving 7-10 billion HUF of private investment has been prepared under the title

"Building the university of the 21st century together". In the next few years, within the framework of the programme, a conference hotel, residences for students and lecturers, a recreational centre, swimming pool, and ice rink will be built, along with a shopping centre and restaurants. The general impression of UM over the last two decades is that of directing efforts towards breadth, with the establishment of more faculties and institutes, and improving the infrastructure of the educational environment. The sections to follow review the quality management implementation at UM.

Table 9.1: Number of students and academics at faculties in 2004.

Name of faculty	Student number (persons)	Number of qualified academics[66]	Total number of academics
Faculty of Earth Sciences and Engineering	776	37	54
Faculty of Materials and Metallurgical Engineering	444	28	43
Faculty of Mechanical Engineering	3414	107	186
Faculty of Law	2714	28	67
Faculty of Economics	2124	27	69
Faculty of Arts	2139	61	136
Comenius Teacher Training College in Sárospatak	1035	27	44
Bartók Béla Music School	260	9	15
Institute of Health-Care Studies	255	7	12
Total	*13,161*	*331*	*626*

Findings of quality management implementation

Responding to market[67] and the governmental expectations concerning quality management the university decided to implement quality management mechanisms in 2000. Quality management committees and workgroups were also established to organise and guide these issues. The university defined clear expectations concerning the Institutional Quality Assurance and Evaluation Committee (IQAEC) and the Quality Management Office (QMO) in the operation rules of the units. The IQAEC takes responsibility mainly for planning and checking the institutional quality management activities, and QMO does the daily work.

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66 Including docents and professors, excluding associates and assistants.

67 The research units are closely connected with the market, thus ISO 9001 certification may provide an advantage in tenders and projects.

In 2000, the UM developed its quality policy and quality manual as a framework co-ordinating the institutional quality management implementation. The university decided to establish a quality management system according to the ISO 9004 standard, because it provides a system and focuses on the institutional stakeholders as well (interviewee, 2005). Furthermore, two units (the Chemical Research Institute and the Postgraduate Institute) will be certified according to the ISO 9001 standard in 2005, because of market demands.

An external quality consultant group provides auditor training programmes for about 30 staff members, and they receive an official auditors' certificate at the end of the training. An external consultancy firm provides further training in the field of quality management basics for about 100 university members, as well as leader training. UM decided that further implementation would be provided and co-ordinated only by internal academics. The university also applied for governmental support for setting up a quality management system, and obtained financial resources for these activities.

The university worked out an evaluation system of teaching quality, using the experiences of students, concerning academics and the curriculum. Further surveys of alumni satisfaction are planned from summer 2005 to measure the usefulness of the curriculum and the performance of academics and the university. In addition, a quality mailbox exists for opinions, remarks, suggestions, and questions on different issues concerning quality management. The university decided to use the ISO 9001/9004 standards so the processes run automatically at the university. Because of the coordination of a large number of staff and faculties, UM worked many rules and procedures and will operate according to them. They only want to intervene with the system if necessary (interviewee, 2005). The study now looks in detail at the quality management implementation.

Quality management implementation process

Implementing any kind of quality management system, in most cases requires extensive change and development. There are many different possibilities to implement and manage such a mechanism. UM wanted to change its management system because of its increased faculty numbers; the new system should fulfil the expectations of quality management as well. In 2000, UM developed a five-year quality management conception that takes into account the expectations of the Higher Education Act and the concept of better institutional functioning. Each faculty accepted the importance of a quality management system in 2000, but the details of the new system were under discussion. The remainder of this study will introduce these details.

The commitment of institutional leaders is clearly stated in the quality manual. First, the tasks of quality management are assigned to the general vice-rector, responsible for quality management implementation. The institutional mission, quality policy, and the main requirements concerning quality management are

also elaborated, and one informant emphasised (2005) that their introduction to the new staff members and to students as well is obligatory, and a part of the recruitment and registration process. UM expects its academics and students to adhere to these directives, and to the continuous improvement of quality. Among the further indicators of the commitment were the establishment of the quality management office, responsible for the operative tasks of quality management. The institutional and faculty Quality Evaluation Committees, quality manuals, and institutional procedures and processes (based on the expectations of ISO 9001 standard) were also planned to be developed. In 2002 UM applied for governmental support directly for quality management. It obtained 2 million HUF for training and improving the infrastructure. The leader of the quality management office stated, however, that the university could hardly find tenders concerning quality management implementation in higher education. The evidence also showed that UM only provided the basic conditions for implementing quality management system, and, as one informant (2005) emphasised, the quality issue was not at the top of the institutional priorities. Similarly, as the leader of the Quality Management Office (2005) mentioned "…the budget for quality activities is not so high, comprising mainly of managing costs".

As a central policy of institutional functioning, the institutional mission statement was developed in 2000. The UM sees itself becoming the regional academic centre of the socio-economic development of the North East of Hungary. This is an urgent matter for the immediate future after the Hungarian accession to the European Union. The role of the university then is going to be that of an intellectual-academic bridge between the East and the West. Its mission is determined through the expectation of the speed and direction of scientific development; international higher education trends; international, national, and regional society; and the institutional position in international and Hungarian higher education area. The mission declaration also included that UM wants to develop and maintain a uniform, state-of-the-art education-research institution. It aims to send out well-educated students and develop the curriculum and structure of education continuously, taking into account European higher education trends, new scientific results, and new scientific areas. UM also wants to develop and update post-graduate and vocational training courses responding to the demands of new (inter and multi) disciplines and societal and professional expectations, to foster international and Hungarian cultural values, to tolerate cultural differences, and accept the principle of societal solidarity. Finally, it wants to explore and utilise the institutional possibilities resulting from its geographical position and utilise all kinds of resources on behalf of fulfilling the institutional goals (Quality Manual, 2000, p. 3). Consequently, the mission statement seems to be comprehensive, emphasising the important geographic role of UM broadly in educational and research fields. The mission was also

elaborated into strategic goals, and the main endeavours emanating from the mission contain the expectations of the quality policy.

The university developed a quality policy in 2000 as a starting point and basic directive of the quality management system. It identifies the following items as essential to the institutional mission. First, the university declared it would establish and operate a quality management system to assure the quality of its education, research, and service activities continuously. They emphasised at the same time that quality costs in the education cost of marketable graduated students would not be significantly increased. Second, an independent institute would certify the institutional quality management system, as the UM strives to obtain qualified supplier acknowledgement concerning its research and service activities. To achieve these goals, UM assures the high quality of education materials and the material needs of education processes. In addition, the school established committees responsible for quality. They are independent organs, and the leading committee (IQAEC, see below) is placed directly under the University Council. Its activity should be deployed to the level of organisational units to assure the expected quality. Two considerations are important concerning the institutional quality policy. First, during the site visit I found that only two units (the Chemical Research Institute and the Postgraduate Institute) would be certified. Second, the scope of the quality management system concentrates only on the education (received questionnaire, 2004) and partially on service processes, though the stated quality policy contains all core processes. The Chemical Research Institute however, will be certified, but that means a quality management system of one unit, not the quality management system of the institutional research activities. Now I turn to address the role of quality committees in quality management implementation.

The University Council accepted the institutional quality manual in 2000, and then developed the particular quality organisations. The Institutional Quality Assurance and Evaluation Committee (IQAEC) was established in 2002. The leader of the committee is always the actual or current general vice-rector, first appointed in 2004, and its members are the leaders of Faculty (independent organisations) Quality Assurance and Evaluation Committees, academics and institutional and external experts; all of them working here part time. The total membership of the committee is twenty. The appointment of a quality leader seems slow, because the quality framework was already declared in 2000. The secretary of the committee is the leader of the Quality Management Office. The University Council fulfils the institutional supervision of IQAEC, and its work is supported by various workgroups. It has the tasks, among others, to develop and track the institutional quality policy, formulate the institutional quality management requirements, and determine and supervise quality management regulations and documents. Moreover, it supervises the Faculty Quality Assurance and Evaluation Committees, evaluates faculty and other organisational quality reports and develops institutional ones, to develop annual MAB reports and submit them to the University Council. Operationally, it does

quality reviews, establishes quality teams for solving particular problems, invites and appoints their members, and is responsible for operating the institutional quality management system (suitable for reaching institutional quality goals) and within it for determining tasks, spheres of authority, and responsibilities.

The UM also established the Faculty Quality Assurance and Evaluation Committees (FQAECs) in 2002. The leaders of the committees are the education vice-deans, and its members include quality management *rapporteurs* and people invited by deans, who are working part time as well. Their secretaries are the faculty quality management representatives. The deans fulfil the supervision of FQAECs, and various workgroups support their tasks. The total number of the committees' members is 92. Their tasks are the same in all units, and include formulating the faculty quality management requirements and checking its conformity, checking the operation of faculty quality management systems, preparing annual faculty MAB reports and faculty quality management regulations and submitting documents to Faculty Councils. They also do quality reviews at the faculty, establish quality teams for solving particular problems and inviting and appointing their members, and are responsible for operating the faculty quality management system and determining tasks, spheres of authority and responsibilities.

Faculty quality management representatives supervise and manage faculty quality management, check associated administrative documents, propose repairs or adjustments in case of non-conformity, prepare and execute evaluations of study programmes, report on faculty quality evaluation work, coordinate quality teams at the faculty and inform the faculty leaders in the event of deviation, and prepare the summative meeting of faculty leaders.

The UM also established the Quality Management Office (QMO) in 2002. It consists of the director, the quality management rapporteur, and the quality management administrator[68]. The leader of the office was appointed through application. The general vice-rector fulfils the task of supervision of the QMO. In general, it holds together and manages the institutional quality management tasks. The responsibilities of the leader of the QMO include, among others: managing the implementation and operation of the institutional quality management system and its regular review, overseeing the work of the secretary of the IQAEC, regularly reporting to the general vice-rector on the operation of the quality management system, participating in leaders' decisions concerning quality issues, co-ordinating the annual internal improvement programme and submitting it to the University Council, coordinating the preparation of the annual MAB reports, making suggestions for leaders' meetings, and establishing quality teams. The quality management rapporteur supports the leader of the QMO, coordinates some quality management tasks, develops quality management documents, and participates in the work of some quality

[68] The secretary is working as a full time administrator; the director is working part time.

management committees. The quality management administrator also supports the leader of the QMO, executes the QMO's administrative tasks, handles quality management documents, and conducts quality records. Finally, quality management workgroups can be established for diverse tasks. A jungle of rules has been developed and, as one informant (2005) stated, the participants have mainly worked according to them.

The QMO was also authorised to organise quality management training for staff members. The quality management training programme started with auditor training. The internal auditors received tools and mechanisms during a three day training course (3 times 8 hours) such as interview techniques and content of ISO 9001 and 9004 standards to help them to understand the audit processes. The audit team included academics and non-academics from different levels, who acted as auditors later. It consisted of 30 people who normally work as full time staff. After the training and successfully accomplished examination, they were provided with certification concerning internal system auditing in summer 2003. The auditors started to work with non-systematic affairs e.g., the working of information systems, because the quality management system is not matured for systematic audits (interviewee, 2005). Systematic audits are planned from 2005 or 2006.

About 100 members of the institution were then provided with basic information concerning quality management, quality management system development, and its operation. It also took 3 days (3 times 8 hours) in summer 2003. Finally, the leaders of UM participated in a one day 'leader' training course on quality management. The university then decided that it would continue the quality management work on its own (without external consultants), because it had appropriate academic staff for this work (interviewee, 2005). The leader of the QMO found the training useful and necessary, because the auditors obtained official auditor certificates, received with information on quality management, and the information came from outside of the university. It should be emphasised again however, that external consultants helped only at the beginning of the implementation.

UM also decided to implement the ISO 9004 standard at all faculties. The Chemical Research Institute and the Postgraduate Institute, having a direct network with the market, will be certified in 2005. I now address the main features of the quality management system.

Quality management system

The leaders of UM developed a conception of the quality management system in 2000, and established the first quality manual. The main reason was that concerning the external and internal demands, the university was expected to develop a uniform education-research higher education institution that can be continuously improved. The following aspects were taken into account concerning the institutional quality management system. First, it aims to help in

satisfying the demands of stakeholders (students, employers, society, etc.) and improve their satisfaction. The quality management system also wants to support the effective working of UM, the improvement of the quality of education, and give direction concerning the policy of development in the process of 'market driven' education. Thus, the goal of the quality management system is to direct the institutional working to where the controlled working and the correction and softening of shortcomings can be assured for improving the satisfaction of stakeholders in point of institutional activities. Finally, the institutional quality management system is determined by the expectations of laws, international standards concerning quality management (ISO 9001, 9004), the expectations and suggested basic aspect system of MAB, and the basic rules of the evaluation system of higher education institutions and the leaders of UM. The QMO (2005) did not find the Protocol appropriate for use as a comprehensive model for the university, because it is based mainly on the Comenius model[69]:

> *The Protocol does not contribute to better working. Its areas are cut to pieces and, they are not built to each other. Furthermore, the three parts of the Protocol cannot be broken down into the daily working processes as the Protocol suggests.*

One informant (2005) emphasised that the implementation of a quality management system at UM would be a long process realised in several steps. The first step included developing the framework and the basic working conditions of the institutional quality management system. It mainly includes the processes that MAB pointed out and that influence the quality of the fulfilment of educational tasks: regulation of the educational process; preparing diploma plans, diploma work and organising state exams; developing education schedules; correcting activities; eliciting the students' opinions; regulation of internal audits; preparing the annual institutional report; and preparing accreditation materials.

In this first step, UM also developed a two part institutional self-evaluation. The first part fulfils the requirements of MAB, and the second one complements this with the deans' evaluations. Deans should develop action programmes for the next year and should evaluate to what extent they reached the previous year's goals (a form of contract management). The latter part of the annual self-evaluation is sent only to the institutional leaders.

The second step of quality management implementation reviews the working processes based on quality management principles, and develops their documentation systems. The final step includes the tasks of making the quality management system operational and quality improvement. The university will develop a new quality manual, but UM is waiting for the new Hungarian Higher

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[69] Comenius quality management model was developed for elementary schools.

Education Act before preparing it; then it will continue with the last two steps. The leader of the QMO however, informed me that the new manual will probably contain a single quality management concept for the whole university and will be implemented at the demand of particular areas (faculties and other units). The QMO will be responsible for the institutional regulations that will include rules concerning everybody (e.g., information system including the electronic education system and the common economic information system); common rules (frameworks or algorithms) with different faculty or unit parameters (e.g., organising state exams); and faculty or unit specific rules. The planned structure of the regulation system contains rules along the following lines: working and operation rules, rules for education, rules for research and service, rules for student issues, rules for institutional economy, administrative rules, faculty specific rules, and other rules.

The new quality manual will be based on the ISO 9004 standard, but will contain appendixes based on ISO 9001, because the two above-mentioned units are going to be certified (interviewee, 2005). The institution decided on ISO standards because of the size of the organisation and the leaders wanted 'automatic' processes. The standard provides clear rules and assures transparency, and where it does not include expectations, the UM will complete it from other sources (e.g., institutional self-assessment). Furthermore, interviewees emphasised that UM wants to have effective and efficient education and working, and quality management is only a tool in this.

