

DISSERTATIONES RERUM OECONOMICARUM
UNIVERSITATIS TARTUENSIS

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KERTU LÄÄTS

Management accounting change
in a dynamic economic environment based
on examples from business and
public sector organizations



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THE LIST OF AUTHOR'S PUBLICATIONS AND CONFERENCE PRESENTATIONS

I Articles in journals

1. **Lääts, K.; Haldma, T.; Moeller, K. (2011).** Performance measurement Patterns in Service Companies: An Empirical study on Estonian Service Companies. – *Baltic Journal of Management*. Bingley: Emerald Group.
2. **Haldma, T.; Meiesaar, K.; Lääts, K. (2004).** Management Accounting Reform in Estonian Hospitals. – *Folia Universitatis Agriculturae Stetinensis* 237. *Oeconomica* 43. Wydawnictwo ar Szczecin, pp. 259–267.
3. **Haldma, T.; Lääts, K. (2002).** Contingencies Influencing the Management Accounting Practices of Estonian Manufacturing Companies. – *Management Accounting Research*, Vol. 13 No. 4, pp. 379–400.
4. **Haldma, T.; Lääts, K. (2002).** Causes of Management Accounting Changes in Estonian Manufacturing Companies. – *Folia Universitatis Agriculturae Stetinensis, Oeconomica* 230 (41). Szczecin: Wydawnictwo Akademii Rolniszej, pp. 93–102.

III Articles in proceedings, a chapter in a book or in a collection

1. **Haldma, T.; Lääts, K. (2011).** Balanced Scorecard as a Performance Management Tool for Museums. – *Best Practices in Management Accounting for Executives and Decision Makers*. Edited by Gregoriou, G. N. Finch, N., Hampshire-London: Palgrave McMillan.
2. **Haldma, T.; Lääts, K. (2002).** Influencing Contingencies on Management Accounting Practices in Estonian Manufacturing Companies – Working Paper Series, nr 13, Faculty of Economics and Business Administration, University of Tartu, 41 p.
3. **Haldma, T.; Lääts, K. (2010).** Performance measurement and management control in the Estonian museums. – 6th International Conference on Accounting, Auditing and Management in Public Sector Reforms. Copenhagen: Copenhagen Business School, 2010, 22 p.
4. **Lääts, K.; Bürkland, S. (2010).** The interplay of people and technology in management accounting change. – 7th Conference on New Directions in Management Accounting: Innovations in Practice and Research. Brussel, 25 p.
5. **Lääts, K.; Bürkland, S. (2009).** Investigating Management Accounting Change in ERP Implementation: A Case Study. – 7th conference of ENROAC. Dundee, 15 p.
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 9. **Lääts, K.; Peets, P. (2002).** Cost Accounting in Estonian Manufacturing Companies. – Accounting and companies' performance management: proceedings of the 5th international scientific conference. Tartu: Tartu University, pp. 145–154.
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VII Conference presentations

1. **Lääts, K.** The Interplay of People and Technology in Management Accounting Change. – 7th Conference on New Directions in Management Accounting: Innovations in Practice and Research, 15.–17.12.2010, Brussel (Belgium).
2. **Lääts, K.** Investigating Management Accounting Change in ERP Implementation: A Case Study. – European Accounting Association 33rd Annual Congress, 19.–21.05.2010, Istanbul (Turkey).
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4. **Lääts, K.** Changes in the Scope of Management Accounting Systems: a Contingency Approach. – The 29th Annual Congress of the European Accounting Association, 22.–24.03.2006, Dublin (Iirimaa).
5. **Lääts, K.** Conceptualising Management Accounting Change: Evidence from Estonian Manufacturing Companies. – The 28th Annual Congress of the European Accounting Association, 18.05.2005, Göteborg (Rootsi).
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7. **Lääts, K.** Tootmisettevõtte tegevustulemust mõjutavad tegurid. – Seminar tootmisettevõtete juhtidele, 16.06.2004, Tartu.
8. **Lääts, K.** Tootmisettevõtte tegevustulemust mõjutavad tegurid. – Seminar tootmisettevõtete juhtidele, 18.06.2004, Tallinn.
9. **Lääts, K.** Management Accounting Change in Estonian Companies. – Euroopa Majandusarvestuse Assotsiatsiooni doktorantide kollokvium, 29.03.–01.04.2003, Sevilla.
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11. **Lääts, K.** Contingency Based Approach in Management Accounting Research. – Teaduskonverents “Arvestus ja ettevõtte majandustulemuste juhtimine”, 25.–26.10.2002, Tartu.
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16. **Lääts, K.** Kuluarvestussüsteemide ja ettevõttesiseste aruandlussüsteemide seisund ja arengusuunad eesti tootmisettevõtetes. – Seminar majanduspraktikutele, 16.06.2000, Tallinn.
17. **Lääts, K.** Stage and Perspectives of Cost Accounting Systems in Estonian Manufacturing Companies. – Accounting and Taxation Problems, 8.–9.09.2000, Tallinn.
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21. **Lääts, K.** Juhtimisarvestuse ja *controllingu* süsteem Eesti ettevõtetes. – Seminar majanduspraktikutele, 10.06.1997, Tartu ja 12.06.1997, Tallinn.

INTRODUCTION

List of papers

This dissertation is based on the four original publications, which will be referred in the text using their respective numbers.

Study 1: Haldma, T. and **Lääts, K.** (2002), “Contingencies Influencing the Management Accounting Practices of Estonian Manufacturing Companies”, *Management Accounting Research*, Vol. 13 No. 4, pp. 379–400.

Study 2: Haldma, T., Meiesaar, K. and **Lääts, K.** (2004), “Management Accounting Reform in Estonian Hospitals”, *Folia Universitatis Agriculturae Stetinensis 237. Oeconomica 43. Wydawnictwo ar Szczecin*, pp. 259–267.

Study 3: **Lääts, K.**, Haldma, T. and Moeller, K. “Performance Measurement Patterns in Service Companies: an Empirical Study on Estonian Service Companies”, Accepted for publication in *Baltic Journal of Management*, date of publication 2011.

Study 4: Haldma, T. **Lääts, K.** The Balanced Scorecard as a Performance Management Tool for Museums, Accepted for publication in collection of articles: *Best Practices in Management Accounting for Executives and Decision Makers*, Palgrave McMillan, date of publication 2011.

Motivation of the research

Changes seem to be an integral part of the current economic environment. Globalisation, increasing competition, governmental reforms, and technological development are the keywords of contemporary society. These environmental shifts affect most organisations whether their purpose is to earn profit or to deliver services in society. The critical aspect determining the survival or success of an organisation is its management and the quality of its decisions in changing contexts. Management accounting enhances the visibility of the effects of decisions on organisational performance in economic terms. In a new context, the main role of management accounting – to increase the economic rationality for managers (Weber and Schäffer, 2008) – comes under constant pressure unless necessary adjustments are made to MA systems.

For advanced market economies, management accounting has already been an accepted topic of research for several decades. However, the various management accounting change issues have been more widely investigated since the 1990s (Drury *et al.*, 1993; Amat *et al.*, 1994; Libby and Waterhouse, 1996; Bruggeman *et al.*, 1996; Virtanen *et al.*, 1996; Granlund and Lukka, 1998; Burns *et al.*, 1999; Vaivio, 1999; Burns and Scapens, 2000; Williams and Seaman, 2001 etc.). Often these studies interpret management accounting

changes as a response to shifts in the environment forcing the emergence of innovative management accounting tools beside conventional ones. In addition, more recent discussion has highlighted the change in the roles of management accountants from internally focused scorekeepers to a business partner or consultant (Burns and Baldvinsdottir, 2007). Advances in information and communication technology have led to the application of various enterprise resource planning systems (e.g. SAP, Oracle), which have had an impact on management accounting information. In particular, these systems substantially reduce the routine information gathering and processing role of accountants, and provide managers with direct access to the system to extract the information they need. Therefore, accountants have become more involved in analysing and interpreting the information and providing business support for managers.

Findings in advanced market economy countries more often present management accounting systems as stable than flexible (Libby and Waterhouse, 1996; Anderson, 1995) or as changing very slowly (Burns and Scapens, 2000). Therefore, accounting has traditionally been viewed as a bastion of conservatism (Sulaiman and Mitchell, 2005), where changes are exceptional. However, in a different less stable context, for example, in the conditions of economic transformation, management accounting systems may be under more pressure to change. An alternative view is that stable management accounting systems can be slow to change to meet new situations.

One of the shortcomings of much management accounting research has been the failure to clearly conceptualise the management accounting change in different economic environments. The economic environment consists of the relevant physical and social factors and components outside the boundaries of the organisation (Duncan, 1972). The author agrees that the widely applied stable and dynamic dimensions of environment do not fit well with today's changing environment. In the current context it seems to be more reasonable to distinguish between less dynamic and highly dynamic contexts. However, in order to avoid making subjective judgements between low and high criteria and to uphold the specificity of the studied context more explicitly, the author distinguishes between dynamic and more stable settings. A dynamic setting refers to the situation in countries which have recently undergone fundamental economic transitions and high fluctuations in economic development, while more stable settings imply the context of the advanced market economies.