Four considerations are important concerning the institutional quality management system. First, UM focused mainly on the expectations of MAB in its first step of quality management implementation, and its quality management system does not yet include elements concerning such crucial areas like designing the teaching and learning processes, and the quality of implementation. A new quality management system concept will be developed only later. Second, the processes focused by UM contain the demands of MAB, a clear signal of its governmental orientation. Third, the UM expects the quality management system to regulate the institutional processes automatically, and in a bureaucratic way. Finally, the different aspect of the institutional quality management system from the other cases should be emphasised. As the leader of the QMO (2005) stated,

> *We will have a look at quality from the aspect of operating and the institution. The customers do not tell us the quality, they can only choose among the different possibilities. Quality management serves to decrease the risk in customers' decisions.*

Now I turn to a short description of the applied tools of measuring system. The university is interested in the opinion of students, which helps in further improvement. The students' satisfaction with their educational experience has been measured for years at UM. The student satisfaction evaluation is multi-dimensional, aimed at capturing student feedback in different stages of their

study. Focusing on student satisfaction not only enables UM to re-engineer its processes and procedures to adapt to student needs, but also allows it to develop a system for continuously monitoring how effectively it meets or exceeds student needs. Concerning the evaluation of students, the UM has a special viewpoint. The goal of the evaluation of students is not to measure the knowledge of students, but to show the results of their invested efforts. They can then decide whether this level is sufficient. The university focuses mainly on the academic dimension of a student's educational experience, stressing the following items: the evaluation of teachers and curriculum, satisfaction of recent graduates, and alumni surveys.

The first concerns the student's *evaluation of the quality of teaching practice and courses*. Teaching evaluation based on student feedback aims at continuously improving the quality of course delivery and measuring teachers' performance. The measurement of satisfaction is done through an aggregate (single-item) level of measurement, where the satisfaction is based on a cognitive process in which students compare their prior expectations of education with perceived education performance. This evaluation is now a common practice throughout the university. Faculties can decide on who (which teachers) will be asked (interviewee, 2005). A basic rule is that academics are asked if they finish their educational activities with a particular group. Students are asked to comment upon the teaching activities and the curriculum carried out by the lecturer within a particular course. Two questionnaires are used, including the opinion of teachers' activities and of the quality of the curriculum. The first questionnaire, comprising 17 questions, is designed to provide student feedback with respect to the thorough preparation of the teacher, harmony between the study programme content and the exam, the following of the advertised curriculum, delivery techniques and presentation skills, and overall satisfaction with the teacher. Finally, free faculty questions and student feedback are requested.

The second questionnaire, also comprising 17 questions, assesses levels of satisfaction along the lines of harmony between lecture and practice, the usefulness of the programme, the state-of-the-art level of the programme, harmony between teaching methods and the nature of the programme, and the objectiveness of evaluation. Finally, free faculty questions and student feedback are requested.

From the 17 questions, 14 are general and the last three can be changed according to the demands of the individual faculties. The questionnaires are administered by the teachers before the end of a particular semester. The questionnaires then are sent to the Student Council, and are evaluated. The results are forwarded to the faculty quality management committees, and discussed with the academics. However, the leader of the QMO found this data of questionable value. He criticised it for its relatively low response rate, and mainly its unreliable outputs. Furthermore, it is not clear what use is made of the outcome of these surveys. "Students can hardly realise any further consequences

of their opinions, and they would be distrustful" (leader of the QMO, 2005). As a response to this problem, the university developed a quality mailbox.

The university found it important that quality should be the issue of all of its members and students could hardly realise any further consequences of their opinions. Therefore, the university developed a quality mailbox for solving this shortcoming. Each member of staff and student can deliver their opinions, remarks, suggestions, and questions to the QMO and it will make arrangements in the issues. Nevertheless, until the beginning of 2005, as the leader of the QMO stated (2005), the QMO rarely got any remarks from students because of mistrust.

Since 2003, *alumni* have been asked about the possibility of being employees, and the market relevance of their knowledge and skills, at two faculties (Mechanical Engineering and Economics). These two faculties have traditionally organised a meeting for their students who graduated at the same time – the programme includes presentations in the morning, group meetings in the afternoon, and dinner in the evening. Since 2003 the faculties have put the questionnaire among the materials alumni students received, and asked their opinion about: what were the most helpful courses; what did they need more of; what was least beneficial; the number of their work places; the reputation of UM and its weakest and strongest points, among others. Results are useful, but only a few questionnaires are filled out and returned (interviewee, 2005).

Finally, the *recent graduates* will also to be asked their opinion of the complete educational process at the end of state exam from summer 2005. They will only get their diploma if they fill in the questionnaire. The questionnaire is under construction, but will concern the courses and the structure of study programmes. These show that the usage and the results of the satisfaction examinations are far from the expected ones.

The picture of the operating institutional quality management system that gradually appears is one of a quality management system functioning in its early stage, where the focus is still mainly on the governmental (MAB) expectations, and its scope focuses only on the education and a little on service processes. In the wake of this process, UM has given priority to the establishment of a formal quality management system; institutional routines and rules however, have not focused on some very important institutional processes. Thus, the current quality management system cannot be marked as developing, and is generally not operating comprehensively because e.g., it does not yet include elements concerning such crucial areas as designing the teaching and learning processes, and the quality of implementation. In addition, the meaningful part of quality policy works only symbolically, not genuinely in practice. For example, some elements of education and a part on service processes were working in practice, though the quality policy contains all of the core processes. The following section describes how the particular features of the institutional decision-making processes influenced the quality management implementation.

Decision-making process

Particular features of the institutional decision-making processes have also exerted influence on the quality management implementation shown in this section. First, the government did not develop a national education quality policy that higher education institutions could have used in the course of their quality management activities, and the Ministry of Education does not have a stable and well-developed long-term strategic plan. Confronting this uncertain situation where the appropriate governmental co-ordination was unclear, UM took slow action. After the governmental demands though, the University Council recognised that to devise and implement a quality management mechanism, it requires an appropriate quality management establishment at the university. However, as one informant (2005) stated:

> *…the university leaders found important the quality management, but it is 'only' one of the important issues. Quality is not ahead of other work, but the leaders are dealing with them.*

The decision to implement a quality management system was made by the University Council in 2000, but the details of the implementation were delegated to the established quality committees and workgroups at different faculties and units. Therefore, the details of quality management implementation had to be specified by the units responsible for their execution. Thus, quality management activities at the university are planned and implemented by specially created sub-units (IQAEC, FQAEC and QMO) working closely with the University Council. The decision and the establishment of quality units occurred in accordance with standard institutional rules and practice. These specially created quality committees and their various working rules should be established first, because there were no procedures to implement quality management at the university. The quality director writes reports according to procedures of the IQAEC and mails them to the University Council. Furthermore, the position of the leader of the QMO—a quality expert who manages the daily work—lets him report directly to quality leader. Moreover, the IQAEC worked and works almost literally according to its operational rules though committees' and workgroup's tendency to 'do what they know how to do' was sometimes reinforced by a lack of information about the activities of other quality groups, and of 'old' routines. As the leader of QMO (2005) emphasised:

> *It sometimes happened that committees or working groups did the same thing within different faculties because of their closed feature, rarely communicating, and with poorly developed co-ordination and rules.*

Thus, the information did not pass from the tentacle to the top of the institution quickly, or even not at all. According to interviewees, this was one cause of working slowly in the implementation of the quality management system.

One informant (2005) emphasised that "quality management mechanisms could help in taking order in daily work and transparency". Coordinating a large number of staff and units of UM (seven faculties, two institutes and number of administrative units) can only function according to well-established standard procedures. After integration, the university started to work out these common working rules, based on the principles of quality management. The university decided on ISO 9001/9004 standards so the processes would be automatic at university. UM only wants to intervene when problems surface. The university worked out many rules and procedures (mentioned in previous sections), and is going to operate according to them. As one interviewee (2005) stated, the quality management implementation was mainly conducted according to the developed rules.

Finally, the leader of the QMO (2005) mentioned that maybe sometimes individual stakes tried to hinder the implementation process, but official information was not provided. These findings claim that quality management implementation mainly occurred according to bureaucratic rules and procedures.

Conclusions

UM was a complex university: it had seven faculties and two institutes, offered courses at four levels of education (VT, BSc MSc, PhD) and in more than 100 study programmes. However, it had only one faculty away from the centre. The merger process in Hungary at the beginning of the 2000s seems to have left the organisational structure of UM unaffected. UM had a special situation, because it integrated and expanded mainly within itself. Only one faculty—the Comenius Teacher Training College in Sárospatak—had joined UM as a result of the national integration of universities. Looking at the study programmes offered by UM, the disciplinary balance was more toward soft or divergent fields, such as law, economics, the arts, and teacher training. As a state university, UM was indeed relatively heavily dependent on the government because around 71% of its overall annual income was publicly financed in 2004.

UM started to implement a quality management mechanism after the governmental expectations were published. However, the uncertain situation where the appropriate governmental co-ordination was unclear hindered the pace of quality management implementation. Even though a relatively government-dependent institution, they did not take the governmental Protocol into account in developing its quality management system because, as the leader of the QMO emphasised, the Protocol did not contribute to improved operations, and its parts were not compatible. Thus instead of the Protocol, the quality management system at UM, which was mainly developed by internal academics, was derived from the principles of ISO standards (9001 and 9004). UM decided to

establish a quality management system according to the ISO 9004 standard, but two units (the Chemical Research Institute and the Postgraduate Institute) would be certified according to the ISO 9001 standard because the market expected it. The scope of the quality management system focused only on the education processes and a little on support processes, though the quality policy contained all of the core institutional functions. At the beginning of quality management implementation, external consultants conducted training for institutional members, such as auditor training, quality management basics, quality management system development training, and training for leaders. Then, however, UM decided to follow the quality management implementation without external consultants. Thus, internal academics have already developed the quality manual and the quality management system. It should be emphasised that the current quality management system can be seen as inadequate, because it neither addressed the design of teaching and learning processes and quality of implementation, nor carried out the meaningful part of quality policy work genuinely in practice. Furthermore, the quality management implementation process seemed to be slow, considering that the quality policy and quality manual were developed in 2000, the quality leader was appointed in 2004, and UM has not implemented a quality management system yet.

The study also illustrated further reasons for the slow quality management implementation, such as the low level of commitment of the leaders. For example, the leaders of UM expressed their commitment concerning quality management implementation, mainly in the quality manual (on paper) but they only provided the basic conditions for implementing a quality management system, and the quality issue was not at the top of the institutional priorities. As one interviewee stated, the budget of quality activities was not high and mainly included managing costs. If it was necessary, however, the institution provided it.

In addition, quality management committees worked out their operational rules, and the members of the committees followed them. One interviewee emphasised that a complex university could only function according to well-established standard procedures. As the findings showed, the quality management implementation mainly occurred according to the developed rules and procedures. Furthermore, I have found some signs of a political decision-making process, but official information was not provided.

Overall, the quality management implementation seemed to be slow, less adequate, and had a narrow scope. As the findings showed, the less committed leadership, lack of external consultants, the complexity of UM, the disciplinary balance more toward soft or divergent fields, and the bureaucratic feature of the decision-making processes have together added up to this result. Finally, UM differs from other higher education institutions in that it defines its own special concept for students' evaluation. The goal of evaluating students was not to measure students' knowledge but to show them the results of their invested efforts. Students can then decide whether this level sufficed or not.

Literature

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Appendix I/e: University of Pécs (UP)

History and institutional characteristics

In 1367, King Louis the Great founded the first Hungarian university in Pécs, opened at approximately the same time as the other famous, still existing Central European universities in Prague, Cracow, and Vienna. The intellectual basis for the establishment of the university was provided by the hundreds of Hungarian graduates who had finished their studies, mainly at Italian universities, and gave rectors and famous professors to the two most famous Italian universities - Bologna and Padua.

In the 15th century, its place had been taken by two separate colleges, one for divinity and one for law studies. In 1833 bishop Ignác Szepesy, cooperating with the town council, established the Academy of Pécs with two faculties (law and arts). In 1921, an Act of Hungarian Parliament also transferred the Erzsébet University of Pozsony (Bratislava) to Pécs. In the period between 1923 and World War II, the university proved to be a dynamic and outstanding spiritual workshop, offering courses in humanities, law, medicine, and theology.

The war, (during which the Faculty of Arts was transferred to Kolozsvár in 1941) and the political pressure suffered in the decades that followed, greatly reduced the possibilities open to the university. After 1951, when the Medical School became an independent institution, the university subsisted with only one faculty for law studies. In 1975 the Faculty of Economics, opened here as the Pécs Faculty of Karl Marx University of Economics, itself started in Budapest in 1970, was established. The Teacher Training College of Pécs merged with the University in 1982 and, in the same year, the university assumed the name of Janus Pannonius.

The Training College of the University for Health Workers opened in 1990, offering four kinds of careers to students: dieticians, physiotherapists, district nurses, and social workers. The College became a Faculty of Health Sciences in 1998. In 1992, after significant structural changes, the Teacher Training Faculty was divided into a Faculty of Humanities and a Faculty of Sciences, increasing the number of faculties to four. The fifth faculty was added in 1995, when Pollack Mihály Technical College was integrated into the university. The Faculty of Visual Arts and Music followed, established January 1, 1996.

In 2000, because of the merger policy in the chapter on Hungarian higher education system, the government forced all of the institutions of higher education in the area of Pécs to form a single University of Pécs. The integration process finished in January 2000 with the merger of Janus Pannonius University, the University Medical School, and Illyés Gyula College of Education (Szekszárd, 62 km from Pécs), leading to the establishment of the present University of Pécs. This now is one of the largest higher education institutions in Hungary, with the widest range of academic programmes (more than 350 study programmes) and

research projects. The present number of student is around 30,000, with about 2,000 academics.

With its nine faculties—Faculty of Law, Medical School, Faculty of Humanities, Faculty of Health Sciences, Illyés Gyula Faculty of Education, Faculty of Business and Economics, Pollack Mihály Faculty of Engineering, Faculty of Sciences, Faculty of Music and Visual Arts—and 24 clinics[70] (within the Medical School) the university offers a broad range of training and degree programmes that

> *…are aimed at training well-qualified experts with a wide intellectual horizon, ranging from higher education professional training programmes – with special regard to the high-level training of physicians – to undergraduate, postgraduate, and doctoral degree programmes* (www.pte.hu; 08.03.2005).

Table 9.2 summarises the total number of students and academics at different faculties. UP offers a unique range of alternatives to those wishing to pursue their studies in higher education.

Table 9.2: The number of students and academics at faculties in 2004.