While much has been written in recent decades about management accounting change in advanced economies, little is known about management accounting change in the transition and post-transition economies of Eastern Europe. A literature review carried out among relevant accounting publications indicates that although it is already more than two decades since the collapse of the planned economies of the Soviet bloc, well-documented and systematic research on management accounting in Central and Eastern Europe is limited. The focus of empirical accounting in the politically and economically changing context is devoted to the regulative accounting issues about financial accounting and auditing themes. Some aspects of management accounting in Hungary,

Poland, Yugoslavia, Czech Republic, Slovenia, Lithuania and Estonia have been researched (Sobanska and Wnuk, 1999; Szychta, 2001; Vamosi, 2000; Cadez and Guilding, 2008; Valanciene and Gimzauskiene, 2009; Haldma and Lääts, 2002). Nevertheless, the number of studies exploring management accounting change in the transition or post-transition economy countries is far from satisfactory and the implications of the economic restructuring on management accounting change are practically unanalysed. The scarce research results offer only fragmentary insights into management accounting developments in these economies.

The main motivation behind the dissertation relies in the scarce research evidence on how management accounting systems may be designed and used in this particular dynamic environment. The current dissertation explores this process and seeks indications of management accounting change and to specify the factors that influence this process, specifically in the dynamic context. The differences and similarities of these indications and influencing factors will be analysed in the light of the context dependency perspective between more stable (advanced market economies) and the dynamic economic context. The importance of studies which focus on the motivation behind changes, the systems' design drivers, and the change effects in the dynamic context has been outlined by several authors (Gray and Roberts, 1991; Anderson and Lanen, 1999; Luther and Longden, 2001).

The economic transitions from a planned to a market economy, and the economic developments after major restructuring, influence organisations' accounting systems. While management accounting in a market economy is a private matter for an organisation, in a planned economy, enterprises could not customise accounting methods to particular circumstances and they had to use the accounting methods in accordance with the central authority regulations (Mihhejev, 1975). Therefore, enterprises had no desire to develop their accounting systems separately from the general instructions. Accounting, in the planning economy, was a major tool for national economic management and rational economic behaviour of organisations was largely ignored. As stressed by Firth (1996), the move away from central economic planning and the introduction of competitive markets has led organisations to question whether their existing accounting systems are adequate and to search for alternatives. These change issues are complex because there are no universal solutions for designing the management accounting systems appropriate for every organisation.

The beginning of the 1990s saw the start of economic restructuring for several Central and Eastern European countries. Given the rapid changes in state macro and micro-economic policies in many transition countries short-term survival goals dominated strategic decision making in most enterprises (Czaban and Whitley, 2000). The impact of the economic restructuring was the transformation of all decision making and other management functions from the state to the organisation level. Additionally, the shift towards the market economy has promoted more market orientated behaviour and increased reliance upon profit. However, research has shown that managers attempted to find a

way to adopt the new economic system while still using central planning accounting methods (Krivogorsky, 2000; Czaban and Whitley, 2000). The later developments, due to the economic recession since 2008 related mostly to the significance of cost efficiency and cost cutting issues, which generate a further need for adjustment to the management accounting systems in line with the changes in management focus.

All these tendencies have implications for the nature of organisations' management accounting practices and their developments in a dynamic economic environment. In general, these historic occurrences provide an excellent opportunity to investigate the nature and impact of management accounting changes in the dynamic economic context. For that reason the current dissertation investigates the management accounting changes of organisations that operate in a dynamic context, in Estonia, where the changes to the economic environment have been remarkable.

After the collapse of the centrally-planned economy, the business environment has changed dramatically. In the conditions of market economy companies need to have objective information about cost and performance in order to be competitive. Since the markets opened in the 1990s, Estonia and other transition countries have faced extensive competition from multinational companies. Companies in all European transition countries had previously enjoyed protection from such competition before independence and economic transition. At the same time, due to the extremely liberal economic and trade policy there may be unique Estonian features of the study results that differentiate the accounting issues in the organisations studied from those in other transition countries. Estonia ranked sixth in the 2004 Index of Economic Freedom by The Wall Street Journal and The Heritage Foundation ('Index of Economic Freedom' ...). The experience of Estonian companies can be considered from one side as a result of that rather liberal economic policy, where the main external influence comes from the market and from other side as fast legal developments and harmonisation with the European regulations, due to joining the European Union.

Estonia has experienced positive GDP growth in 1997 of +11.7% and in 2006 of +10.6%, while in 1999 Estonia had a negative growth rate of -0.3% and in 2009 of -13.9% (Main economic indicators ..., 2011). These fluctuations, which are noticeably higher than in other advanced market economies in Europe, are considered signs of high dynamics in the economic environment. In general, since the 1990s, the development of the economic environment in Estonia was affected by the following events:

- monetary reform (1992) and introduction of national currency – the Estonian Kroon
- ownership changes (the most intensive period of privatisation was 1993–1995)
- development of the capital market (the Tallinn Stock Exchange opened in May 1996)
- joining the European Union (2004)

At the same time companies from transition economies are facing new challenges brought by the economic environment characterised by the rapid development of information technology, globalisation and intensified competition. During the transition period, management roles were redefined in order to focus attention more sharply on market alterations, customer demands, capital investments, financing and organisational changes. The organisational changes refer to the development of a new market oriented strategy, changes in organisational structure, technology and other arrangements.

The contingency theory approach suggests that organisations change their management accounting system according to the influences from external or internal environments (Chenhall, 1997, 2003; Baines and Langfield-Smith, 2003; Abernethy and Lillis, 1995; Anderson and Lanen, 1999). In principle, the survival and success of an organisation is based on its adaptation to both external and internal forces (Otley, 1980). Environmental changes create a need for adjustments of organisational arrangements and their functioning. Among other alterations, the changes in management information systems are necessary for supporting the economic rationality of managers' decisions and the sustainability of organisations. Here, the management accounting system's effectiveness plays a significant role that underpins organisations' management decisions. Therefore, contingency theory provides an explanation for the spread of management accounting due to a group of factors that influence the design of management accounting systems. In general, these factors relate to the organisation and its environmental characteristics. Moreover, the changes in the environment are usually accompanied by the changes in organisation's objectives or strategies and with further reorganisations of internal processes and activities. In order to facilitate these changes, knowledge must be accessible and there have to be mechanisms that can be used to gather the necessary information (Garengo *et al.*, 2005). Accordingly, to fit with the new organisational needs the changes or renewal of management accounting systems are essential.

An additional source of motivation is the service sector. The area has attracted less research attention to its possible influence on management accounting design. Most of the previous management accounting studies focus on the practices of manufacturing organisations (Bhimani, 1994; Libby and Waterhouse, 1996; Ittner and Larcker, 1998; Luther and Longden, 2001; Baines and Langfield-Smith, 2003; Malina and Selto, 2004; Waweru *et al.*, 2004; Chanegrih, 2008; Henri, 2010). Few studies focus on the individual service sector cases in the particular industry (e.g. Ittner *et al.*, 2003 in financial services Beekes *et al.*, 2010 in professional services). Assuming that the service and manufacturing businesses are different, then they may also be assumed to vary in their performance measurement as reflected by their management accounting systems. Therefore, the current dissertation focuses on the differences – specifically on performance measurement and its changes between service and manufacturing organisations as an example of the influence of area of activity.

Moreover, environmental influences and restructuring processes stimulate transformations not only in private sector organisations, but in the public sector

too. During the last decades, New Public Management as an international trend came to influence public and financial management initiatives (Bogt, 2001). In general, New Public Management conveys the initiatives for increasing transparency and efficiency in public sector (Baird, 2007; Mimba *et al.*, 2007) and encourages the public sector to adopt private sector management techniques (Hood, 1995). As noted by Clarke and Lapsley (2004) the reforms create shifts in the public sector from a producer-driven attitude towards a more responsive approach to citizens as customers of services. Therefore, the management accounting development in the public sector is taking place very strongly in the performance measurement area where key performance indicators are now used in a large number of public sector organisations (Mussari, 1995; Jackson and Lapsley, 2003). Better accountability of stakeholders' interests and improved transparency of processes, as advocated by New Public Management has had significant effects on the demands of public sector organisations' performance information and their performance measurement systems.

Since the beginning of the 21st century New Public Management has influenced the governmental reforms and performance measurement developments in the Estonian public sector (Haldma *et al.*, 2008). Therefore, the changes in the public sector management accounting area are more likely to transfer to Estonian public organisations as well. Unfortunately, there is practically no well-documented evidence about the public sector management accounting developments in the Central and Eastern European region. That provides the motivation for the current research into how the management accounting tools are implemented and how the implementation impacts on performance management in public sector organisations operating in a dynamic context. The drivers and impacts of these changes can illustrate the shortcomings of management accounting in functioning as provider of comprehensive information support for managers and in enhancing organisational performance. In the public sector organisations, the importance of internally driven change initiatives, among the other drivers, and future research areas concerning these developments has been outlined (Lapsley and Wright, 2004; Hyvonen and Järvinen, 2006). The introduction of central key performance indicators does not explain the internal creation and successful implementation of additional performance indicators. Nevertheless, the key performance indicators help the translation of overall strategy into different departments' objectives and to visualise these linkages across the functions and management levels. Therefore, the current dissertation explores one of the performance measurement innovations more deeply, namely balanced scorecard implementation in the public sector.

In order to understand the management accounting phenomenon, and how drivers of and barriers to change influence it, we should have more research evidence. Management accounting change represents a complex process, where intervention of people, systems and various organisational attributes shape the change process and outcome (Groot and Lukka, 2000; Burns and Vaivio, 2001). Although, in general, in Estonia and other Eastern European countries shifts

towards highly developed market economy management accounting practices can be expected. However, this argument can be confirmed only by adequate research evidence. Therefore, this dissertation attempts to provide additional knowledge about management accounting change in the dynamic economic context in particular.

Additionally, as proposed by Granlund and Lukka (1998) the prevalence of convergence in advance of the divergence of worldwide management accounting practices takes place. Since in a dynamic economic context the possible drivers and evidence of this convergence or deviation process have remained unexplored, the current dissertation attempts to explore these issues more broadly. Hence, the motivation behind the current dissertation is to provide deeper understanding about the management accounting process in a dynamic economic context. Moreover, the idea is to acquire preliminary evidence about possible convergence of private and public sector management accounting practices from countries with developing economies and experience of a centrally planned economy.

The author believes that in general management accounting as a practical discipline and its change occurrence has to be studied in practice, where the real problems and solutions occur, and not in laboratories or other artificial settings. Therefore, the current dissertation includes four empirical studies about management accounting change issues in practice, and the findings of these studies have been connected and translated to theory and not vice versa.

The aim and research tasks

The aim of the dissertation is to provide in-depth understanding of management accounting change and the factors influencing the business and public organisations operating in the dynamic market economy context. The dissertation examines the influence of environmental and organisational characteristics on the changes of management accounting systems using contingency theory. The pressures from the current environment stimulate organisations to seek continuous improvements in efficiency. This creates an internal demand for additional management accounting information, the resulting changes in the management accounting system allowing diverse performance measurement and management. The general research question of the dissertation is: What are the main influencing factors and characteristics of management accounting change in business and public organisations operating in a dynamic economic environment? A greater understanding of management accounting change and the factors that influence it will help advance the management accounting function in supporting rational behaviour in organisations. To achieve the aim, the following research tasks were identified:

1. Provide a theoretical overview of the management accounting function and elements.

2. Review the contingency theory approach and the influential factors of management accounting change reported in previous related studies.
3. Frame the management accounting change concept and its attributes on the basis of previous research.
4. Analyse the environmental and organisational factors influencing the management accounting changes in business and public organisations in Estonia.
5. Investigate management accounting and performance measurement dynamics in service and manufacturing private sector organisations as an indication of management accounting change and its influencing factors.
6. Explore the impact of design and implementation of the balanced scorecard concept on the performance measurement and management development in a public sector organisation.
7. Advance the understanding about management accounting change and its influential factors in the dynamic economy context.

Contribution of the research

Although, management accounting change has been a popular research topic in developed market economy countries since the mid –1990s, the findings on change drivers and effects have been ambiguous (Van der Stede *et al.*, 2006). In general, management accounting change can be described as progress moving towards more sophisticated management accounting structures (Burns and Vaivio, 2001; Baines and Langfield-Smith, 2003). Nevertheless, due to the complexity of the management accounting process, previous studies do not suggest obvious change paths or provide a comprehensive template for the process. Therefore, the current dissertation provides additional understanding about the management accounting change seen as a sophistication process. The main difference between the previous studies and the current thesis is twofold: firstly, these developments are investigated according to the specified management accounting elements, and secondly, the focus of the sophistication process is explored alongside its technical and conceptual dimensions.

The current dissertation is based on the contingency approach, which relies on the premise, that environmental and organisational factors have different impacts on the management accounting systems and an effective accounting system should adapt to these changes. The motivation and need for management accounting changes can vary depending on its context. Most of the management accounting change studies investigate these developments mainly in rather stable market economies. However, management accounting change as a research topic has gained very moderate attention in dynamic economic contexts, where the various external influences on the organisational arrangements can be expected. For example, the considerable shifts in the political environment and economic restructuring affecting the management accounting changes and other

organisational arrangements in the Eastern European countries have remained deeply unexplored. There are only few internationally published studies of an exploratory nature concerning management accounting change issues of business organisations in Eastern European countries (Sobanska and Wnuk, 1999; Vamosi, 2000; Szychta, 2001; Haldma and Lääts, 2002; Cadez and Guilding, 2008; Valanciene and Gimzauskiene, 2009). Moreover, according to the best of the author's knowledge, there are no empirical studies reported in international publications concerning the public sector management accounting developments in these countries. Therefore, the novelty of the study is in its research focus that includes evidence of management accounting change in business and public sector organisations operating in the dynamic economic context of one Eastern European country, Estonia.

The focus of the current dissertation is on the management accounting change in business and public organisations. The previous management accounting change studies have concentrated their focus either on the business or public sector organisations, because in developed market economy countries the accounting regulations embody more distinctions between public and business sector accounting than in Estonian legislation. The diffusion of businesslike practices to the public sector by New Public Management initiatives outlined by several authors (Kaplan, 2001; Aidemark, 2001a; Lawrence and Sharma, 2002; Modell 2004; Lapsley and Wright, 2004; Neely *et al.*, 2006; Chen *et al.*, 2006; Peters *et al.*, 2007; Qudrat-Ullah, 2007) gives an opportunity to investigate the public and business sector management accounting developments with a similar approach. The main argument for looking at the management accounting developments in parallel in both sectors is associated with the unique situation in Estonia, where the main accounting regulation – The Estonian Accounting Law – is common to both the business and public sectors. According to the knowledge of the author, this specific legal accounting environment context in Eastern Europe is particular only to Estonia. The common accounting legal framework offers a specific starting point for management accounting developments for the public sector organisations in particular, where advances in management accounting tend to lag behind business sector practice. The common regulatory accounting environment offers a favourable situation for public sector organisations, where the possible spill over of innovative management accounting practices can occur. Therefore, the current dissertation is novel in applying a common approach to studying management accounting change jointly in business and public organisations.

The research framework applied in the current dissertation is novel too. The sophistication of management accounting system has been explored from two perspectives: firstly, the contextual influence on the base of factors explaining the appropriateness of management accounting system is divided into two categories –the environmental and the organisational; and secondly, there is the change process perspective concentrating on the driving and hindering forces of management accounting change. The contingency based management accounting literature emphasises the influence of various environmental and

organisational factors (e.g. Gordon and Miller, 1976; Otley, 1980; Chenhall, 2003; Hopwood, 2009). Drivers and barriers of change have been widely accepted as explanatory variables in explaining the management accounting change process (e.g. Innes and Mitchell, 1990; Groot and Lukka, 2000; Burns and Vaivio, 2001). The novelty in the current dissertation lies in the integrated theoretical framework which combines these two approaches.

A novel aspect of the research considers the empirical influence of legal accounting regulations on the management accounting change. In theory it has been argued that in the business sector the legal accounting developments have been seen as a prerequisite of developments in management accounting change (Innes and Mitchell, 1990; Libby and Waterhouse, 1996). The earlier empirical management accounting change studies have examined the general influence of different change drivers, but they have not empirically explored the effect of the legal accounting environment on the development of management accounting elements. This dissertation looks at the influences of legal accounting reforms on the management accounting elements in both business and public sectors.

Granlund and Lukka (1998) suggest there is a dominant tendency towards more convergence of management accounting practices worldwide rather than a divergence. The convergence pressure driven by macro-level factors, such as tightening competition, application of advanced information systems, internationalisation of businesses, a global consultancy industry, also affect management accounting practices. There are practically no studies focusing on the possible convergence of management accounting in the dynamic economic environment. Therefore, the current dissertation is taking the first step in investigating management accounting convergence aspects in the dynamic setting where organisations are expected to move towards the higher application of developed market economy practices.

The originality of the current dissertation lies in its research focus concentrating on the performance measurement developments in service sector organisations. There is very limited knowledge of performance measurement practices investigating the specificity of service organisations, as most performance measurement studies focus on manufacturing organisations (see Bhimani, 1994; Ittner and Larcker, 1998; Laitinen, 2002; Henri, 2010). However, despite the service sector's expansion, there is still limited knowledge of performance measurement attributes in service companies. Whilst a few performance measurement studies focus on specific service industries such as financial services (see Ittner *et al.*, 2003) and professional services (see Beekes *et al.*, 2010), unfortunately, most of this research is based on case studies of single industries or single organisations. Estonia's service sector represents a remarkable share of the country's economy, and research about performance measurement patterns of these companies would offer useful insights concerning the importance of area of activity in explaining the possible convergence or divergence of these practices.

In addition, with regard to the sector, previous research has shown that the public sector accounting innovations have mainly originated from the business

sector (Lapsley and Wright, 2004; Neely *et al.*, 2006; Chen *et al.*, 2006; Peters *et al.*, 2007; Qudrat-Ullah, 2007). The current dissertation offers additional insight about the diffusion of business sector management accounting practices to public sector organisations, which can be interpreted as a form of management accounting practices convergence between the business and public sectors.