Name of faculty	Student number (person)	Number of qualified academics[71]	Total number of academics
Faculty of Law	4322	30	81
Faculty of Humanities	4845	94	231
Medical School	1237	159	614
Faculty of Health Sciences	3549	32	149
Illyés Gyula Faculty of Education	1600	19	48
Faculty of Business and Economics	2166	42	83
Pollack Mihály Faculty of Engineering	4401	64	149
Faculty of Sciences	2075	75	155
Faculty of Music and Visual Arts	497	22	45
Institute of adult teaching and HR	3761	9	35
Total numbers	*28,453*	*546*	*1590*

As a state university, UP receives state funding. In 2004, governmental support was around 39%, the outside income was about 40%, and the university income was about 21% of the overall institutional income; it is fair to claim that UP is quite independent from the government. The sections to follow review the implementation and further development of the quality management system.

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70 Their main activities include diagnostics and therapy (healing).

71 Including docents and professors, excluding associates and assistants.

Findings of quality management implementation

Responding to the (unspecified) market expectations concerning quality management, UP established a quality improvement committee in 1997 to organise and teach quality management. The quality leader (2005) mentioned that concerning the quality management implementation, the main external demands are the following: governmental expectation, market demand (in case of some faculties the external partners asked the implementation of quality management system) and prestige. UP decided to introduce a quality management system organised within each faculty.

The faculties decided on establishing quality management teams who took care of and managed the implementation of quality management systems. The teams first identified their tasks to be accomplished and their executive programmes. The first quality management training courses were implemented and quality manuals and quality documentation systems were developed. In 2001, all faculties received a quality manual, and introduced their quality management system. During the implementation, the university did not develop any new rules and procedures; its 'old' ones would have been built into the quality management system. In 2004 two faculties and two clinics finished the implementation, and became ISO 9001 certified. Further units are going to be certified in 2005. As the quality leader mentioned (2005), "…in clinics, where the life of people is at stake, it is important that the names and their papers should not be mixed up".

The implementation was supported by consultants, but the group was not external from the institutional point of view. The university has a TQM centre that teaches quality management and implemented quality management systems in firms and higher education. The TQM centre provided the training, developed quality manuals, and helped with the implementation.

UP applied for external support to set up the quality management system, and received about 8 million HUF for these activities. The University Senate assured a further 2 million HUF for quality management. Workgroups developed quality management tools including a questionnaire concerning student satisfaction, recently graduated students, and staff and alumni satisfaction. The quality director (interviewed in 2005) emphasised however, that UP did not have enough money for using the latter two. The study now looks in detail at the quality management implementation.

Quality management implementation process

UP started the quality management implementation because the market expected it (interview with quality director, 2005). Further reasons are that

> *…according to Higher Education Act, each higher education institution has to develop and operate a quality management system from January 2002, and the autonomous institutions can choose its form. The MAB does not want to intervene, and it only asserts a right to report. In addition, it can be hard to assure the appropriate level of the obligatory annual self evaluation without the implementation of some kind of quality management system. It expects the assurance of the resources, the operation of critical processes from the point of view of education and research, corrections and preventive actions, the continuous review of the institution, and that faculty leaders should take responsibility (Bársony, et al., 2001).*

As a starting point of institutional quality management activities, the regional TQM centre was established in 1994 under the authority of the still independent Pollack Mihály College and Janus Pannonius University. Its main goal was to establish and improve the concept of TQM. Its main activities are: TQM education at university and college level, organising TQM seminars for leaders, supervising TQM implementations at firms, and organising the exchange of working methods of TQM introduction. Currently, its three members teach and implement not only the TQM, but also quality management philosophy based on ISO 9001 standards. Its role will appear in the next sections. After integration in 2000, the UP Senate decided to implement a quality management system according to the faculties in 2001. The remainder of this paper introduces this implementation focusing on general findings and results at the faculties[72].

Concerning the commitment of institutional leaders, quality management implementation got the basic subsidy, and rectors supported the process. As the quality leader stated (2005), "…the UP Senate assured the basic conditions and resources for quality work". He also emphasised that rector, vice-rectors, and deans participated in quality management training as well, showing their commitment to the quality management issue. To set up a quality management system, the university applied for governmental support and received two lots of 4 million HUF for these activities in 2001 and 2003. The UP Senate also supported the quality management improvement activities with a further 2 million HUF, which can be used for operating a faculty quality management system, and in some cases the cost of certification. The UP did not provide money for using the developed questionnaires (more details later), which weakens its commitment.

As a central guiding point of institutional working, the mission of UP was formulated by the UP Senate, which portrayed UP as an intellectual centre, showing strong influence,

- *whose roots go back to the first Hungarian University established in 1367,*

[72] I am not going to introduce the whole implementation processes at all the faculties, but address the common features of them, sometimes highlighting the important particular events, processes, and issues in terms of my thesis.

- *which can be found in the southern Transdanube region of Hungary and its range points beyond regional and national boundaries,*
- *that mediates the results of the highest level education, research, composition and medication and perceives and responds to the intellectual challenges of society,*
- *that functions as a real and virtual place for teaching and employing synergic minded experts, who are able to continuously renew,*
- *where the knowledge, tolerance, loyalty, relatedness, and the common power are considered as value,*
- *where the academics, the students, and other staff are linked for a lifetime (www.pte.hu; 08.03.2005).*

Thus "Pécs is cut out for disseminating the seeds of science" as stated in the foundation document of the university in 1367. The institution emphasised this, and highlighted its own role in the new millennium for fulfilling it. To achieve this, UP implemented a quality management system, and derived its quality policy according to the faculties as a framework to determine its quality goals. The quality policy identifies the following items[73] as essential to accomplish the faculty goals. First, the faculties establish and operate a quality management system to assure the stable and competitive quality of its education and research; continuous maintenance and improvement of its activities, services, and organisations; and the satisfaction of partners (students, graduated students, academics, and non-academics), laws, and the orders of authorities. They also want to develop a long-term network with their suppliers. A quality improvement committee (QIC) and faculty committees are to be established for implementing and operating a quality management system based on international standards, and expects that quality management should be the issue of each staff member. Concerning the institutional quality policy, two considerations are important. First, UP implemented quality management systems also focus on education, research, and service functions. Second, the quality management system emphasises the demands and satisfaction of stakeholders and the market in general, and is based on ISO 9001 standard.

The QIC implemented a quality management system that satisfies the expectations of the ISO 9001 standard, and it can be introduced in separate steps depending on the demands, intention, motivation, and ability of each faculty. For faculties, the scale spreads from the realisation and satisfaction of the demands of the most important partners to the possibility of international certification. Additional reasons to this standard were that

[73] A general framework of quality policies is addressed here, but faculty quality policies can contain more detailed and slightly different elements.

- *It is primarily a model of service organisations and a more up-to-date approach can be seen in the new model, instead of the previous constancy and safety function of the industry.*
- *It focuses on the expectations of stakeholders, the operating processes and their improvements, instead of the superfluous formalities that are inevitable in market-oriented higher education in terms of institutional survival. …*
- *It strives for efficiency and effectiveness.*
- *It can be introduced in stages, and is suitable for certifying, but it is not obligatory. …*
- *It is uniform up to a certain level, according to faculties, and it assures comparison.*
- *It can fit into the institutional administrative system (Bársony et al., 2001).*

The quality director did not find the Protocol appropriate for using as a comprehensive model for the university. As he (2005) mentioned:

> *The Protocol is unsuitable and humbug. If ISO systems are good enough all over the world, why not here? And ISO 9004:2000 contains many elements of TQM philosophy. ISO systems can be checked better, but TQM cannot.*

At the same time, he emphasised the role of MAB evaluating the existence of the requirements of particular study programmes at different higher education institutions.

The QIC was established to implement and operate a quality management system. It is a subcommittee of the UP Senate, and its eleven part time members include the leader of the committee (the quality director of UP), its secretary, and the faculty quality delegates. The quality director was originally appointed in 1997, and now performs the operative control of the quality management activity at UP, and plays an advisory role to the vice-rector who supervises this area. The QIC's members are appointed by the University Senate for terms of four years. The committee holds meetings according to its working order (four times per year), makes annual working plans, and reports annually to the University Senate that can accept them. The QIC is mainly responsible for expressing its opinion on institutional quality policy and all of the questions concerning quality improvements and non-conformities: following with attention the activities defined in faculty quality management documentation on the strength of the faculty documentation system; representing the university in questions of quality policy and improvements; co-operating with the MAB, the Ministry of Education, and other quality management organisations, university and faculty leaders on quality management issues. They also continuously evaluate the annual fulfilment of qualification requirements, the quality of institutional study programmes and the existence of human and material resources; summarise the results of education and research; and prepare an annual report about the

institutional quality improvement activities, including actions and suggestions to the University Senate.

Each faculty has its own QIC, comprising 3-5 members. Their leaders are the members of the institutional QIC. They report to Faculty Councils about their annual activities. Their leaders and members were appointed in 2002. The QIC is mainly a policy developer has an evaluative role, while faculty QICs perform operative issues.

Quality management system

I now address the implemented quality management system and some particular elements of the introduction. It provides a general picture on how it occurred at various faculties. Of course, there were differences at faculties, but the study aims to introduce the common features of quality management systems and their implementation, also addressing some particular matters.

I begin with the units decided on establishing quality management teams who take care of and manage the implementation of the quality management system. The teams included the leader and the quality leader of the units, two- or three-unit quality representatives, and the consultants. As I mentioned above, the consultants worked at the TQM centre of the university, so they were not externals from the UP point of view. The teams first identified their tasks and their executive programmes. Table 9.3 contains the activities and the planned number of working months[74] of quality management implementation.

Table 9.3: General phases of quality management implementation.

Working phase	**Working month**										
	1	2	3	4	5	6	7	8	9	10	11
1. Quality management training											
2. Developing quality manual											
3. Developing QMS documents											
4. Introduction of QMS											
5. Pre audit											
6. Certification process											

First phase: Quality management training courses

The quality management training programme provided basic information concerning quality management, quality management systems, quality management thinking, and the requirements of the ISO 9001 standard. The

[74] In case of different units there were smaller differences in the implementation process.

quality director emphasised the importance of these training courses where the participants came to know, understand, and learn the knowledge necessary for the implementation of a quality management system. Furthermore, he (2005) stated that

> *…they had to start the training with quality management basics, because this kind of preparedness of staff was still extremely incomplete in terms of highly qualified academic working places at the university or faculties.*

Then the internal auditors received tools and mechanisms during the training such as interview techniques, content of ISO 9001 standard, and the processes of institutional audit. The audit team included academics and non-academics from different levels who later acted as auditors. The responsible departments of each study programme delegated at least one person. The auditor team consists of around 100 people who successfully passed the examination and received auditor certificates[75]. The auditor training was organised and mainly provided by the members of TQM centre, who have the qualification of quality auditor and quality management system manager at their disposal. The training courses were mainly concentrated on practical applications. The auditors then evaluated the different faculties and study programmes of UP. They found many deviations, and took suggestions for correcting and improving them. The fulfilment of improving plans was evaluated and found to be appropriate (quality director, 2005). The self-evaluations and the actual quality goals of faculties and study programmes sent to MAB were already prepared and developed according to the results of their internal audits.

The leaders of UP also participated in a 20-hour training course on 'the tasks of leaders in quality management implementation' in 2001. Forty-five people participated in the training. It included, among others: basics of quality management systems, the structure of quality management systems, quality policy and quality strategy, identification of partners and their demands, measurable quality goals, self-evaluation, measuring satisfaction, correcting non-conformity, preventive actions, and the requirements of being certified. The members of faculty quality committees also participated in a 20-hour training course on 'the practical tasks and methods of quality improvement'. Forty-four people participated in a subsequent training. This course included, among others: improving quality management processes, problem solving techniques, team techniques, quality cycles, data collection, and process matrix. In addition, faculty quality leaders participated in training courses concerning the uniform interpretation of expectations and practicing of documentation and record treating. Furthermore, the UP provided 'introduction to quality management' training for all faculty members (academics, externals, and administrative staff). Finally, the members of the TQM centre are continuously in service for faculties at

[75] They can use this certificate on the market as well.

all phases of quality management implementation, operation, and improvement. It seems that institutional members received the appropriate quality management information for the quality management implementation and operation.

Second phase: developing the quality manual

In this phase, the university developed the basic document of quality management system the quality manual. UP decided to operate a uniform and documented quality management system according to the faculties[76]. Faculty quality leaders were responsible for maintaining and improving them. Each element of the quality management system is recorded as governing principles or procedures in a quality manual based on quality policy. The documentation system based on the ISO 9001 standard contains the quality policy, quality manual, obligatory procedures[77] including education and research, recording templates and forms. The quality manual that comprises less than 40 pages also suits the faculty governing documentation system, the working rules and their appendixes. UP did not develop any new procedures and rules.

Each faculty received its planned documentation system in 2001. The quality management system controls the following processes. First, it handles the documents and records of the quality management system. The quality manual contains the responsibility of faculty leaders (satisfaction, focusing on partners, quality policy, quality planning, setting up quality goals, identifying the spheres of authority, assuring internal communication, and the annual review of quality management system). The quality director stated (2005) that the responsibilities and the spheres of authorities are clear at all levels, but the internal communication caused lots of problems, namely getting the information in time to all particulars and collecting their observations on the decisions of leaders. The quality management system also manages the various resources (assuring, maintaining and developing of human resources, infrastructure, and working conditions). The selection and qualifying of external persons, institutes, and firms connected with education are handled here as well. These indicate that the quality management system controls the support processes comprehensively.

Concerning the education and research processes, the quality manual controls the following processes: recruitment of students, the planning and improving of the curriculum, education and research, acquisition, implementation of education and research, and handling of measuring tools. "The education processes are under control. The main work here was to collect the external and internal rules

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[76] The quality manual is uniform, but they contain faculty specifications (mainly infrastructural differences).

[77] The quality manuals also contain the six demanded documented procedures as the handling of documents and records, internal quality audits, handling of non-conformed services, correcting activities and preventive actions, and the least possible formulas.