The findings of the dissertation about the nature of management accounting change and its drivers should be directly relevant to the success or failure of implementation of contemporary management accounting methods and tools (the balanced scorecard and activity-based costing) that affect the accuracy and effectiveness of management accounting information. Changes towards more sophisticated and complex management accounting systems maintain the sustainability and performance improvements of the organisations (Brignall and Ballantine, 2004; Van der Stede *et al.*, 2006; De Geuser *et al.*, 2009).

The current dissertation looks at the developments of the management accounting practices in Estonia. These developments in the organisational arrangements can be considered as implications of the rather fast reorientation from a planned command economy towards a market economy. This dissertation examines the nature of management accounting changes in the organisations operating in the dynamic context and its convergence towards market economy management accounting practices. Although, the empirical studies of current dissertation have been conducted in a single country, they offer additional insights into management accounting practices and a broader understanding of management accounting change drivers in the context of rapid changes.

Research methodology and the contribution of individual authors

There is no universal method for studying management accounting change in practice. Each research approach and method incorporates a variety of features that could influence the research findings. Traditionally, surveys allow quantitative examination of the general characteristics of the constructs studied, whereas case studies enable the researcher to expose a more detailed representation of the studied phenomenon and its context. In management accounting change studies both the survey method (Libby and Waterhouse, 1996; Anderson and Lanen, 1999; Laitinen, 2001; Luther and Longden, 2001; Baines and Langfield-Smith, 2003; Malina and Selto, 2004; Baird *et al.*, 2004) and case study method (Vamosi, 2000; Bourne *et al.*, 2000; Kennerly and Neely, 2003; Scapens and Jazayer, 2003; Ahrens and Chapman, 2004; Tuomela, 2005) have been applied, offering varied insights into the management accounting change phenomenon.

Table 1.1 gives an overview about the applied research methods and the contribution of the author in the studies. The current dissertation consists of studies where both quantitative and qualitative approaches have been adopted.

Table 1.1 Applied research methods and contribution of the author to the studies.

Studies	Research method	Sector	Contribution of the author
Study 1	Questionnaire survey	Business manufacturing	Development of theoretical framework Preparation of survey instrument (questionnaire) Selection of respondents Conducting the survey Data analysis Discussion of the findings
Study 2	Case study	Public health care	Development of research questions Preparation of interview questions Data analysis Discussion of the findings
Study 3	Questionnaire survey	Business service and manufacturing	Preparation of research questions Compilation of survey instrument (questionnaire) Data processing and analysis Discussion of the findings
Study 4	Case study	Public museum	Development of research framework Data analysis Discussion of the findings

Source: compiled by the author

In Study 1 and Study 3, a questionnaire survey was used. The questionnaire survey allows us to examine general constructs of management accounting change (Study 1), dynamics of performance measurement tools (Study 3) and the influential factors. In Study 2 and Study 4 the case study approach has been applied in order to conduct a more intense investigation into the management accounting change process (Study 2) and performance measurement system development (Study 4). The case study method helps deepen the understanding of the nature of management accounting change and its drivers and influences. Every research method has its shortcomings; but the application of these two research methods simultaneously provides the opportunity to avoid those shortcomings and contributes to the more profound knowledge about the studied phenomenon.

The empirical studies included in the dissertation cover different sectors. The selected organisations represent private and public sector entities. Study 1 focuses on private manufacturing organisations and Study 2 on public sector health care organisations. Study 3 examines the change issues by comparing the practices of private service organisations with manufacturing ones. Study 4 investigates the management accounting change in a museum representing the public sector. The variety of sectors enables analysis of the influence of contextual factors from the practices of different organisations and to enhance the knowledge about the management accounting change process.

All four studies presented in the second chapter are co-authored and the author of this dissertation had the central part in all studies. The contribution of the dissertation's author and article's co-authors in the studies conducted were as follows. In Study 1, the general research framework, literature review and survey questionnaire were prepared by the author. In addition, the entire survey data gathering process, empirical data analysis, and discussion of the findings in conjunction to the theory were the main tasks of the author. In Study 1, the co-author assisted mainly in framing the questionnaire and in developing the discussion part of the article. In Study 2, the dissertation's author was responsible for the preparation of interview questions in relation to the research questions, the data analysis and in the theorization of the findings. The empirical data collection via semi-structured interviews was conducted by one of the co-authors. In addition, the study framework and the findings discussion were co-authored. In Study 3, the author's main roles were the preparation of research questions, processing and analysing the empirical data, and the discussion of the findings. Additionally, in Study 3, the dissertation's author contributed by helping with the compilation of the research questionnaire and in the data gathering process. In Study 3, co-authors assisted in questionnaire compilation, data gathering and the discussion process. In Study 4, the author contributed by framing the theoretical approach, analysing the empirical data from the interviews and elaborating the discussion. In Study 4, a co-author helped with data gathering and with suggestions for the theoretical and empirical findings of the study.

The main argument driving the choice of a case study to illustrate the public sector situation is the heterogeneity underpinning that sector. The public sector includes governmental and local authority institutions and organisations providing a variety of services (health care, education, social, cultural, water utilities, transportation etc.) with a range of possible specifics inherent in each service area. The use of case studies in public sector organisations lends focus to the research and at the same time limits the discussion, although the selection of case study units is always problematic. The main criteria for selecting organisations in this dissertation related to access and availability of the required data, which will often be a very sensitive matter for the managers involved and hence not easy to collect. The dissertation was supported by the constructive contact provided by the managers from hospitals and the museum, which is why those organisations serve as examples of public sector organisations.

The author is fully aware that the uneven use of research methods causes an imbalance in data sources and views between the public and business sectors. Due to the higher number of organisations studied, the business sector certainly offers a wider data source, but lacks the deeper focus; whereas the findings relating to the numerically fewer public sector organisations can provide deeper insights into the investigated phenomenon. Furthermore, the survey selected as the research method for the business organisations does not offer detailed insights into the management accounting developments in these organisations;

whereas the case study applied in the public sector organisations fails to paint a wider picture about the management accounting developments in general. Despite these deficiencies the author considers that the empirical data gathered can offer reliable findings on MA changes in the organisations.

Structure of the dissertation

The current dissertation consists of the following chapters: an introduction, theoretical, empirical and discussion chapters. The overall structure of the dissertation is presented in Figure 1.1. The introduction to the dissertation presents the motivation behind the research and the aim of dissertation. It also provides an overview about the contribution of the research to the existing literature and the research method applied.

The first chapter provides the theoretical concepts applied in the study and explains the developments in management accounting definitions and its various roles in organisations in general. The management accounting function and elements in relation to management activities are also discussed. The drivers behind the management accounting change are explored throughout the contingency based framework. The selection of drivers is made from the existing management accounting studies to delineate the prevailing factors with regard to the dynamic context of empirically studied organisations in this dissertation. Thereafter, the different perspectives and attributes of management accounting change are outlined and the theoretical framework proposed. Finally, the research questions are summarised and links with the proposed theoretical framework are presented.

The second chapter is empirical; including four studies comprising the investigation of management accounting change practices and their influential factors in the selected business and public organisations operating in a dynamic economic context, namely Estonia. Study 1 explores the nature of management accounting practices, the changes to it and the factors influencing it during the period 1997–1999 in business organisations. Study 2 looks at the management accounting practices and changes during the period 2000–2002 in the public sector health care organisations. Additionally, the factors influencing management accounting change are outlined. Study 3 analyses the changes in one management accounting element, performance measurement, in the period 2004–2007 in business sector manufacturing and service organisations. In addition, the study examines the influence of perceived market dynamics, size and activity on management accounting design. Study 4 explicates the development of the balanced scorecard as a performance management tool in the public sector, using a museum as an example. This study presents a prospective way in which to increase the sophistication of management accounting systems using contemporary management accounting developments from theory and the details of design and application from practice.

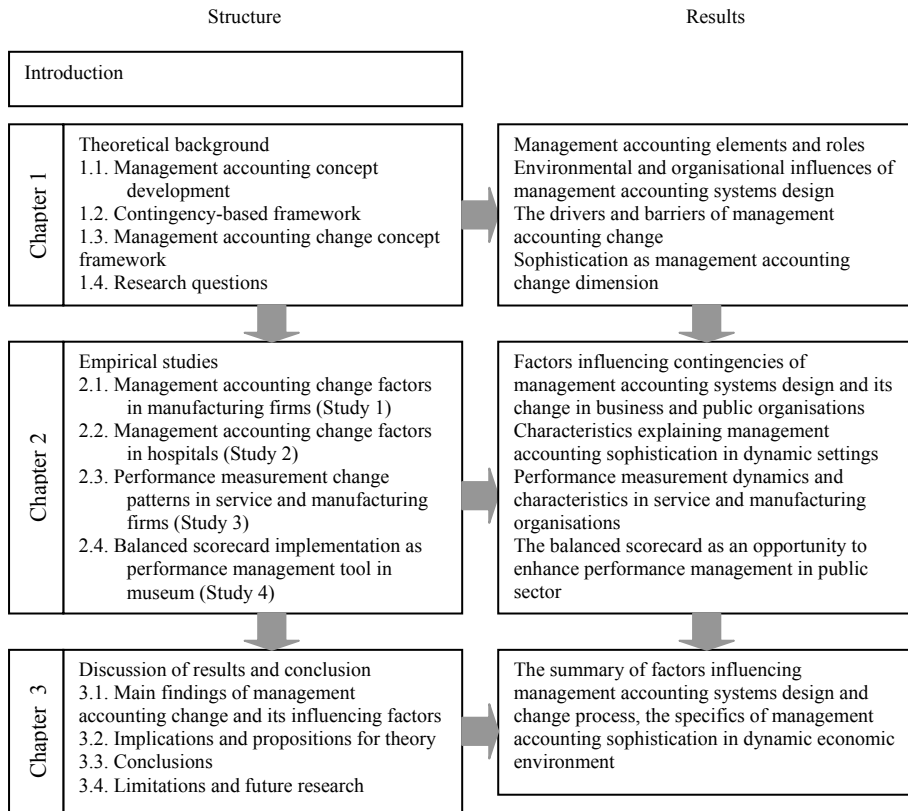


Figure 1.1. Structure of the study
 Source: compiled by the author

The third chapter provides a discussion of the main findings and conclusions of the dissertation. The chapter starts with a summary of the findings from the empirical studies and aligns them with the dissertation’s research questions. There follows a discussion of the dissertation’s findings, the main propositions for theory and implications for managers. After outlining the main theoretical conclusions, the chapter explains the value of the dissertation for theory and practice. The final sub-chapter outlines the limitations of the study and suggestions for future research.

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I. THEORETICAL BASIS FOR THE RESEARCH

I.1. Concept and Elements of Management Accounting

This chapter examines the theoretical foundations of management accounting and the modifications they have undergone over time, as well as introducing the research questions and methods applied in the current dissertation. The first section of the chapter describes the historical development of the management accounting concept in advanced market economies since the 1980s and presents an overview of empirical studies of management accounting, outlining the variation in the elements of classification used in previous research. The contingency theory approach and factors influencing management accounting are discussed in the second section. The third section presents an overview of management accounting change perspectives and attributes, based on previous empirical management accounting change studies. The last section of the chapter outlines the research questions and methods of the dissertation.

The evolution of the management accounting concept

In the market economy model, the common branches of accounting have been categorised according to the user of the accounting information. The users can be divided into two types: internal (managers and employees) and external (potential investors, creditors and government authorities). The objective of an organisation's accounting system is to provide sufficient information to these users. The division makes it possible to distinguish between two branches of accounting: management accounting (or managerial accounting) and financial accounting.

Management accounting (hereafter, MA) is concerned with the preparation and provision of accounting information for people within the organisation that assists them in making better decisions¹. Financial accounting mainly concentrates on the provision of information to external interest groups. Compared to financial accounting, MA is a relatively young discipline, and MA concepts and tools are still evolving as new ways are found to provide information that assists management (Hilton, 2002). Moreover, the current economic environment is changing rapidly. For MA to continue to be a useful tool for effective management in the future, it will have to be adapted to reflect those changes.

¹ In the current dissertation, the distinction between management accounting and cost accounting is made, whereas in the accounting literature these terms have often been used simultaneously. Here, management accounting offers information for internal use, whereas cost accounting is concerned with cost accumulation for inventory valuation to meet the requirements of external reporting and internal profit measurement (Drury, 2008, p. 19). Therefore, cost accounting offers a great deal of necessary information for managers, but at the same time meets the needs for financial accounting for external reporting purposes as well.

The nature of management accounting has been characterised by Gray et al. (2001) as a two-sided domain with a rather technical side, *accounting*, and a relatively soft approach, *management*. Accounting deals with the provision of information in the society or organisation. The second domain, management, has its origins in anthropology and psychology and is inevitably associated with various information issues. In order to plan, organise and control an organisation's activities, managers need information that can be obtained from an MA system. The effectiveness of the system depends on its ability to respond to that need and therefore on how suited it is to the organisational context. Regardless of whether the organisation is profit or non-profit-oriented, a manufacturer or a service provider, MA information plays an important part in supporting effective performance management. It is vital to all organisations seeking effective management and economic, rational decision-making.

Previous literature on the subject has provided a number of MA definitions and roles describing the content of MA in the context of the market economy, albeit with a rather limited focus, and the current functions and roles of MA have been considerably expanded from those seen decades ago. During the 1980s and early 1990s, the following examples of the definition of MA could be found:

Managerial accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information that is used by management to plan, evaluate, and control within an organisation. (Siegel and Shim, 1987, p. 261)

The focus of accounting data for intra-firm allocations through the planning and control process is termed management accounting. (DeCoster et al., 1988, p. 4)

Management accounting is concerned with the provision of information to managers who make decisions about the ways in which an organisation's resources should be allocated. (Arnold and Hope, 1990, p. 5)

These definitions emphasise one of the basic features of MA, namely, the internal use of financial data, the information provision function of MA for planning, decision-making and financial controlling within an organisation. Here the MA information has been understood as a technical rationality driven by the internal operations of organisations (Covaleski et al., 1996). In order to understand the core role of MA, one must comprehend the nature of economic rationality, and the theories and practices of organisational management and decision-making. Until the middle of the 1990s, this understanding of the fundamental nature of MA systems and practices persisted in the market economies (Drury, 1993). Towards the end of the 20th century, however, the application of accounting within the management process started to change remarkably (Bromwich and Bhimani, 1994). The definition developed by the International Federation of Accountants (IFAC), which includes 163 member

organisations from 119 countries, represents one of the first examples of the developments in the MA concept. It describes MA as:

The process of identification, measurement, accumulation, analysis, preparation, and communication of information (both financial and operating) used by management to plan, evaluate, and control within an organisation and to assure use of and accountability for its resources. (International Management Accounting ..., 1998, p. 99)

This definition represents the combination of related activities of information processing with the purpose of communicating the financial and operational information used by managers to plan, evaluate and control organisational performance. Here, MA information comprises both financial information and the operational information used for traditional management tasks. In addition, the importance of assuring correct resource usage and accountability in effective management is emphasised. The above mentioned IFAC statement recognises that different labels, in different languages, are used to refer to MA. Therefore, anyone dealing with MA should be aware not just of the range of definitions of MA, but also of their development over time, development that continues to this day. Definitions appearing since the beginning of this century have included:

Management accounting measures and reports financial and non-financial information that helps managers make decisions to fulfil the goals of an organisation. (Horngren et al., 2002, p. 6)

Management accounting is concerned specifically with how cost information and other financial and non-financial information should be used for planning controlling, continuous improvement, and decision-making. (Hansen and Mowen, 2003, p. 2)

Managerial accounting is the process of identifying, measuring, analysing, interpreting, and communicating information in pursuit of an organisation's goals." (Hilton, 2009, p. 4)

These definitions are similar to their predecessors in including the intention to support the managers in their activities. Besides the traditional management functions (decision-making, planning and control), continuous improvement and performance measurement issues are now being identified as essential outcomes of MA information. The most recent definitions also emphasise the role of the organisation's objectives or fulfilment of goals, which was missing from the earlier definitions. The latest definitions clearly emphasise a broader set of organisational management aspects highlighting information use for continuous improvement, the fulfilment of goals, and the wider scope of MA information that can comprise both financial and non-financial information. Nevertheless, the fundamental assumption underpinning MA definitions is that better-informed managers produce activities that serve the purposes of their organisation (Otley, 1980; Covalleski et al., 1996; Williams and Seaman, 2002).

The essence and activities of MA as they are currently conceived can be illustrated by the comprehensive definitions introduced by different professional accounting societies. For example, the Chartered Institute of Management Accountants (CIMA) – the largest association of management accountants in the United Kingdom – sees MA primarily as “*the practical science of value creation within organisations in both the private and public sectors and professional management accountants as financially competent business leaders*” (What is CIMA’s definition ..., 2009). CIMA relates MA to both profit and non-profit organisations because all organisations require information regardless of their activities or purposes. MA systems should provide information for short-term and long-term periods too. The current dissertation follows the CIMA approach, focusing on the MA and its developments in both business and public sector organisations. This study defines MA as *the process of identifying, measuring, analysing, interpreting, and communicating financial and non-financial information to assist the fulfilment of an organisation’s goals in the business and public sectors*.

As the definition of MA has developed, so too has the role and function of MA, which are viewed very differently in advanced market economies today than in the 1960s and 1970s. Several authors (e.g. Atkinson and Kaplan, 1989; Hilton, 2002; Gray et al., 2001) have pointed out that MA was previously seen rather as a method to calculate accurate costs for inventory and sales pricing. MA techniques and costing principles from that period, being to a greater extent internally oriented, are often described as the traditional variants. During the last decade, MA’s previous role as simply a calculation tool or cost information supplier has been superseded by its functioning as a business partner assuring rationality in management (International Management Accounting ..., 1998; Kaplan, 2001; Scapens et al., 2003; Hilton, 2009). For instance, according to the profile of management accountants proposed by CIMA:

They operate within all areas of organisations, in both the private and public sectors, driving success and creating value through a combination of the application of leading edge techniques and an in-depth understanding of the businesses in which they operate; whilst qualified in accounting and finance, their focus is commercial and forward looking, pre-empting and adapting to businesses’ changing needs. (What is CIMA’s definition ..., 2009)

Recently, the role of MA has been expressed as more like that of a strategic business partner supporting the decision-making and the management of the organisation’s activities. The emergence of the strategic partner role strongly emphasises the forward-looking aspect of MA, helping the organisation to adapt to changing needs brought about by the forthcoming changes in the organisation’s environment. This orientation towards the future plays a significant role in current resource allocation decisions. For example, during an economic recession the focus of management decisions and the MA area are primarily concerned with cost reductions, cost management or performance

management issues. Furthermore, the current economic environment, typified by the increasing power of the interactive relationships of customers, suppliers, and alliances leaves its imprint on the information needs of the organisation too.