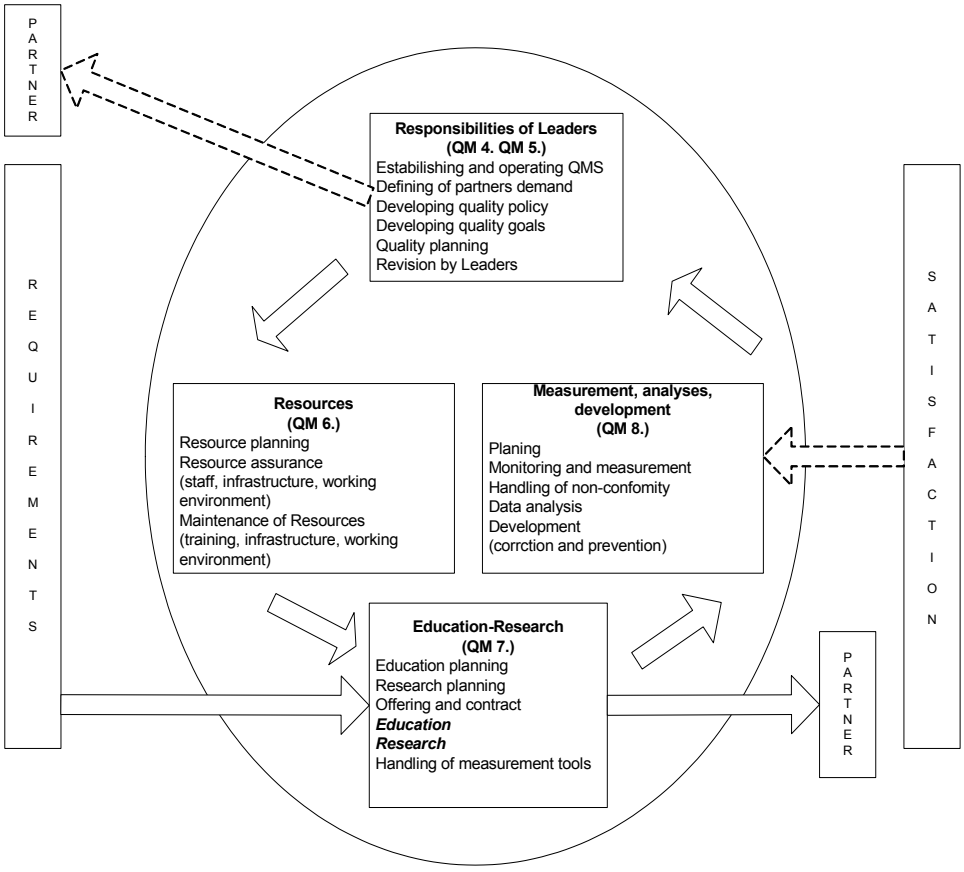
and orders, and assuring the institutional operation according to them" (quality director, 2005). It should be emphasised however, that the quality management system hardly controls the processes of designing teaching and learning methods, teaching materials, and the students' learning environment.

The quality management system also controls the processes of measurement and analysis. For instance, it measures the satisfaction of partners, including the evaluation of teaching processes, internal audits, keeps track of the processes of the quality management system, and opinions and evaluation of the presidents of state exam committees (in questionnaire form). Additionally, it includes self-evaluation of the institution and education processes based on the requirements of the Ministry of Education, input, throughput, and output control (including the evaluation of students' performance) and inspection of the education and research activities. UP uniformly controls the evaluation of measuring results, repairing failures and correcting and preventive arrangements, though they were handled according to the demands of faculties if necessary, (quality director, 2005). In addition, he emphasised the importance of the demands and satisfaction of partners as the minimum requirement of a well-run quality management system, stressing that the main partner is the student. He mentioned though, that this is not so popular among the academics. He also found it important to measure the demands of external and internal partners (students, academics, employers, etc.), transfer these results into measurable institutional goals, and implement them. However, the quality management system does not control the quality information system and the relation of examinations to education objectives. Finally, it contains correcting and preventive arrangements based on data analysis, including the improvement of study programmes.

Figure 9.2 addresses the processes of the quality management systems and their networks. This follows the basic logic of the ISO 9001 standard, beginning with the demands of customers, and measuring their satisfaction at the end of the process. It regulates the management processes, resources, some parts of education processes, the research processes and measurement, analyses, and development ones. Taking into account the quality management processes, the quality management system seems to be close to being a comprehensive one in terms of the framework developed in Chapter 3.

We now describe the important elements of the measuring system. First, the student satisfaction evaluation is two-dimensional, aimed at capturing student feedback in different stages of their study. The two elements are the evaluation of teachers and the curriculum, and recent graduates' opinions. Student evaluation provides rich information concerning teachers and education processes. Teaching evaluation based on the student feedback programme is a common practice throughout the UP. Students are asked to comment on the teaching activities and the curriculum carried out by the lecturer within a particular course.

Figure 9.2: Processes of the quality management system.



The questionnaire is designed to provide student feedback with respect to the content value and the interest of the course, the curriculum, the strengths and weaknesses of the course, the coherence of the course, the preparedness and consistency of the lecturer, the connection with students, and the strengths and weaknesses of the lecturer. The questionnaires are administered by the teachers at the end of semesters. A working committee also surveyed the documents available at different faculties, concerning the satisfaction of recent graduates. They realised that the faculties operate with this issue in different ways and elaboration. Then the committee finalised those areas where students would be asked. The questionnaire expects answers referring to the level and quality of education, infrastructural and technical background, faculty administration and reports, societal and cultural possibilities, and public activity. The committee

strived to get information on the students, including their intentions, workplace selection, long-term ideas beyond their opinion of the whole university, and faculty specialities at the end of the state exam. Nevertheless, it should also be emphasised that alumni satisfaction was not measured. UP developed a questionnaire for this; however, it did not have enough money to implement it.

In addition to students, UP measured the satisfaction of staff, but the response rate was low. It was commented that the questionnaire was long, very detailed, and questions are sometimes repeated; therefore, people did not take it up at all. The institution wanted to simplify it to get information about staff satisfaction. The main goal was that the 40 questions should be reduced, and the normal five-point scale should be used. An additional goal was to find a threshold value that can point out if somebody wants to resign and seek other employment. Factor analysis was used for solving the problem, and four factors were chosen as important signals of satisfaction: powerful professional unit, varied and valued work, security, and workplace climate. Based on this result, 18 questions were selected to assure the existence of the different areas. In addition, it can assure a threshold under which the exit of people can be expected. The quality director (2005) emphasised that questions concerning income must not be asked. He also highlighted that UP did not have enough money to use the developed questionnaire that might weaken the institutional commitment.

Finally, concerning the externals, UP asked the opinion of the presidents of the committee of state exams about the faculties and study programmes. The university is planning the fulfilment of continuous communication with employers that will concern the possibility of pursuit, the tools of demand measuring, and the methods of getting contacts. UP also uses a four-year further training plan concerning assistant professors and associate professors evaluating their education and research results. These illustrate that UP is using only some of the elements of the planned measuring system.

Quality management systems started to work at faculties in 2002. As the quality leader emphasised, the first stage quality management system was only suitable for operating the most needed quality functions as partner-focused working, internal audit, and self-evaluation. It is strange however, that the core education processes are not included among the most needed ones. The university set up quality improvement programmes for developing the system and satisfying the expectations of stakeholders and faculties. The TQM centre developed a guide for using quality manuals for faculties. The quality management guide interprets the tasks related to the expectations formulated in the quality manual through examples (including the expectations of the ISO 9004 standard) and outlines quality improvement techniques. The guide was developed and delivered to faculties in 2002.

Third phase: developing quality management system documents

This phase developed the documents of the quality management system. The quality management procedures (process descriptions), working orders, and documents constitute the documentation background of the quality management system. In the course of developing these documents, the institution prepared document templates, selected internal participants for preparing documents, corrected and finalised the documents, prepared their final version, and had them approved by faculty councils.

Fourth phase: Introduction of the quality management system

This phase introduced the quality management system. The main tasks were the following: the introduction schedule was exacted and accepted concerning the content of documents, informing and preparing staff members, giving out documents and test working; training people for internal audit; internal audit; fulfilment of corrections; and giving out the documents corrected and starting with the operation. The evaluation of the working system and the identification of necessary corrections were fulfilled by the internal auditors, and the members of TQM centre co-ordinated the work. The faculty leaders, faculty quality members, and the consultants then evaluated the experience of the implementation. The quality leader (2005) emphasised that one of the most important experiences was the importance of the teaching and training of staff members:

> *One of the most important conditions of successful quality management implementation is that the leaders and staff should see exactly the principles of the quality management system and their roles within it. People who discouraged the whole quality management implementation changed their opinion after the training, and helped the implementation.*

The implementation occurred slower than the original time schedule indicated. This is underlined by the fact that the whole process of the quickest faculty claimed almost three years, instead of the planned eleven months.

Fifth phase: Pre audit

Having implemented the last element of quality management system, the faculties assured a longer period for identifying problems during its operation. It took between 3-5 months in particular cases. After this period, the implementation of the quality management system finished, and an external auditor firm fulfilled the pre audit of the quality management systems. This firm worked as certifying body; namely, it compared the daily operation and the

documentation of the quality management system with the requirements of the ISO 9001 standard. It evaluated the working quality management system and suggested further corrections necessary for successful certification.

Sixth phase: Certification process

The faculties corrected the proposed areas and processes, and put them into daily operation. After finalising quality documents, the faculties started to operate the documented quality management system and, by demand, started to become certified in the event of conformity with requirements from 2004 quality management systems. UP invited an external auditor firm to certify the particular faculties and clinics. The certification processes in 2004 were 'witness audits', where the auditor firm was controlled by NAB[78]. The following units were certified in 2004: the Faculty of Law, the Medical School, and two clinics[79]. Additionally, the Pollack Mihály Faculty of Engineering, the Faculty of Sciences, the Faculty of Humanities, the Faculty of Health Sciences, and six clinics will be certified in 2005.

As to his experiences of quality management implementation, the quality director (2005) emphasised that it went well in technical, economic, medical, and natural science areas at university; but the Faculty of Art has not implemented quality management yet. He also mentioned that

> *…it worked well at faculties where there are more activities than just education. Moreover, the successfulness of the implementation was also dependent on the commitment and attitude of the deans.*

He also stated that ISO and TQM could be implemented and used parallel to each other in higher education. ISO 9001 assures systematic and documented regulations, and TQM can be used in improving the well working regulated quality management system. He first suggested a standardised quality management method, and during the operation, "…it should be reinforced and improved by TQM techniques". Finally, he emphasised the importance of the commitment of leaders especially in higher education where the executives of education processes have the same professional preparedness as the leaders, their work requires considerable independence and creativity, and their commitment is at least as much the condition of the successful implementation and working of quality management system as the commitment of the leaders.

UP has an almost comprehensively developed quality management system, but some elements of it are not used in practice. For example, the developed questionnaires for measuring the satisfaction of stakeholders were not used. It was also strange that the core education processes were not included in the most

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78 NAB (National Accreditation Body) has the right to give licences for certifying firms in Hungary.

79 The Institute of adult teaching and human resources has had certification since 1998.

needed quality functions, but these functions included less important ones, such as internal audit and self-evaluation.

Decision-making process

UP began quality management activities and established the QIC in 1997. In some areas (law, economy and technical sciences), the market expected it. Therefore, when the government developed its expectations, it was not new for the university. However, as one informant (2005) stated "…the Ministry of Education does not have a stable, well developed, and crystallised point of view, and it was not consistent enough; the rules were often changed". Confronting this uncertain situation, where the appropriate governmental co-ordination was unclear, and taking into account the market expectations, the UP Senate decided to implement the ISO 9001 standard "…because it was independent from governments, and was internationally acknowledged" (interview with the quality director, 2005). The UP Senate made the official decision to implement a quality management system; however, it fully accepted what the quality director suggested.

In addition, a specially created committee (QIC) working closely with the University Senate planned and fulfilled the institutional quality management activities. The QIC has been working for a long time according to their rules and habits. The QIC only provides suggestions and ideas for solving problems, but the details of the implementation were delegated to the TQM centre (interview with quality director, 2005). The TQM centre had a routine for quality management implementation, having already introduced a quality management system in industry and at one of the UP's institutes. However, the quality leader emphasised that he did the major part of quality work, and others did what he said because he was the only quality expert within the institution. The pace of quality management implementation was mainly determined by his experiments and capacity. As he mentioned (2005), "I discussed the important questions with the faculty leader, and then I worked out the materials. I was mainly working according to my working habits". He developed the quality management documentation system based on the specific faculty expectations, and the faculties 'only' had to operate according to it. Thus, the implementation outlined above arose mainly from his own working rules and habits.

The quality director also stated that they did not establish any new rules during the development of quality documents and the implementation. "The working of higher education institutions is controlled by a huge number of rules (laws, MAB, etc.), which were built into the structure of particular quality management systems"; then these controlled the institutional activities, and quality management implementation occurred mainly according to them (quality director, 2005). Finally, during the site visit I did not find signals of political decision-making processes concerning quality management implementation.

These findings suggest that quality management implementation occurred mainly in a bureaucratic way.

Conclusions

UP was one of the most complex higher education institutions in Hungary: it had nine faculties and one institute, offered courses at four levels (VT, BSc MSc, PhD) of education, and in more than 350 study programmes. However, it had only one faculty outside of the centre. During the merger process at the beginning of 2000s, only two smaller units joined the previous Janus Pannonius University—the University Medical School and Illyés Gyula College of Education—which included only one tenth of the total number of students. This merger also seems to have largely left the organisational structure of UP unaffected. Looking at the study programmes offered by UP, the disciplinary balance was toward soft or divergent fields like economy, law, humanities, arts, and teacher training. Although a state university, UP was relatively independent from the government because only 39% of its overall annual income was publicly financed in 2004.

Quality management activities began well before the government's initiative on quality management. As the quality director stated, quality management activities started in faculties, which had a stronger connection with the market, and so the external partners expected a quality management system as well as certification. This predicts that UP turned to implement the ISO 9001 standard. The quality leader also emphasised that UP did not consider the Protocol to develop a quality management system, because it was found "…unsuitable and humbug". UP hired professionals to help with the implementation process but brought them from within the organisation's structure, creating a TQM centre. This centre, and especially the quality leader, supported the quality management implementation during the whole process. The TQM centre conducted training for institutional members, such as auditor training, quality management basics, training for leaders, and 'practical tools and methods of quality improvement' training, developed the quality manuals, and helped in the implementation, pre audits, and also in the certifying processes. In addition, the quality leader suggested introducing ISO 9001 standards and implementing them in the faculties. The reason behind the latter point was that UP was too big and complex to introduce one quality management system at an institutional level. The pace of quality management implementation seems to have been slow: they developed quality policies and quality manuals in 2001, established quality committees in the same year, and implemented a quality management system at only two of the ten faculties and two of the 24 clinics in 2004.

The study also illustrated another reason for the slow quality management implementation: the low level of commitment of the leaders. For example, UP decided to implement quality management systems by faculty. Deans expressed their commitment on quality management implementation mainly in the quality manual (on paper). Quality management implementation got the basic resources,

but money, for example, was not supplied for some of the questionnaires developed.

The scope of quality management systems in UP also focused on all core functions, such as education, research, and service. It is not surprising, because the quality leader of UP also supported the implementation of a number of quality management systems outside the university. Therefore, his knowledge and experience was the same as any external consultant in this respect. This knowledge and the support of internal experts also seemed to result in faculties having almost comprehensively developed quality management systems. However, a meaningful part of them was used only symbolically. For example, the developed questionnaires for measuring the satisfaction of stakeholders were not used in practice. Consequently, it seems that UP developed and implemented a quality management system more for showing to externals than to improve its quality.

The evidence also indicates that the meaningful part of quality management work was developed by the TQM centre, mainly by the quality leader. He worked mainly according to his own rules and habits. He discussed the important questions with the faculty leader, and then he worked out the materials alone. Furthermore, UP did not establish any new rules; therefore, the old rules controlled the institutional activities. The implementation processes thus occurred according to the old institutional rules and the habits of quality leader, and as such, in a bureaucratic way. I did not find signals of political decision-making processes concerning quality management implementation.