Closer examination of present MA functions reveals that different approaches and perspectives have been applied by accounting scholars. In general, these approaches are complementary, describing the MA field from the following three perspectives:

- management decisions-related (decision-influencing or facilitating function),
- management levels (operational and strategic control), and
- management accountants' role.

The perspective related to management decisions, as underlined by Hilton (2002), is based on information needs being the driving force behind MA. It holds that MA information often serves two general functions: a decisions-facilitation function and a decision-influencing function. Thus, MA information is usually supplied to assist a decision maker in choosing between alternative actions or is intended to influence the manager's decision-making process. The focus behind the New Public Management reforms has been identified as the intention to facilitate efficient and effective decisions (Vinnari and Näsi, 2008). The diagnostic and interactive roles of MA and control information proposed by Simon (2000) also relates to the management decision-related perspective. Diagnostic use of MA information helps managers to monitor organisational outcomes and correct deviations from predetermined performance standards. Interactive use of MA information helps cope with strategic uncertainties and involves dialogue between managers in the course of decision-making.

Atkinson et al. (2001) identify different MA information functions, including operational control, product and customer costing, management control, and strategic control, and draw a distinction between different management levels (operative managers, middle managers, and senior executives) and their information needs. The distinction helps to systematise the MA information flows within the organisation and draws attention to the way that the information in budgets and reports has to respond to the information needs of the various management levels. The balanced scorecard (Kaplan and Norton, 2001b) represents one of the widely applied concepts that contribute to performance management by specifying indicators for operative and strategic management levels. An organisation's overall strategy (its mission in the public sector) is translated across financial, customer, internal process, and learning and growth dimensions into operational performance targets and measures.

Following the management accountants' perspective, Bhimani et al. (2008) highlight three functions of management accountants within organisations: keeping score, directing attention and solving problems. The first function emphasises the importance of the integrity of various forms of information, while the other two emphasise the helper role of the accountant. In the past, managerial accountants operated in a strictly staff capacity, usually physically separated from the managers to whom they provided reports and information.

Now, managerial accountants serve as internal business consultants, working alongside other managers in cross-functional teams in all areas of the organisation (Hilton, 2009). Thus, the management accountant's role today is to pursue value creation methods for the organisation by managing resources, activities, and people in order to achieve the organisation's goals most effectively. In addition, Burns and Vaivio (1999) explain that the management accountant's role in many organisations has transformed from 'controller' or 'score keeper' to 'business support' or 'internal business consultant'. For instance, it is not uncommon for management accountants to now be proactively involved in such areas as strategy, information systems implementation and change management, whereas a few decades ago the majority of management accountants were considered to be more 'bean counters' than business consultants (Lukka and Shields, 1999; International Management Accounting ..., 1999; Burns and Baldvinsdottir, 2007). The business support or consulting role includes the functions of directing attention and problem solving proposed by Bhimani et al. (2008).

The widening management accountant roles also affect the scope of MA information. For a management accountant to act as an internal consultant, the traditional information requirements have to be replaced with more wide-ranging information. Although much of the information provided by a managerial accounting system is still financial, there is a strong trend towards the presentation of substantial non-financial data as well (Atkinson et al., 2001; Bhimani et al., 2008). Traditional performance measures (e.g. profit in the business sector, budget-based costs in the public sector), are increasingly viewed as a part of a broader set of performance measures, where the causal links between non-financial and financial performance measures are discovered and used by strategically focused measurement tools, such as the balanced scorecard (Burns and Baldvinsdottir, 2007).

These three perspectives highlight the essential nature of MA as it is recognised in market economy practice. Decisions facilitating and influencing them show the impact of MA information on the rationality of management decisions and the decision-making process. The management levels perspective indicates the links between different management levels for operational and strategic control purposes within the organisation. Examination of the management accountant's role offers insights into the MA function described through its behavioural aspects. Each of these perspectives points out the general influence MA has on the effective functioning of an organisation.

A different situation can be discerned if we consider MA in countries with experience of planned economies. Accounting information and rational economic behaviour were largely ignored in the planned economy and served notably different purposes than in the market economy. The Soviet accounting system represented a unified planned economy model, where all enterprises provided comparable information to central planners. Comparability was achieved by using a standard chart of accounts, through which the various pieces of accounting information were accumulated and systematised.

Accounting information was a tool for adjusting the production process in a timely manner to meet planned targets (Enthoven et al., 1993). In general, in the planned economy, MA information and detailed cost and profitability data were of limited use to the management of enterprises because they had few decision-making responsibilities. Economic projections and profit measurement were primarily based on subjective planned targets (Kuter, 2004) and were not used for effective management. The role of accounting information in this context can be compared to a score keeper and was dominated by meeting planned targets and tight budget control.

In the Soviet planned economy, the centrally focused accounting methods and techniques were applied to all enterprises within the industry without being sufficiently customised to meet particular circumstances. Enterprises also had little motivation to develop their accounting systems (Mihhejev, 1975). The transition from a centrally planned to a market oriented economy entails a modernization of enterprises' accounting systems (Enthoven et al., 1993). Without a proper accounting system, neither managers nor investors or other stakeholders are able to evaluate performance and estimate costs. It might be argued that during the period of transition from a planned economy to a free market economy, MA started to develop into a separate accounting concept recognised as an extension of operational-technical accounting as it was in free market economies, but the MA field in the post-soviet Eastern European countries has been not researched in any detail. International publications provide little information on MA studies in those countries, the exceptions being Sobanska and Wnuk (1999) and Szychta (2002), who investigated the modification of cost accounting systems, management accounting and budgeting in Poland; Vamosi (2000), who researched MA change in Hungary; and Cadez and Guilding (2008), who examined the effect of market orientation, strategic choices and company size on strategic MA in Yugoslavia. However, this research cannot adequately explain the MA change in those countries with the numerous changes in their economic and legal contexts.

The transition economies represent a specific dynamic setting where MA changes can be expected to run alongside the development of organisations into more market oriented structures. Moreover, there is practically no internationally published research on the public sector MA developments in these countries. Proceeding from the previous MA concept development discussion the importance of MA information has been outlined both private and public sectors. Therefore, in order to understand the MA change in the dynamic economic environment, it is reasonable to raise the general research question: What are the main influencing factors and characteristics of MA change in business and public organisations operating in the dynamic setting?

In conclusion, it is clear that accounting has different meanings and roles depending on the context in which it is required to operate. In the market economy, accounting plays an important role for all sorts of organisations regardless of whether they are profit-oriented or non-profit organisations. Pragmatism dictates that their performance should be measured and evaluated in order to

guarantee the effective management of the organisation. Since the 1980s the content, meaning and roles of MA have been extended according to developments in business philosophy and changes in the economic environment.

In the market economy, there have been considerable developments in all elements of the MA concept, but especially in its functions and roles. Over the years, the scope of MA has widened until now it comprises both financial and non-financial performance information. This study sees MA as the process of identifying, measuring, analysing, interpreting, and communicating financial and non-financial information to assist the fulfilment of an organisation's goals in the private and public sectors. The role of management accountants within organisations have also altered from primarily being one concerned with technical calculation to today's strategic consulting role. These trends highlight the increasing need to interpret and communicate relevant information across the whole organisation, and whether the MA system is appropriate for the particular organisation becomes more relevant. However, in the most dynamic environments (in comparison to the more stable and developed economies) such developments in the MA field remain largely unexamined. More profound knowledge about MA change outcomes and the driving or hindering forces of change could explain the possible variations in these processes or similarities between them in relatively stable and dynamic economic environments.

Management accounting elements

Prior research reveals practically no clear-cut or distinct borders between the MA systems and the general information systems of an organisation. Nevertheless, to help to determine the MA area and its diverse nature before the empirical research, it is worth defining the common elements and functions of the MA system in organisations.

If MA is to be recognised as an integral part of the management process, it has to meet the demands made by management for information, and that requirement makes specifying management activities essential. There are various classifications of management functions, but the planning, organising, leading, and controlling functions are acknowledged as the traditional ones (see e.g. Robbins and Decenzo, 2004; Luthans, 2005). Additionally, decision-making has been seen as a separate function or enabling component of every management function or task (Hilton, 2009). These basic functions can help managers to achieve the organisation's stated objectives. Similarly, the professional body, IFAC, outlines the MA main objectives in relation to management activities as follows (International Management Accounting ..., 1998, p. 99):

- reducing subjectivity in the decision-making process,
- planning future strategies, tactics and operations,
- controlling the current activities of an organisation,
- measuring and evaluating performance,
- optimising the use of its resources, and
- improving internal and external communication.