The slow pace of quality management implementation at UP has been influenced by institutional complexity, lower leadership commitment, bureaucratic decision-making processes, and perhaps a lack of external consultancy. The study also indicates that the support of internal experts contributed to the wide scope and nearly comprehensive content of quality management systems. Finally, the quality management systems in UP worked in practice more symbolically—certificate oriented—than genuinely.

Literature

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Appendix I/f: University of Veszprém (UV)

History and institutional characteristics

The University of Veszprém (UV) was established in 1949. It was a state higher education institution with a strong emphasis on chemical disciplines. The establishment in Veszprém occurred simultaneously with the expansion of Hungarian heavy-industry, and in the beginning it worked as a regional faculty of the Technical University of Budapest. Two years later it became independent under the name of Veszprém University of Chemical Engineering. Thus, what started as a regional organisation obtained a strong focus on chemical technology, a profile that later changed. Since 1991 the institution has been called the University of Veszprém.

The university first offered courses in four areas of chemical technology (oil and coal technology, electrochemical industry, inorganic chemical technology, silicate chemistry). From the middle of the sixties, a further two courses (nuclear chemistry and technology, process control and system engineering) became part of the chemical engineering education in Veszprém. The changing and increasing requirements set for the graduates persuaded the university to continually reform and restructure its education activities. As a result, new courses were introduced, such as agro-chemistry in 1970, chemical engineering management in 1973, higher level foreign language teaching in 1983, and instrumentation and measurement techniques in 1984. To respond to the society's growing demand for computer professionals, with the help of external financial support and the university's scientific expertise, the educational infrastructure of the information technology and automation study programmes was created in 1989. These clearly indicate that since its establishment in 1949, the study programmes at UV have had a relatively strong profile with regard to engineering sciences.

The 1990s, a period of a rapid expansion in Hungarian higher education, were a very challenging phase for the university. As a result of the increasing openness of Hungary, the need for teachers of foreign languages increased considerably. Having recognised this, the university set up new schools of philology: English, German, and French languages and literatures, theatre studies, applied linguistics, international studies, and ethics, among others. In the meantime, the education of catholic theologians started in the form of a regional faculty of the Theology College. Simultaneously, the Faculty of Teacher Training and the Faculty of Engineering were established.

In the 1990s the UV expanded extensively, in numbers of students and study programmes. The university became one of the most dynamically developing higher education institutions of the Transdanube region[80], now offering more

[80] The number of students has grown by eight times (from around 1000 to more than 8500) and the

than 60 study programmes, and at four levels (vocational training, BSc, MSc, PhD) of education. This also stimulates changes in the institutional education practice, and as a consequence, UV was among the first higher education institutions that introduced the credit system in the middle of the 1990s. It was on its own initiative, and it allows permeability between educational programmes, career correction, and simultaneously obtaining several degrees.

Another reason for the expansion of the institution is related to UV's merging with the more than 200 year old Georgikon Faculty of Agriculture in Keszthely in January, 2000. This happened due to legislation on university integration requiring the establishment of multidiscipline universities. The Georgikon Faculty provides education and carries out research in many fields related to agriculture. Now UV has two campuses, and their distance is 70km apart.

A following step in the increase of the number of faculties came in 2001, when first the Institute of Economics and the Institute of Technology were created within the Faculty of Engineering and in 2003 were accredited as two new faculties: the Faculty of Economics and the Faculty of Information Technology. The Faculty of Economics offers programmes at all levels of education, including economics, engineering management, tourism, human resource management, and catering and hotel management. The Faculty of Information Technology offers courses such as information technology and electrical engineering.

Until the end of the 1980s, the former Veszprém University of Chemical Engineering had barely 600 students; by 2004 more than 8700 students were studying in the educational programmes offered by the five faculties of the university. The main bulk of the approximately 8700 students are attached to the 'Veszprém Campus', while about 900 are attached to the other campus located in Keszthely. The academic staff amounts to about 500 full- and part-time employees, among whom less than half qualify as professors or docents. The balance is more on hard and convergent sciences at UV.

For the continuous operation of higher education institutions, they need appropriate financial resources. As a state university, UV receives a considerable amount of state funding. In 2003, the governmental support amounted to about 5.2 billion HUF. This however, is not enough to cover expenses. As a consequence, UV also needed further resources, and the own income amounted to about 2.3 billion HUF. The governmental support thus constituted around 70 percent of the overall annual budget. It is fair to claim that UV is relatively dependent on the government. The sections to follow review the quality management implementation at UV.

Findings of quality management implementation

Responding to market and governmental expectations concerning quality, the university decided to implement quality management mechanisms. In 2001, a

number of faculties has grown by 5 times (from 1 to 5) during the last 15 years.

quality management unit was established to organise and guide these issues. The university defined clear expectations concerning the Quality Assurance Office (QAO) in the operation rules of the unit. The QAO takes responsibilities for the following areas, among others: establishing quality management implementation plans, setting up quality management committees, and co-ordinating and organising the implementation process. At the beginning of the implementation, the QAO also organised training for team members. It started to work out the quality management system of education. The university decided to establish a quality management system according to the ISO 9004 standard, because it provides a system and focuses the institutional stakeholders.

Two committees were established – the Quality Assurance Committee (QAC) and the Quality Evaluation Committee (QEC) to help the implementation process. The QAC is responsible for establishing and improving the institutional quality management system and the QEC controls and evaluates the activities concerning quality management implementation.

Parallel to the establishment of a quality management system, the university worked out the evaluation system of teaching quality using the experiences of students and performance indicators of academics. Depending on the results of the evaluation, academics will be offered higher or lower salaries.

The university decided to use additional sources of information for improving the working environment and the quality of study programmes. Surveys of alumni satisfaction were conducted to measure the usefulness of the curriculum and the performance of academics and the university. Furthermore, the staff satisfaction examination's mission was to paint a realistic portrait of the institutional professionals and argue that surveys of staff satisfaction are needed to establish an appropriate work environment for academics and other staff members. The study now looks in detail at the quality management implementation.

Quality management implementation process

External pressures posed new challenges to the UV. Concerning the governmental expectation, UV started to implement a quality management mechanism. In addition, the declining governmental financial support and the increasing number of higher education institutions also contributed to quality management implementation. The increasing number of higher education institutions mainly harmed the UV because a new university (the Széchenyi University) was established after 2000 with a similar profile. The distance between the two universities is only about 70km, which means that Széchenyi University can deprive the UV of students. Furthermore, more and more institutions applied for and received the right to set up similar study programmes. Thus the number of higher education institutions offering the same study programmes as UV was increasing while the number of students in

Hungary was decreasing. Together these factors stimulated new activities at UV after 2000.

In the wake of these challenges, the university leadership began to search for new ways to manage dwindling resources, while maintaining an institution of high-quality learning and research in 2000. This was planned with the help of quality management.

It was recognised that to devise and implement a quality management mechanism requires considerable time and dedication, and must be given the status of an executive project. It was also essential that any quality management initiative be fully integrated into the university's operating philosophy, structure, and culture. To address the issues which are important in implementation such as institutional culture, resources, and commitment, the university has also taken the following steps. First, plans of processes, procedures, schedules and models were circulated to leaders and team members throughout the university, and updated regularly. Second, some of the university leaders and directors of committees connected with quality management were invited to education processes development sessions as a preparation for design and implementation of teaching and learning processes. Third, reporting on key outcomes of quality improvements has been incorporated into the normal cycle of internal reporting to the University Council. Finally, leaders found important, and therefore planned, that information on students' satisfaction would be collected regularly every semester. The Quality Assurance Office (QAO) was established in 2001 to guide the quality management implementation process. The university provides about 2 - 2.5 million HUF as annual working costs for the QAO. It should be emphasised however, that nobody measured or evaluated its performance.

In addition, the university realised that it needs to improve its staff members' insights into the principles of quality management. Therefore, in 2002 the university applied for governmental support for quality management. Upon being selected, the university received 2 million HUF for these activities. In 2003 the university applied for and received 4 million HUF - money used for training and improving the infrastructure. However, informants (2004) highlighted that higher education institutions could rarely find tenders concerning quality management implementation in higher education, implying what was mentioned above. The findings also show that UV only provided the basic resources for quality management and, as one informant (2005) mentioned, quality management implementation was not at the top of the leaders' priorities. According to interviewees, the meagre financial resources resulted in slow quality management implementation.

As a central guideline of the institutional working, the university defined its mission in 2003 as an educational, intellectual, and research centre of the region; creating an outstanding scientific, professional, and cultural aura worth transmitting to the future generations of the region of Veszprém, the nation, and the world through education, research, and service. As such, the university would take up an important role in the Hungarian higher education system, and

would complete the national university system. The mission statement was then elaborated into strategic goals, and its elements concerning quality management activities were declared in the quality plan and in the quality policy.

An important event in the work on institutional quality management was the creation of the first institutional quality plan in 2001. It represented the first attempt of UV to formally define the general concept of its quality management activities. As a point of departure, the quality plan identified and emphasised three priority items: increasing administrative efficiency, improving the quality of processes and outcomes, and increasing the order of institutional working by implementing a quality management system. Thus a clear feature in the plan is to improve the institutional processes. In the wake of drawing up the first quality plan, five critical areas seemed to be relevant in the quality policy for accomplishing the university's mission and quality plan. First and foremost, UV wanted to develop, maintain, and improve its education, research, and service processes. Second, the quality policy emphasised the importance of improving the satisfaction of stakeholders. Third, UV had the intention of focusing the expectation of health-, security-, and environmental protection. It also mapped the intention of the institutional leaders to clarify the quality policy for staff, and encourage them to work actively within it. Finally, the quality policy emphasises continuously developing and assessing quality goals and their implementation.

Within the context of the institutional mission statement and quality goals and objectives, the university's key principles for quality management are expressed in quality-oriented processes summarised as follows. First, the rector takes direct responsibility for the director of the Quality Assurance Office[81]. Second, continuous quality improvement should be everyone's responsibility. In addition, staff development should be an essential element of quality management. Finally, effective quality management at UV is planned to be characterised by planning and innovation, using standards and criteria to judge performance, evaluating improvement and its consequences, and strategies for implementing change.

From the quality principles, the quality plan, and the quality policy, informants (2004) pointed out three critical factors emphasised as central elements. The first emphasises the improvement of teaching and learning processes, and that institutional products and services should meet current and future market needs. The second points out the enhancement of the technical (infrastructural) and information support. The third highlights the importance of quality advancement processes and procedures. These factors provide a framework and focus for further action through the university's quality plan and quality policy. The university first focused on the teaching and learning processes. This plan requires that faculties review, as a first step, the efficiency and effectiveness, strengths, and weaknesses of all study programmes, units, and areas for improvement. This will be followed by the development of each unit's

[81] The rector delegates critical issues directly under him.

teaching and learning management plan, involving the improvement of the student recruitment processes, student administration, and their teaching and examination.

Concerning the institutional quality plan and quality policy, four important features might be emphasised. First, the UV planned quality management system that focuses on education, research, and service. Second, the quality management system is going to be comprehensively focused on the satisfaction of stakeholders. Third, UV specifically wants to improve the teaching and learning processes. Finally, the quality policy emphasises the continuous improvement of policies and processes. At first glance, as a planned quality management system, these together may seem to be comprehensive. Later in the following section however, their actual implementation will show its shortfalls in practice.

To develop a quality plan and quality policy into operative actions, the Quality Assurance Office (QAO) was established in 2001. The QAO consists of the director and a secretary[82]. Among the main intentions behind this establishment were that work on quality management at UV would become more organised and effective, and contribute to making the institution more competitive in recognition of the fact that the competition for inputs such as students, projects, funds, and academics will increase. In practice, the QAO is responsible for:

- *identifying the critical success factors;*
- *providing overall strategic direction on quality management mechanisms for the institution;*
- *establishing plans for quality management implementation;*
- *setting up quality evaluation and quality action teams to make improvements;*
- *reviewing plans for the development of quality management mechanism and process improvement;*
- *completing quality assessment activities and reporting the work finished for the rector;*
- *participating in quality management conferences;*
- *managing complaints concerning quality management;*
- *co-ordinating the annual quality report for MAB;*
- *representing the institution at quality forums;*
- *documenting the quality materials (Constitutional and Operation rules of the QAO, 2003).*

Two quality committees were set up to manage and support these processes. The members of the committees were suggested by the directors of the particular committees, and the faculties delegated them. Both committees work under the co-ordination of the QAO. First, the Quality Evaluation Committee (QEC)

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82 The secretary is working as a full time administrator; the director is working part time. A further administrator was planned according to the agreement between the QAO and the University Council to work as full time staff, but the financial withdrawal cancelled it. The present administrator provides his or her work.

controls and evaluates the activities concerning quality management at the university. The chair suggested a committee of six staff, and the University Council accepted it. Their responsibilities include paying attention to the realisation of institutional quality policy; prioritising and selecting processes for further improvement; reviewing, evaluating, and supporting the work of the QAC; reporting to the QAO and the QAC and their accounts; implementation of 'internal assessment plan' and evaluating institutional quality management activities once a year; and reporting to the University Council.

Furthermore, Quality Assurance Committee (QAC) carries out detailed improvements of a particular process assigned by the committee. The leader of the QAO selected 13 staff members, who represent all of the faculties to form the committee. According to the mandate, the QAC was supposed to evaluate and improve the quality management system of all institutional activities (education, research, service, and support processes), prepare the institutional quality management system for accreditation, and plan, organise, and evaluate training concerning quality management. The large amount of members in the committee also led to problems of a more practical nature; it proved difficult to assemble members all at once, and contributed to a lack of effective work. To solve the problems attached to the large amount of members of the QAC, the leader drew up smaller tasks, each to be led by a deputy with members of the QAC participating. In the first three years of its operation, UV did not accomplish any performance evaluation and rewarding activities concerning the work of the QAO and the two quality committees.

The QAO was also authorised to organise training for the institutional members. The quality management training programme began with a two-day team workshop for the members of the pre-audit group in 2002. The workshop was provided by an external consultant. Tools and mechanisms such as interview techniques and content of the ISO 9001 standard were discussed and used to help members understand the processes of audit, and promote effective work. Auditors were provided with three days of auditor training in 2003. The audit team included academics from different levels, who acted as interviewers; it consists of 30 people. They worked on the different parts of the pre-audit process being reviewed. The team evaluated different units, procedures, and resources of the university. The results structured the institutional quality management system. In addition, the leaders of UV participated in one day 'leader' training in the topic of quality management. Informants (2004) found the training useful; this was the only stage quality management implementation in which external consultants helped.

After the training on quality management principles and tools, the institution implemented the ISO 9004 standard in 2003. The institution chose to work with internal staff members. Principles behind this were the lower cost and the fact that in the case of external consultants, the institution would also have to contribute to the implementation. The university then started with a thorough

analysis of its external and internal environments, including an evaluation of teaching and learning quality in academic departments. The basic idea behind this evaluation was identifying and collecting the existing elements of the coming quality management system. These elements can be used as basic building blocks of the quality management system that will be introduced. UV did not find the Protocol appropriate as a comprehensive model for higher education institutions because it is too general and its focus is too narrow. As a professor (2004) emphasised:

> *The Protocol does not include the system (model) it explains only some elements of quality management system. Using this framework, the university can not regulate the processes because it is missing from the Protocol. In summarising, the Protocol highlights the key stakeholders and some further elements of quality management, but it cannot be used as a system.*

From 2002, the institutional initiatives regarding quality management activities moved further. The establishment of a Quality Management Day, supposed to be open for both students and staff, exemplifies this tendency. Quality Management Day is a conference where the participants can also become familiar with the actual progress at other institutions, hear lecturers and discuss issues during the seminars.

Quality management system

The institutional quality management system will focus on the education, research, and service processes, and will be based on the ISO 9004 standard. However, only some parts of it were designed and operated at the end of 2004. This section consists of an evaluation of these elements, which have only been brought forth concerning the education quality. Other parts of the institutional quality management system were not in place yet.

There are some areas concerning quality management that have been in place for a long time at UV, such as determining the desired learning outcomes of study programmes, and the design of curricula. Thus, these are not the result of the quality management activities of the latter five years. The evaluation of education quality is another considerable part of the working elements of the quality management system, addressed in the following pages.

The evaluation of education quality is multi-dimensional and aimed at capturing feedback about education resources provided, educational delivery, and the utilisation of lectures and seminars. The education quality evaluation rests on four pillars: teaching quality, student feedback, alumni satisfaction, and staff satisfaction measurement.

First, the university developed processes to monitor and report quality evaluation of teaching quality. Teaching, research, and marketing output factors were taken into account in determining teaching quality in each department. The

following rationale were used as indicators to show the teaching, research, and marketing productivity: teaching contact hours per staff member, supervising diploma work, supervising examination work, study aid, education organising activity, publications, scientific public life activity, scientific recruitment education, tender money received, external assignment, and the outcome of networks.

Summing up the teaching productivity points resulted in the teaching performance of each academic staff, research productivity by summing up the research productivity points, and financial productivity by summing up the financial productivity points. These indicators showed the relative position of each staff member to the values prescribed at UV. The evaluation was repeated three times until 2004 with the same questions to arrive at strategic decisions regarding staff policy. These results would also provide the leaders of UV with valuable information to discuss options for rewarding and further sanctions. If staff members are continuously over the expected values in at least two areas from 2005 onwards, they will get a 1.5 times higher salary. If they perform continuously under the value expected in two areas, they may be demoted to a part time job.

Second, UV has had a system for student evaluation of teaching since the mid '90s. This form of evaluation may have been institutionalised long before demands for institutional quality management activities emerged from the Ministry of Education in the early 2000s. Teaching evaluation is based on student feedback, aimed at continuously improving the quality of course delivery measuring teachers' performance. Filling in satisfaction questionnaires about teaching performance and the overall student experience is now a common practice throughout the university. This quality management questionnaire is intended as part of the university's quality management procedure to improve the quality of teaching. Students are asked to comment upon the teaching performance of an individual lecturer and all teaching activities carried out by that lecturer within a particular course. The questionnaire, comprising 14 questions, is designed to provide student feedback with respect to the structure and organisation of teaching, characteristics of the teacher, subject knowledge, and references, student participation, care and concern for students, delivery techniques and presentation skills, overall evaluation of teaching received, and free student feedbacks.

The questionnaires are administered by the teachers two weeks before the end of each semester. There is no set procedure for administering these questionnaires, though the teachers are advised to allow enough time for the students to complete the questionnaire in the class. Teachers send the completed questionnaires to the administration for analysis. This is designed to be used as evidence for improving teachers' performance and course quality.

Student feedback has been a rich source of quantitative and qualitative continual feedback from students at the end of the semesters. Answers to these

questions are produced as statistical data. The points given to teaching performance of all academics can then be monitored using process control charts to see if their performance is stable, improving, or becoming worse over a period of time. This data was evaluated by the Student Council, and the results were forwarded to the leaders of departments, deans, and the rector.

However, academics found this data both difficult to decipher and of questionable value. They criticised it for its exclusively quantitative results, the relatively low response rate, and its unreliable outputs. Furthermore, it was not clear what use was made of the outcome of these surveys. In response to these criticisms, the university delegated this work into the activity of the QAO. It works up the questionnaires, and the teaching quality will be evaluated according to the results of the last three semesters. The summary of the analysis of responses to the questionnaire is distributed, when possible, in the fifth week of the following semester, instead of the twelfth, as in the past. If academics perform continuously under the value expected (threshold), they will be challenged by their department leader.

The third is the satisfaction of alumni. UV has also chosen to regularly use alternative sources of information as a basis for making decisions about the quality of programmes. One principle form is data on student feedback in a questionnaire administered by the Department of Sociology to graduates three and six years after graduation. This measurement was first conducted in 2004. The questionnaire included questions related to teaching quality, as well as more general educational experiences. A survey of alumni that assess the teaching quality and curriculum design (What were the most helpful courses? What did they need more of? What was least beneficial?) could be a measure for the quality of performance. Answers to these questions were produced as statistical data. The general opinion is that satisfaction of students was decreasing (Research Final Report, 2004). The weak points were, among others: little practice, incompletion in providing state-of-the-art methods and techniques, and insufficient language training. The students were satisfied with the theoretical education, and the unemployment was negligible among them.

Finally, I address the institutional activities concerning staff satisfaction, describe the areas of satisfaction examination, and summarise the main results concerning general institutional satisfaction. UV also decided to ask institutional staff about their satisfaction in order to improve the quality of teaching. The information about staff satisfaction was obtained from questionnaires administered by the human resource office of the university in April, 2004. It solicited responses from all of the institutional academic and non-academic staff (about 1200 members). The organisers asked each unit leader to give the questionnaire to their employees and collect them after completion. The questionnaires were returned by 1139 people, and 1064 were valuable. The components of the staff satisfaction survey used at UV can be classified into two categories, *institutional factors* and *work-related factors*. Furthermore, respondents

were also asked to indicate their age, length of service, sex, academic rank (if any), and functional area.

Institutional factors relate to the environments of UV in which people work. Important institutional factors included the perceived opportunities for promotion or advancement, departmental environment and collegial relations among staff, governance style, institutional duties, operation, information flow, education policy, strategy, and mission. Work-related factors included clear and consistent job duties, stimulation from work, salary status, job security, and quality and autonomy of work, among others.

The data on institutional factors pointed out a clear difference in perceptions with respect to the institutional environment. The results found much more negative feelings and lower staff satisfaction among the members of Faculty of Information Technology than the average, such as Georgikon Faculty of Agriculture, Faculty of Engineering, and Faculty of Economics. Staff at the Faculty of Teacher Training were satisfied with the institutional environment. Women reported receiving institutional support, and perceived a wide variety of impediments to career success at UV. Moreover, the attitudes of almost all respondents toward internal communication, and the actions after the evaluations, were overwhelmingly negative. Furthermore, institutional performance (education, research) was estimated as 3.76 in the 5-point scale from low to excellent. The findings also demonstrate negative satisfaction with salary and resources provided (money, equipment, time) and more than 60% of respondents did not find the institutional order appropriate.

The picture of the current institutional quality management system appears to be functioning in its early stage. The work on quality was to a large extent focused narrowly on a strong orientation towards stakeholders, rather than on the institutional quality management system and the quality of its core functions. An effect therefore, has been that the institutional quality management system has not been established. The student evaluation of teaching, and the satisfaction surveys, may be said to provide a useful tool for the quality management system, but the way it worked was rather as a ´warning mechanism´ than as a continual instrument for improving quality. Some crucial areas such as designing learning and teaching processes and student evaluation, the quality of implementation, resource management, and quality information systems, were not working at UV and the current operating quality management system only focuses on education processes. Thus the current quality management system cannot be marked as developing and operating comprehensively. In addition, the meaningful part of quality policy works only symbolically, and not genuinely in practice. The following section will describe how the particular features of the institutional decision-making processes influenced the quality management implementation.

Decision-making process

In 2001, a new guideline was discussed for the use of institutional quality management in the Ministry of Education. Although this guideline has not been deployed in detail, the government provides the institutions with a Protocol. As previously mentioned, the quality management experts of the university highlighted that they did not find it appropriate as a comprehensive model for UV. Furthermore, the university (not only this one) suffers from governmental decisions in terms of their rationality and pace. As one informant emphasised (2004):

> *Sometimes it is too general, and institutions do not know what to do, sometimes institutions are expected to do something too suddenly. And the government is not consistent enough, the rules are often changed.*

The institutional behaviour was in accordance with experiences concerning governmental behaviour. Thus confronting the uncertain situation where the appropriate governmental guideline was unclear, UV is reacting slowly.

Concerning the governmental expectation, the University Council recognised that to devise and implement a quality management mechanism requires appropriate quality management establishment, and thus the QAO was established to guide the quality management implementation. The rector found the quality issue important, and maintains that he took direct responsibility for the QAO's work. As he states (2004) "...in the case of the university, the issue of quality management will meet with strong opposition, and requires a strong-handed man to carry this out". According to Institutional Regulations, the committees could work through the institutional hierarchy. The rector however, took some satisfaction in this triumph of rationality over organisational routine. But simultaneously, another related sequence of events was demonstrating how the number of important routines and personal stakes caused slippage in quality management implementation, described here.

The University Council made the final decision to implement the quality management system, but its details were delegated to appropriate institutional committees and groups. Quality management tasks at the university are planned by the specially created QAO working closely with the university rector. The quality director wrote reports according to the procedures of the QAO and mailed them directly to the rector. In addition, information is in the system without being available to the particular unit, and sometimes it was collected in a poorly organised manner, and sometimes more than necessary. It happened more than once that units and members concerned with a particular question were not informed of the institutional decisions. It frustrated the academics, and others being asked. All of these were the result of following the 'old' routines. Similarly, as one informant (2004) stated:

> *Quicker work would have been possible only in the case of more special institutional capacities and procedures. Had they been provided and created earlier, however, implementation would have occurred quicker. Clever quality management implementation requires co-ordinating a large number of staff.*

This kind of organisation (university feature) must, and can, function according to established routines and standard procedures. All of these capacities however, have been created after the governmental expectations, including the working procedures of the QAO, the QAC and the QEC. However, as one informant (2004) emphasised, quality management activities mainly occurred according to them. Concerning the standard operating procedures of quality management however, some problems were mentioned. For example, after having finished the training concerning basic quality management methods and tools, members did their work afterwards, but did not get responses concerning their work. Some people found it injurious and frustrating that they were not asked to participate in the following rounds of implementation. Yet quality management events outlined above arise principally from the newly developed programmes and routines, and sometimes from the 'old' standard operating procedures which were not developed specifically for quality management.

An understanding of why the present quality management system and procedures emerged at the university requires careful attention to the occurring political process by which the implementation of quality management took place. Some bargaining games determined the pace of the implementation process. First, as I mentioned above, the rector achieved the level of taking direct responsibility for the institutional quality management activities. Members of quality committees sometimes did not purely follow the rules concerning quality issues, but framed them according to their own characters and stakes. This happened when the director of the QAO sent the materials of following meetings to the members, and they were asked to read them and make suggestions for improving them. Some members did not read the documents because, as the quality leader (2004) mentioned

> *...they believed that the purpose of the meeting would be to discuss the whole material. Thus the situation after the meeting was the same as before it, so the result was negligent.*

The process by which this happened is a story of resistance. Some of the quality committees' members were delegated by their units' leader, and wanted to work as little as possible, showing their dissatisfaction, and thought that quality work was just a 'pain in the neck'. Further cases of proving the particular stakes of staff are the completing and returning time of e.g., the institutional questionnaire and satisfaction survey. As the quality leader (2004) emphasised:

> *A number of academics did not return these documents because these activities required extra work. They found lots of private pretexts with which they could delay the work, and bargained for almost all of the work.*

The preferences and behaviours of institutional players determine the pace of work. The timing of different tasks was the product of reluctance, a tug of deadlines between some academics, and the institutional system. In addition, the leader of the QAO sometimes struggled for more money for the quality committee. He wanted to remunerate the members of quality committees, and in other cases some new tasks delegated among the scope of duties of the QAO required an extra budget, and the director of the QAO struggled for them. Last but not least, there is a personal example. University staff were asked to fill in the staff satisfaction questionnaire. When I requested an unfilled questionnaire for describing its content and the results of the analysis for my case study, the personnel office refused though I had already completed the questionnaire as a teacher. So I could get it only in a personal way, rather than through bargaining with the particular UV office. It is also interesting here that the result of this survey was not provided to the public, even after a year. These findings claim that quality management implementation was mainly arising from the institutional standard operating procedures, and bargaining events also hindered the quality management implementation.

Conclusions

UV is a complex higher education institution: it has five faculties, and offers courses at four levels (VT, BSc MSc, PhD) of education, and in more than 60 study programmes. However, UV has only one faculty away from the centre. This relatively small faculty—Georgikon Faculty of Agriculture—was the only one which joined UV as the result of the national integration of universities in 2000. Therefore, the merger process at UV seems to have left its organisational structure unaffected. Looking at the study programmes offered by UV, the disciplinary balance was more toward hard and convergent fields, such as engineering, agriculture, and IT. As a state university, UV was somewhat dependent on the government because around 70% of its overall annual income was publicly financed in 2003.

UV implemented a quality management mechanism after political initiatives on the national level. As an institution dependent on the government however, it did not take the governmental Protocol into account in developing its quality management system. The reason was that UV did not find it appropriate as a comprehensive model for the university, because the Protocol was too general and had too narrow a focus. As the interviewees stated, UV first needed a quality management system, but the Protocol only included some elements of a quality mechanism, and therefore did not provide a system to UV. Thus instead of the Protocol, the quality management system at UV was derived from the principles

of the ISO 9004 standard. However, the quality management system only focused on the education processes, and therefore its scope was narrow.

In addition, evidence also shows that the institutional quality management system seems to be inadequate. For example, the design of the questionnaires concerning student evaluation of teaching quality was not well performed, and their feedback was of little use. Moreover, the success of quality teams was not measured, and they did not get feedback on their performances. These all are important in contributing to the quality of education, but are secondary compared to the basic educational processes, such as the quality of implementation and the design of teaching and learning processes (not included in the current quality management system). The evidence also shows that a meaningful part of the planned quality management system worked only symbolically and the quality management implementation seems to be slow, taking into account that quality committees were established in 2001, the quality policy was developed in 2003, and UV did not implemented quality a management system until the end of 2004.

The study also illustrated other reasons why the particular quality management implementation emerged. The first important reason was that the external consultant only supported the quality management implementation at the beginning. The external consultants conducted training for institutional members, but UV established their quality management system without external support. The second crucial reason was the insufficient commitment from leadership. For example, the leaders only expressed their commitment concerning quality management implementation in the quality manual (on paper), but later the quality policy was not translated into a set of guiding principles. Thus its deployment into strategic steps could not contribute to the further development of quality management. The findings also showed that the quality management activities were only provided with basic resources for doing their work.

Finally, the bureaucratic and political features of decision-making processes also hindered the pace of quality management implementation. Quality management implementation occurred according to the new standard operating procedures; however, if staff members did not find appropriate ones, they sometimes continued according to their 'old' routines. The findings provided evidence that political elements of decision-making process slowed down the quality management implementation. Particular problems identified included academics who wanted to contribute to the implementation as little as possible, because they did not want to do any extra work.