The MA objectives listed above relate directly or indirectly to the previously outlined traditional management functions. Three of the MA information objectives – planning strategies, tactics and operations; controlling the current activities of an organisation; and reducing subjectivity in decision-making – can be associated directly with the planning, controlling and decision-making functions. The other two fundamental functions, organising and leading, have less tangible connections with accounting information. Organising includes organisational design and human resource management issues (Luthans, 2005). The leading function encompasses motivating employees and directing the activities within the organisation (Dessler, 2001). Nevertheless, both the organising and leading activities share a common theme, namely, performance measurement and evaluation, where accounting information forms an essential information base useful for organising and leading activities. In addition, the performance measurement and evaluation objective connects with the other management functions: planning and controlling. The final two MA objectives – optimising the use of its resources and improving an organisation’s communication – can be regarded as general aims expressing the common purposes of MA.

Assuming that the MA changes in the Estonian organisations that feature in the empirical section are moves towards developed market economy practices, the current study proposes that the MA objectives discussed provide the foundation for the specification of the elements of MA. The classification of MA elements makes it possible to determine the MA concept that supports the communication of relevant information for the managers within the organisation. The basic MA information is to a great extent related to diverse cost information reflecting consumption of different resources, such as materials, labour, machinery, and energy (Drury, 2008; Bhimani et al., 2008). Moreover, cost information is essential to several management activities, especially for planning and controlling purposes. By following the MA objectives and management functions, we can specify how they relate to the elements of MA. Accordingly, the author suggests that MA comprises the following four interconnected elements:

- cost accounting,
- planning and budgeting,
- control and reporting, and
- performance measurement.

Table 1.2 reviews the main suggested corresponding links between the MA elements, MA objectives and management functions. However, there is an overlap between the listed management functions and MA information objectives. For instance, for the controlling function, managers cannot rely purely on feedback information from reports, but also need information about the planned activities and performance measurement indicators. Therefore, Table 1.2 represents only the most important connections between the management functions discussed and the elements of MA.

Each MA element has its own functions and purposes. Cost accounting provides relevant cost information to reduce subjectivity in decision-making, but cost data form the basis for diverse planning and control activities. Cost

accounting also associates with the performance measurement aspects through cost assignment to cost objects and cost allocation issues. For businesses, cost accounting relates to the profit measurement in order to distinguish between profitable and unprofitable activities. Although, there is no profit intention within public sector organisations, the clear view about the cost items, cost centres and cost objects can enhance the opportunities to increase efficiency within the organisation.

Table 1.2. Links between MA system's elements, MA objectives and management functions

MA system's elements	MA objectives	Management function
	<u>Specific objectives:</u>	
Cost accounting	- to reduce subjectivity in the decision-making process	Decision-making
Planning and budgeting	- to plan its future strategies, tactics and operations	Planning
Control and reporting	- to control the current activities of an organisation	Controlling
Performance measurement	- to measure and evaluate performance	Planning, organising, leading, controlling
	<u>General objectives:</u>	
	- to optimise the use of its resources	
	- to improve internal and external communication	

Source: compiled by the author based on the IFAC's management accounting objectives (International Management Accounting ..., 1998, p. 99)

Planning and budgeting is concerned with the implementation of a plan for the year ahead, whereas various activities within the organisation have to be coordinated by the preparation of short-term plans or budgets for future periods. In general, the planning process and budgeting can be similar in business and public sector organisations, but there are also differences. Since it is difficult to measure precise objectives and their accomplishment in public sector organisations and even more so to express them in monetary terms, the budgets in non-profit organisations are mainly concerned with the input of resources, whereas business organisations can rely more on the sales revenue and focus on the relationships between inputs and outputs (Drury, 2008). In other words, in the public sector organisations there is less emphasis on the managerial performance in terms of results achieved than in business organisations.

The control and reporting element is concerned with the information about actual work required to fulfil organisational goals and with the preparation of accounting reports by segment and for the organisation as a whole. For the

organisations, it is often meaningful to prepare segmented performance reports (in business organisations, income reports), which show the performance of major segments or departments and for the entire organisation. Segmented performance reports enable top managers to exercise control over their subordinates. As regards budget-based management control, as a basic form of control it tends to be more widely used by the public sector than in business sector organisations.

Measuring the performance of activities, sub-units, managers and other employees within an organisation is at the core of performance measurement. Information about both actual and planned performance is necessary for effective management. Analysis of variances between planned and actual performance offer valuable insights and reveal actions required. The difficulties of precisely quantifying measures in the public organisations mean that obtaining meaningful comparisons between budgets and actual results demands extra effort devoted to developing appropriate performance measures. In addition, performance measurement has an important role in motivating people to work towards their organisation's goals. Performance measurement principles also affect the planning and control elements. The performance measurement principles applied by an organisation affect the performance measures specified in budgets and reports, which generally reflect performance information.

All the elements described may be identified in all organisations regardless of their purpose or sector. At the organisational level, the elements may be used more or less intensively by managers depending on the manager's preferences or the specific performance dimensions they are working to. The four elements together form an organisation's MA system. The links between management functions and MA elements connect MA with the overall management information system and its different parts: planning, management control and performance measurement systems.

The focus of the current dissertation is on all four MA elements, but it pays particular attention to the performance measurement and cost accounting elements. There are two main reasons for this focus: Performance measurement can be considered a key element for effective performance management in the organisations, and cost accounting provides the fundamental information for other MA elements and can be considered the basis of management information.

Overview of previous empirical management accounting studies

Empirical studies of MA can be generally viewed as falling into one of three groups: studies of either the design, the implementation or the use of MA systems (Bourne et al., 2000; Atkinson et al., 2001; Bhimani et al., 2008; What is CIMAs definition ..., 2009). MA system design studies emphasise the main components and their functions within the system, where they have been connected to the other organisational characteristics, such as strategy, structure, and technology. Just as organisations differ in their arrangements, so too can the complexity and sophistication of MA system design vary. The implementation

studies outline and explore the functioning of an MA system within a particular setting (Granlund and Malmi, 2002; Hyvönen, 2003; Caglio, 2003; Scapens and Jazayer, 2003). Studies of an MA systems use cover themes relating to the usage and application of MA information in management activities. This incorporates the use of accounting information in decision-making (Foster and Gupta, 1994; Bouwens and Abernethy, 2000; Gerdin, 2005; Henri, 2006), reliance on accounting performance measures (Hartmann, 2000), the use of MA system information for control purposes (Macintosh and Daft, 1987; Williams et al., 1990), and reward systems (Ittner et al., 2003). The widely applied diagnostic and integrative control framework pioneered by Robert Simons relates mainly to the use of MA information (Mundy, 2010).

The design and use of MA systems are undoubtedly connected. Well-designed MA systems can offer reliable and relevant information to managers to support decision making or planning and control. These systems might gain the trust of managers and consequently be used quite extensively. Poorly designed MA systems offer information that will not help managers to make decisions and such systems are, as a result, likely to be underused. The design of MA systems and the use and interpretation of the MA information produced by the systems are critical to success in the globally competitive and technologically challenging environment facing both manufacturing and service organisations today (Atkinson et al., 2001; Hilton, 2002). The current dissertation concentrates on the MA system design issues, changes in system design, and the factors affecting such changes. The importance of the design focus has also been stressed by Malina and Selto's (2004) performance measurement study, which found system's design attributes to be more important than use attributes.

Previous empirical studies of MA can be divided into two categories: static and dynamic. Studies of the first type describe the MA practice in an organisation at a certain point in time (Bhimani, 1996; Ballas and Veneris, 1996; Virtanen et al., 1996; Scherrer, 1996; Bruggeman et al., 1996; Chenhall and Langfield-Smith, 1998; Tillema, 2005). This group of studies describe either the whole MA system or particular elements of the system without focusing on the possible changes taking place in the system over time. The second category of studies explores the dynamic nature of these systems, including a variety of MA change issues (Innes and Mitchell, 1990; Libby and Waterhouse, 1996; Anderson and Lanen, 1999; Vamosi, 2000; Pistoni and Zoni, 2000; Laitinen, 2001; Luther and Longden, 2001; Williams and Seaman, 2001; Szychta, 2002; Baines and Langfield-Smith, 2003; Malina and Selto, 2004; Sulaiman and Mitchell, 2005; Chanegrih, 2008; Henri, 2006 and 2010). These studies explore the different aspects of such changes and the reasons for changes more deeply by comparing MA changes over the course of time and therefore concentrating more on the MA change as a process.

MA has been researched for decades, but the MA concept applied in the previous empirical studies is broad and not always clearly stated, whether in static or dynamic studies. There are studies that do not specify the MA elements investigated but use MA as a generic concept (e.g. Szychta, 2002; Waweru et al.,

2004). In addition, there are studies only listing different MA methods or techniques without an exact MA system component classification (e.g. Chenhall and Langfield-Smith, 1998; Laitinen, 2001; Luther and Longden, 2001; Baines and Langfield-Smith, 2003). The lack of a systematic MA concept and the diligent categorisation of its elements can make it difficult to understand the studied constructs and open up the possibility of empirical findings being misinterpreted.