In conclusion, the quality management implementation seems to be slow, and the implemented quality management mechanism is less adequate and has narrow scope. As the findings show, the inadequate commitment from leaders, lack of external consultants, complexity of UV, and the bureaucratic and political features of the decision-making processes together add up to this result.

Literature

Constitutional and Operation rules of the Quality Assurance Office, University of Veszprém, (2003).

Research Final Report on Alumni Satisfaction, (2004).

Appendix II: Characteristics of respondent institutions

Appendix II describes 'institutional complexity' and 'reputation'. There are two reasons for addressing them: first, to provide basic information to readers about the Hungarian higher education context; and second, these indicators (characteristics) were used to develop my independent variables, in particular complexity and reputation.

First I will introduce 'institutional complexity'. Based on my theory, there were three constituent parts of complexity, which will be described below. Concerning the horizontal differentiation of higher education institutions, I counted the number of broad disciplinary areas (according to a scheme usual in Hungary). Then I merged the answers into one composite indicator. This was measured in four categories.

Figure 10.1: Horizontal differentiation (in %, n=44).

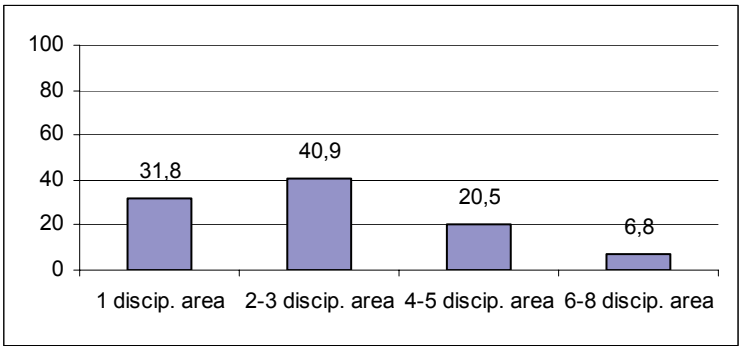

Figure 10.1 shows that many of the institutions (n=32) were less differentiated horizontally, while only some (n=12) had remarkable horizontal differentiation. Of the 32 that were less differentiated horizontally, 14 had study programmes only in one disciplinary area and eighteen had in two to three. Of the twelve that differed remarkably, nine had study programmes only in four to five disciplinary areas, while three covered in six and even up to eight disciplinary areas.

14% (n=2) of the institutions that had study programmes in only one disciplinary area were universities and 86% (n=12) colleges. 43% (n=6) of these institutions were state-owned, 36% (n=5) church-related, and the rest, 21% (n=3) private higher education institutions. 21% (n=3) were located in the western part of Hungary, 71% (n=10) in Budapest, and only one in the eastern part of the country. In addition, all institutions (n=3) that had study programmes in six to eight disciplinary areas were state-owned universities. 33% (n=1) were located in

the western part of Hungary, and 67% (n=2) in the eastern part of the country. This evidence shows that colleges focused on fewer disciplinary areas than universities.

Second, the vertical differentiation of the institutions concerning the hierarchy of their education system was measured by the number of vertical levels of vocational training, bachelor, master, and PhD programmes in any particular disciplinary area, then the answers were added up and divided by the number of disciplinary areas offered in the institution. The results of this computation were clustered into an ordinal scale with four categories.

Figure 10.2: Vertical differentiation (in %, n=44).

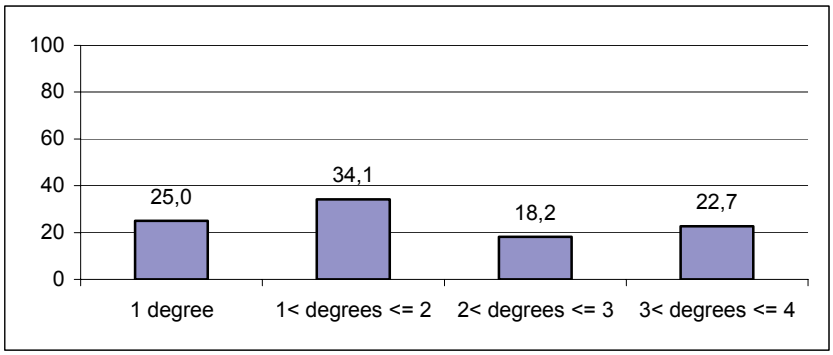

Figure 10.2 indicates that 25% of the institutions (n=11) had study programmes only at one degree level, 34% (n=15) one to two, 18% (n=8) two to three and 23% almost at all levels.

All institutions (n=11) that had study programmes only at one degree level were colleges. 27% (n=3) of these institutions were state-owned, 55% (n=6) church-related, and the rest, 18% (n=2) private higher education institutions. 18% (n=2) were located in the western part of Hungary, 64% (n=7) in Budapest, and 18% (n=2) in the eastern part of the country. In addition, all institutions (n=10) that had study programmes almost at all levels (3-4 degrees) were state universities. 50% (n=5) were located in the western part of Hungary, 10% (n=1) in Budapest, and 40% (n=4) in the eastern part of the country. This shows that colleges focused mainly on one vertical level, while universities focused on almost all vertical levels of study programmes.

Finally, with regard to the geographic dispersion of the institutions, the total number of faculties at the institution's main location (campus) was divided by the total number of faculties belonging to the higher education institution. Then I merged the numbers into one composite indicator. This is a variable with four categories; the higher the percentage of faculties in the main location, the lower the geographical dispersion.

Figure 10.3: Geographical dispersion (in %, n=44).

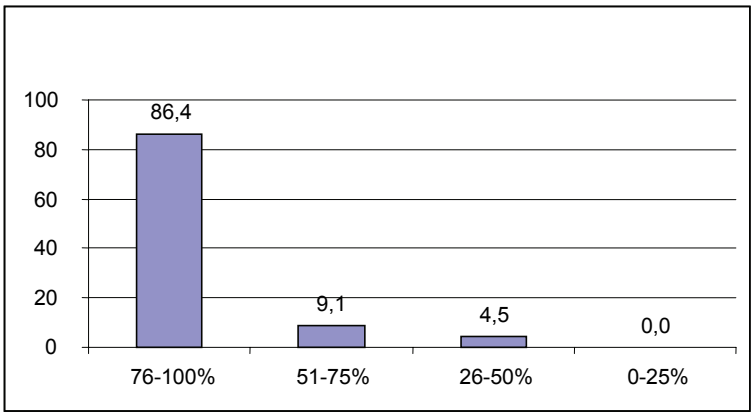

Figure 10.3 shows that almost all institutions (n=38) have only a small number of faculties outside the central location, while only some (n=6) have more faculties or campuses outside the main location. Of these six, four had between 51 and 75% of the faculties in the main location and two had between 26 and 50% in the main location.

32% (n=12) of the institutions that were least dispersed geographically (76-100% of faculties in the main location) were universities and 68% (n=26) colleges. 58% (n=22) of these institutions were state-owned, 26% (n=10) church-related, and the rest, 16% (n=6) private higher education institutions. 32% (n=12) were located in the western part of Hungary, 42% (n=16) in Budapest, and 26% (n=10) in the eastern part of the country. In addition, 83% (n=5) of the institutions that were more dispersed geographically (less than 76% of faculties in the main location) were universities and only one college. 67% (n=4) of these institutions were state-owned, while 33% (n=2) were church-related higher education institutions. 17% (n=1) were located in the western part of Hungary, 50% (n=3) in Budapest, and 33% (n=2) in the eastern part of the country. This evidence shows that universities were more dispersed geographically than colleges.

Taking all three indicators into account, these findings suggest that universities were more complex than colleges.

The next institutional characteristic to be mentioned here is institutional reputation. Based on my operationalisation, the four constituent parts of reputation are briefly described below. Concerning the input side of institutional reputation, the over-application rate, I counted the number of students who had indicated that particular institution as their first preference in relation to the number of students admitted at that institution, taking the average of the values

in 2003 and in 2004[83]. This was collapsed into an ordinal variable with four categories.

Figure 10.4: Students' over-application rate (in %, n=44).

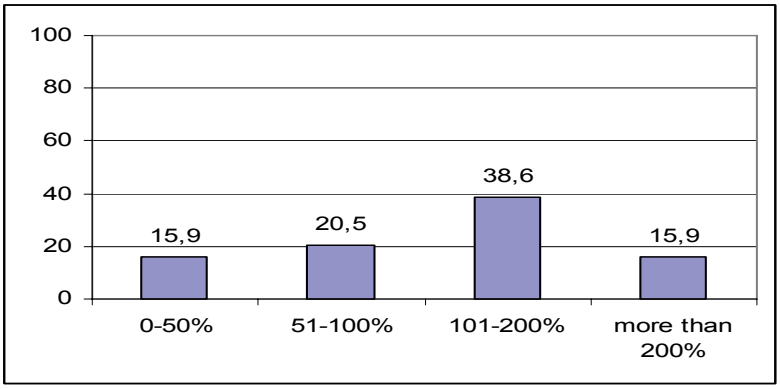

Figure 10.4 indicates that more than half of the institutions (n=24) have high over-application rates, while 45% (n=20) have low rates. In seven higher education institutions, less than 50% had indicated this institution as their first preference. In 13 institutions, 51 to 100% had indicated this institution as their first preference. In 17 institutions, the number of students that had indicated this one as their first preference was between 101 to 200% the number of places available for students. In 7 higher education institutions, the number of students that had indicated this one as their first preference was at least double the number of places available for students (more than 200%).

14% (n=1) of the institutions that had the lowest over-application rate (0-50%)—in fact, they had a severe under-application—were state-owned universities and 86% (n=6) church-related colleges. 29% (n=2) were located in the western part of Hungary, 57% (n=4) in Budapest, and only one in the eastern part of the country. In addition, 43% (n=3) of the institutions that had the highest over-application rate (more than 200%) were universities and 57% (n=4) colleges. 57% (n=4) of these institutions were state-owned, 29% (n=2) church-related, while only one was a private higher education institution. 14% (n=1) were located in the western part of Hungary, while 86% (n=6) in Budapest. To sum up, the evidence did not show any clear correlation with the three control variables.

Concerning the second indicator, the academic qualification of staff members, I counted the number of qualified academics (professors and docents) as a percentage of the total number of academics at any particular institution[84]. Then the values were condensed into four brackets.

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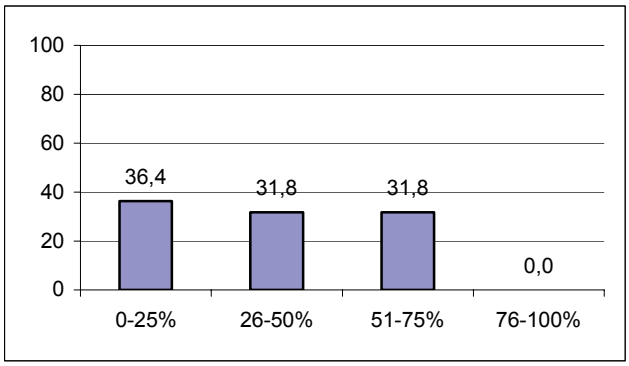
[83] Source: Admission to Higher Education National Institute, 2004.
[84] Source: Statistical handbook of the Ministry of Education, 2004.

Figure 10.5 shows that around one-third of the institutions (n=14) have relatively high academic qualification of staff members, around one-third (n=14) have medium (26-50%), and around one-third (n=16) have low (0-25%).

All of the institutions (n=16) that fell into the lowest bracket of academic qualification of staff members (i.e. no more than 25% professors and docents) were colleges. 50% (n=8) of these institutions were state-owned, 25% (n=4) church-related, and also 25% (n=4) private higher education institutions. 25% (n=4) were located in the western part of Hungary, 50% (n=8) in Budapest, and 25% (n=4) in the eastern part of the country. Furthermore, 29% (n=4) of the institutions that had academic-qualification rate of staff members between 26-50% were universities and 71% (n=10) colleges. 43% (n=6) of these institutions were state-owned, 43% (n=6) church-related, and the rest, 14% (n=2) private higher education institutions. 36% (n=5) were located in the western part of Hungary, 43% (n=6) in Budapest, and 21% (n=3) in the eastern part of the country. In addition, 93% (n=13) of the institutions that had an academic-qualification rate of staff members between 51-75% were universities and only one was a college. 86% (n=12) of these institutions were state-owned, while 14% (n=2) were church-related higher education institutions. 29% (n=4) were located in the western part of Hungary, 36% (n=5) in Budapest, and also 36% (n=5) in the eastern part of the country. This shows that colleges had lower academic qualifications of staff members than universities.

Figure 10.5: Academic qualification of stuff members (in %, n=44).



The next indicator of institutional reputation, the size of the institution, was measured by recording the number of study programmes of the institutions[85]; the values were condensed into four brackets.

[85] Source: Statistical handbook of the Ministry of Education, 2004

Figure 10.6: Number of study programmes (in %, n=44).

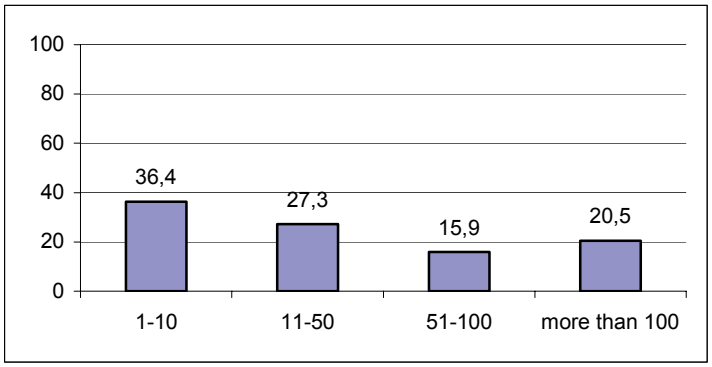


Figure 10.6 shows that around two-third of the institutions (n=28) offered fewer than 50 study programmes, 16 institutions gave up to 10 programmes and 12 offered 11 to 50 programmes. Around one-third (n=16) offered more than 50, as 7 offered 51 to 100 and 9 gave more than 100 programmes.

13% (n=2) of the institutions that had less than eleven study programmes were universities and 87% (n=14) colleges. 13% (n=2) of these institutions were state-owned, 56% (n=9) church-related, and 31% (n=5) private higher education institutions. 31% (n=5) were located in the western part of Hungary, 63% (n=10) in Budapest, and only one in the eastern part of the country. In addition, 78% (n=7) of the institutions that had more than 100 study programmes were universities and 22% (n=2) colleges. 89% (n=8) of these institutions were state-owned, and only one was a church-related higher education institution. 33% (n=3) were located in the western part of Hungary, 22% (n=2) in Budapest, and 45% (n=4) in the eastern part of the country. This indicator shows that universities had more study programmes than colleges.

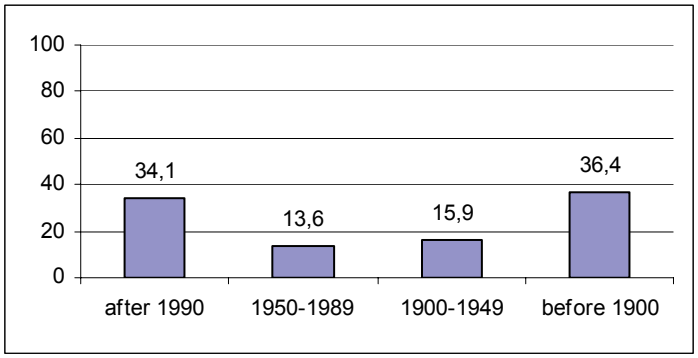
The final indicator of institutional reputation, the institutional age, was based on the starting year of the institution. I have merged the year numbers into four brackets.

Figure 10.7 indicates that around one-third of the institutions (n=15) are young, 14% (n=6) were established between 1950 and 1989, 16% (n=7) were established between 1900 and 1949, and about one-third (n=16) are older than a century.

20% (n=3) of the youngest institutions (established after 1990) were universities and 80% (n=12) colleges. 20% (n=3) of these institutions were state-owned, 40% (n=6) church-related, and also 40% (n=6) private higher education institutions. 40% (n=6) were located in the western part of Hungary, 47% (n=7) in Budapest, and 13% (n=2) in the eastern part of the country. In addition, 56% (n=9) of the oldest institutions (established before 1900) were universities and 44% (n=7) colleges. 75% (n=12) of these institutions were state-owned, while 25% (n=4) were church-related higher education institutions. 19% (n=3) were located in the

western part of Hungary, 37% (n=6) in Budapest, and 44% (n=7) in the eastern part of the country. This evidence shows that more universities were older than colleges.

Figure 10.7: The starting year of the institutions (in %, n=44).



Consequently, on each these indicators it appeared that universities had higher institutional reputation than colleges.

Appendix III: Questionnaire

on the quality management activities of the higher education institutions

I. The institution

1. Name of the institution: .....

2. Year of foundation: …….....

3. Sex of respondent:

- □ Female
- □ Male

4. Function of respondent:

- □ Quality leader (director)
- □ Secretary General
- □ Other, namely.....

5. Who is the owner of the institution?

□ state □ church □ private firm (person) □ foundation □ other.....

6. Please indicate in which disciplines and which kind of programmes on which your institution provides education

VT: vocational training	**B:** bachelor	**M:** master	**P:** PhD
Natural Sciences	□ VT □ B	□ M	□ P
Technical Sciences	□ VT □ B	□ M	□ P
Medicine	□ VT □ B	□ M	□ P
Agriculture Sciences	□ VT □ B	□ M	□ P
Social Sciences	□ VT □ B	□ M	□ P
The arts	□ VT □ B	□ M	□ P
Art	□ VT □ B	□ M	□ P
Theology	□ VT □ B	□ M	□ P

II. Institutional reputation

7. How many students studied at your institution who later obtained a Nobel Prize?

…… person

8. How many students studied at your institution who later obtained an Olympic medal?

……..... person

9. How many world patents does your institution have?

□ ……..... number
□ No data

10. To what extent do you think the following factors influence the institutions' reputation?

Use the following scale:

1	2	3	4	5	9
No increase	Small increase	Some increase	Increase	Marked increase	No opinion

Factor	Answer
Institutional age	1 2 3 4 5 9
The reputation of doctoral schools	1 2 3 4 5 9
The number of world patent	1 2 3 4 5 9
The number of students who later obtained a Nobel Prize	1 2 3 4 5 9
The number of students who later obtained an Olympic medal	1 2 3 4 5 9
Other, ...	1 2 3 4 5
Other, ...	1 2 3 4 5
Other, ...	1 2 3 4 5

III. Institutional quality management factors

11. When did the institution publish its quality policy?

- □ before 2001
- □ in 2001
- □ in 2002
- □ in 2003
- □ in 2004
- □ not yet

12. When was the institutional quality leader (director) appointed?

- □ before 2001
- □ in 2001
- □ in 2002
- □ in 2003
- □ in 2004
- □ not yet

13. What type of quality management committees (groups) were established at your institution? Please indicate their names, characteristics (permanent [P], Ad hoc [A]), staff number and the year of establishment

	Characteristic		Staff number (person)	Year
The name of committee(s)	Permanent	Ad hoc		
1. ……	□ P	□ A	……	……
2. ……	□ P	□ A	……	……
3. ……	□ P	□ A	……	……
4. ……	□ P	□ A	……	……
5. ……	□ P	□ A	……	……

14. When was the institutional quality manual developed?

- □ before 2001
- □ in 2001
- □ in 2002
- □ in 2003
- □ in 2004
- □ not yet

15. Does the institution have a quality management system?

- □ yes
- □ no

16. Does the institution have ISO 9001 certification?

- □ yes
- □ no

17. If yes, the year the certification was received was:

- □ before 2001
- □ in 2001
- □ in 2002
- □ in 2003
- □ in 2004

18. Please indicate how many study programmes do you have in the following disciplinary areas?

	Number of study programmes
□ Natural Sciences	…….
□ Technical Sciences	…….
□ Medicine	…….
□ Agriculture Sciences	…….
□ Social Sciences	…….
□ The arts	…….
□ Art	…….
□ Theology	…….

19. Please indicate in how many study programmes an education quality management system has been implemented

	Number of study programmes with quality management systems
□ Natural Sciences	…….
□ Technical Sciences	…….
□ Medicine	…….
□ Agriculture Sciences	…….
□ Social Sciences	…….
□ The arts	…….
□ Art	…….
□ Theology	…….

20. Does the institution operate one or more research quality management systems? If yes, please list them.

.....
.....
.....
.....
.....
.....

21. Please indicate the involvement of the following areas in the institutional quality management system.

- □ Supplier administration
- □ Student administrative services
- □ Governance of rectoral office
- □ Maintenance
- □ Institutional IT system
- □ Social services (e.g. student hostel, etc.)
- □ Library services
- □ Institutional management
- □ Network with stakeholders
- □ HRM
- □ Economic issues
- □ Infrastructure
- □ Talent caring
- □ Institutional press
- □ Institutional language school
- □ Other: .....

22. Did the institution make an overall self-assessment during the last 5 years?

- □ Yes
- □ No

23. If yes, according to which model?

- □ ISO 9001
- □ ISO 9004
- □ EFQM model
- □ MAB requirements
- □ SWOT analysis
- □ Other, namely.....

24. Please indicate the following results of self assessment.
We used it in:

Developing the institutional improving plan	□ yes	□ no
Preparing accreditation report for MAB	□ yes	□ no
Developing new vision	□ yes	□ no
Building institutional quality management system	□ yes	□ no
Improving the activities of faculties and institutes	□ yes	□ no

Other, namely.....

25. Did the institution identify its stakeholders?

□ Yes
□ No

26. Who are the stakeholders that the institution identified? Please indicate how often the institution measures their demands

Use the following scale:

1	2	3	4	5	9
Not once	Once till now	Yearly	Per semester	More often	No opinion / no information

□	Students	1	2	3	4	5	9
□	Employers	1	2	3	4	5	9
□	Academics	1	2	3	4	5	9
□	Other staff members	1	2	3	4	5	9
□	Graduated students	1	2	3	4	5	9
□	Professional chambers	1	2	3	4	5	9
□	Other, namely	1	2	3	4	5	9

27. Please indicate how often the institution measures the satisfaction of the stakeholders identified.

Use the following scale:

1	2	3	4	5	9
Not once	Once till now	Yearly	Per semester	More often	No opinion

□	Students	1	2	3	4	5	9
□	Employers	1	2	3	4	5	9
□	Academics	1	2	3	4	5	9

□	Other staff members	1	2	3	4	5	9
□	Graduated students	1	2	3	4	5	9
□	Professional chambers	1	2	3	4	5	9
□	Other, namely	1	2	3	4	5	9

28. How many quality indicators does the institution use for improving its quality management system?

□ Does not use any
□ Around 1-20
□ Around 21-50
□ Around 51-100
□ More than 100

29. In which areas does the institution use quality indicators? Indicate their frequency based on the following scale:

1	2	3	4	5
Not once	Once till now	Yearly	Per semester	More often

Area	Frequency				
Academics' performance	1	2	3	4	5
Students' performance	1	2	3	4	5
Facilities for teaching (e.g. lecture room, etc.)	1	2	3	4	5
Facilities for research	1	2	3	4	5
Research performance	1	2	3	4	5
Quality of education (e.g. students per academic)	1	2	3	4	5
Performance in getting financial sources	1	2	3	4	5

30. Please indicate your opinion on the importance of teamwork in quality management activities.

1	2	3	4	5	9
Not important	Hardly important	Moderately important	Very important	Fully important	No opinion

31. To what extent does your institution use teamwork to implement quality management system?

1	2	3	4	5	9
Not	Hardly	Somewhat	Very much	Fully	No opinion

32. Which models did you use for developing the institutional quality management system? (please check all answers that apply)

- □ Did not use such models
- □ ISO 9001:2000
- □ ISO 9004:2000
- □ EFQM model
- □ The Protocol of the Ministry of Education
- □ TQM
- □ Other, namely.....

33. How do you think the institutional quality management system influences the following factors?

Use the following scale:

-2	-1	0	1	2
Hinders very much	Hinders	Neutral	Helps	Helps very much

Factors	Answer				
Meet customer expectations	-2	-1	0	1	2
To be competitive	-2	-1	0	1	2
Resolve current problems and overcome weaknesses	-2	-1	0	1	2
Survival	-2	-1	0	1	2
Improve work environment	-2	-1	0	1	2
Improve the institution and its processes	-2	-1	0	1	2
Minimise costs	-2	-1	0	1	2
Compete for funds	-2	-1	0	1	2
Improve reputation	-2	-1	0	1	2
Improve decision making processes	-2	-1	0	1	2

IV. External consultants

34. Was the institution supported by external consultants in implementing quality management system?

- □ Yes
- □ No

35. If yes, the external consultants came from

- □ Abroad
- □ Hungary
- □ Both

36. What was/were the background(s) of the consultants? (please check all answers that apply)

- □ Industry
- □ Quality consultant
- □ Experts from another higher education institution
- □ Others: .....

37. Please indicate the amount of quality training hours they offered.

- □ 1-40 hours
- □ 41-80 hours
- □ 81-160 hours
- □ More than 160 hours
- □ No such training

38. Please indicate the strength of their helping in the following areas.

Use the following scale:

1	2	3	4	5	9
Did not help	Helped hardly	Helped somewhat	Helped much	Helped very much	No opinion/ do not know

Activity	**Answer**
Institutional self-assessment	1 2 3 4 5 9
Developing quality policy	1 2 3 4 5 9
Working out a quality manual	1 2 3 4 5 9
Developing a quality management system	1 2 3 4 5 9
Implementing a quality management system	1 2 3 4 5 9
Other, namely	1 2 3 4 5
Other, namely	1 2 3 4 5
Other, namely	1 2 3 4 5

V. Financial situation of the institution

39. Who provided how much of institutional income in the following areas in 2004?

Support	Provider	Sum (million Ft)
1. Student grant		
2. Scholarships of academics		
3. Public education provision		
4.1. Educational support		
4.2. Research support		
4.3. Maintenance support		
4.4. Support for clinics		
4.5. Support for model farms		
4.6. Other …….		
5. Programme financing		
6. Development provision		

40. How much was the institution's income in the following fields in 2003?

Million Ft

- □ Tenders .....
- □ Social services .....
- □ Rent .....
- □ Tuition fees .....
- □ Contract research .....
- □ Vocational training support …….
- □ Foundational support …….
- □ Other, …….. …….

VI. Operative and strategic questions of implementing quality management system

41. How do you think the following factors hindered the implementation of quality management system?

Use the following scale:

1	2	3	4	5	9
Did not hinder	Hindered hardly	Hindered somewhat	Hindered rather	Hindered markedly	No opinion / do not know?

Factor	Answer
Lack of the commitment of leaders	1 2 3 4 5 9
Lack of financial resources	1 2 3 4 5 9
The institutional disciplinary balance	1 2 3 4 5 9
Lack of willingness to change of the academics	1 2 3 4 5 9
Lack of positive institutional examples	1 2 3 4 5 9
Lack of confidence concerning quality management	1 2 3 4 5 9
Fear of new things	1 2 3 4 5 9
Lack of consequent institutional policy	1 2 3 4 5 9
Lack of an appropriate IT system	1 2 3 4 5 9
Lack of an appropriate quality management model for higher education institutions	1 2 3 4 5 9
Lack of professional ministerial support	1 2 3 4 5 9

42. Did you find other (further) hindering factors?

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.....
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.....

43. How do you think the following factors influenced the implementation of the quality management system(s) in your institution?

Use the following scale:

-2	-1	0	1	2
Hinders very much	Hinders	Neutrals	Helps	Helps very much

Factor	Answer
Governmental pressure	-2 -1 0 1 2
Reputation	-2 -1 0 1 2
The commitment of leaders	-2 -1 0 1 2
External consultants	-2 -1 0 1 2
Disciplinary balance	-2 -1 0 1 2
The expectations of MAB	-2 -1 0 1 2

44. What did the institution do regarding quality management implementation that was not considered in this questionnaire?

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45. Other remarks, suggestions:

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Thank you for your answers!

Appendix IV: Interview protocol

Find below the general protocol for the interviews. In the individual interviews, questions were further elaborated to focus on specific activities within the institutions. The interviews were conducted in a semi-structured manner.

1. History and institutional characteristics

- The foundation of the institution
- Changes (e.g. integrations, mergers, etc.)
- Study programmes
- Mission statement, strategy

2. Institutional quality management

- Quality policy
- Quality manual
- Quality management system implementation (quality management system, desired learning outcomes, design of curriculum, education processes, student evaluation, quality of implementation, support processes, resource management)
- Quality management committees
- Quality trainings and the role of external consultants
- Tools for assuring quality (questionnaires concerning demands and satisfaction of stakeholders)
- Resources for quality management activities
- The role of leaders in quality management implementation

3. Decision-making process

- Institutional standard operating processes and rules following in quality management implementation
- Old and new procedures for quality management implementation
- Pulling and hauling for parochial stakes
- Struggling for resources for quality management
- Fighting and bargaining for own rights

Appendix V: List of interviewees

Attila Belatiny-Kenéz, Quality leader and Secretary General, King Sigismund College

Nándor Bierher, Quality Leader, Theological College of Veszprém

Zoltán Bíró, Quality Leader, University of Miskolc

Prof. Zoltán Gaál, Rector of University of Veszprém, Former Head of the Hungarian Rectors' Conference

Zoltán Koczor, Quality Leader, Budapest Tech

Árpád Kovács, Quality Leader, University of Pécs

Andrea Mogyorósi, Quality administrator, University of Veszprém

Szilárd Szentgyörgyi, Quality director of University of Veszprém

József Varga B., Quality leader, Theological College of Szeged

Prof. Gábor Veress, Quality management expert, University of Debrecen

Four Anonymous Interviewees

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