In the current research, the specification of MA content and its elements is considered an essential step in studying the MA change phenomenon. Part of that specification process is a review of the empirical studies of MA in business organisations conducted during the last two decades, as presented in Table 1.3. The studies are divided into two groups: static MA design and dynamic studies. The categorisation of MA elements is based on previously discussed management activities and their connection with accounting information. As Table 1.3 illustrates, the cost accounting element has been included in the majority of static MA design and change studies, with the exception of Tillema's (2005) study which looks at the sophistication of MA in planning, controlling and performance measurement without any special focus on cost accounting. However, the cost accounting element together with the cost management, cost calculations and costing principles is generally seen as a significant part of recognised MA studies. The summary of MA elements covered by empirical studies illustrates the variation in the specification of MA elements. Some studies have researched planning as a separate component (Chenhall and Langfield-Smith, 1998; Pistoni and Zoni, 2000) whereas others have researched it jointly with the controlling aspects (Anderson and Lanen, 1999; Laitinen, 2001; Tillema, 2005). Budgeting has sometimes been included in the planning component (Libby and Waterhouse, 1996; Ballas and Veneris, 1996; Williams and Seaman, 2001; Waweru et al., 2004) and sometimes considered separately (Firth, 1996; Chenhall and Langfield-Smith, 1998).

There are also other aspects (such as decision-making, directing, rewarding, and capital budgeting) that have interested researchers studying MA in practice. Different aspects of MA information provided to support decision-making have been studied, for instance, by Libby and Waterhouse (1996), Williams and Seaman (2001), and Tillema (2005). Libby and Waterhouse (1996) also looked at the use of MA to guide reward systems, and MA has been researched as one component of financial management, which has generated studies about capital investments (Bruggeman et al., 1996), cash flow management (Vamosi, 2000) and capital appraisal techniques (Bhimani, 1996) in the area of MA research.

Table 1.3. Overview of the empirical studies and their focus in relation to MA elements

MA element Author (year)	Cost accounting	Planning and budgeting	Control and reporting	Performance measurement	Additional focus
Static MA design studies					
Bhimani (1996)	+			+	
Ballas and Veneris (1996)	+	+		+	Financial control
Virtanen et al. (1996)	+				
Scherrer (1996)	+			+	Cost management
Bruggeman et al. (1996)	+			+	Capital investments
Chenhall and Langfield-Smith (1998)	+	+		+	Different analyse methods
Tillema (2005)		+	+	+	
MA change studies					
Innes and Mitchell (1990)	+			+	Market oriented practices
Libby and Waterhouse (1996)	+	+	+		Directing, decision-making as MA sub-systems
Anderson and Lanen (1999)		+		+	Cost management
Vamosi (2000)	+				Cash flow management
Pistoni and Zoni (2000)	+	+	+	+	
Laitinen (2001)	+	+	+	+	
Luther and Longden (2001)	+	+		+	
Williams and Seaman (2001)	+	+	+		Relevant information for decision-making
Szychta (2002)	+	+			
Baines and Langfield-Smith (2003)	+	+		+	Advanced MA practices
Malina and Selto (2004)				+	
Sulaiman and Mitchell (2005)	+	+	+		Directing, decision-making as MA sub-systems
Chanegrih (2008)	+	+	+		
Henri (2006, 2010)				+	

Source: compiled by the author

Given the theme of the current research, it will not be surprising that the focus of the following discussion falls mainly upon MA change studies. The empirical MA change studies to date have mostly investigated the elements of MA jointly rather than separately. This can be explained by the interdependent nature of those elements. For instance, cost accounting incorporates the cost information calculated using different costing methods and techniques. Essentially, the same cost calculation is one part of the reports (cost reports, income statement) and also a

part of the reporting element. These costs also form the basis for performance measurement and management. The same costs can be part of the next planning period included in the budgets, and can be considered as a part of budgeting element. Thus, all the MA elements are tightly connected, and the selection of which MA elements to study inevitably varies, depending mainly on the research questions and the constructs applied.

Within MA change settings, cost accounting and performance measurement elements have been studied by Innes and Mitchell (1990) and Baines and Langfield-Smith (2003). The changes in planning, budgeting and reporting elements have been studied by Libby and Waterhouse (1996), Williams and Seaman (2001) and Sulaiman and Mitchell (2005). Changes in cost accounting together with changes in budgeting and performance measurement have been investigated by Laitinen (2001) and Luther and Longden (2001). Changes in planning and performance measurement have been explored by Anderson and Lanen (1999). A number of MA change studies concentrate exclusively on the performance measurement and management element (Malina and Selto, 2004; Henri, 2006 and 2010), and some studies have studied performance measurement as a part of the management control area (Libby and Waterhouse, 1996).

The MA change studies in the public sector have covered several accounting development themes highlighted in the New Public Management reforms in the advanced market economies. Since the mid-1990s there have been a number of accounting innovations in the public sector, such as implementation of activity-based costing, resource management and key performance indicators (Jackson and Lapsley, 2003). In addition, Monsen (2008) has suggested that international governmental accounting development involves introducing accrual accounting principles. These trends gave rise to studies investigating the public sector accrual-based accounting practices in different countries (Guthrie, 1998; Christensen, 2002; Carlin, 2005; Paulsson, 2006; Connolly and Hyndman, 2006). Considerable attention has been devoted to the performance measurement area (Kloot and Martin, 2000; Lawrence and Sharma, 2002; Kennerly and Neely, 2002; Christensen and Skaerbaek, 2007). The public sector studies outline the general political and administrative aspects of the changes in accounting practices or techniques, but MA system development at the organisational level has gained less attention. A focus on the MA system at the organisational level helps to understand the constructs and forces behind the system's development that may eventually contribute to the effective management of the organisation.

Although, historically, accounting has been seen different in the public sector from accounting in the business sector, the worldwide New Public Management trends have prompted the spread of business management practices to the public sector as well (Jansen, 2008). These trends affect MA systems and the views of the performance dimensions that MA systems should cover. Little, however, is known about the MA developments in Estonia and other Eastern European countries. As the introductory chapter underlined, there is practically no internationally published research on the public sector MA developments in these countries – a fact that gives rise to this paper seeking to determine the most influential factors

and characteristics of MA change in public sector organisations operating in a dynamic economic environment, Estonia. Nevertheless, the scope of the current dissertation does not extend to MA changes across the whole public sector of Estonia. Instead the investigation is of health care and cultural organisations. The findings generated about changes to MA could be useful not only to those interested in the health and culture spheres but can also offer valuable insights into other public sector organisations, and so will be of interest to those seeking to enhance effective performance management within the organisations.

Summing up, studies conducted in the MA field inevitably differ in their focus and orientation. Over the decades the MA concept has been developed and the roles assigned to MA have been changed. Four main MA elements can be identified: planning, controlling, performance measurement and cost accounting. Each of these four is critical to the design of effective MA systems and change studies in stable advanced market economies. The scarce findings available on MA change in countries emerging from a planned economy regimen offer little explanation of the developments to MA in the business and public organisations operating in the dynamic economic environment. The current dissertation considers the development of all MA elements but pays particular attention to the performance measurement and cost accounting elements; the former dictates a central set of performance assessment approaches and tools in the organisation, and the latter supplies the information fundamental to the other MA elements.

1.2. Contingency theory framework

The following section provides an overview about the contingency theory framework applied in MA studies and outlines the main factors that influence the design of an MA system.

Contingency theory

MA change studies in public and business organisations demonstrate various theoretical approaches, but two, the institutional and the contingency approach, can be considered common. The former, based on old institutional economics, is concerned with the rules and routines of MA practice and how they become institutionalised (Burns et al., 1999). The latter, based on the rationality and equilibrium principles from neoclassical economics, assumes that organisations moving towards equilibrium have to change their MA system according to the influences of the external or internal environment (Otley, 1980; Chenhall, 1997). The contingency approach derives from management literature, where it has been applied and described in relation to organisation design (Donnelly et al., 1992; Griffin, 2004). Organisations designing their new structures or redesigning existing structures depend on various environmental influences. Appropriate organisational structures depend on the contingent factors of an operating context. In the same way, the MA theorists have argued that the nature and design of an accounting system is contingent upon its operating context (Otley, 1999). This approach contradicts the universal-style thinking

according to which management selects a single best way in all situations depending on the relative importance of a task in relation to human considerations (Griffin, 2004). Thus, the contingency approach assumes that an appropriate accounting system is influenced by the operating context.

There are two contingency models applied in the accounting research: the business organisations' accounting information system design model proposed by Otley (1980) and a governmental accounting innovation model developed by Lüder (1992). Studies of business organisations largely rely on Otley's framework or its advanced forms (Chenhall, 2003). Figure 1.2 illustrates the essential components and the relations of these studies. The contingency model of governmental accounting developed by Lüder (1992) specifies the general social-political-administrative environmental impacts without stimuli provided by reforms on governmental accounting innovations. Chan et al. (1996) and Christensen (2002) extended this model with the addition of attitudinal and behavioural variables. However, the presented governmental accounting model contains what is essentially the information users' and producers' perspective without the deeper focus on the changes within an MA system and its elements.

The alterations in public sector management brought about by the dominance of New Public Management and its promotion of businesslike practices allows us to interpret changes in MA systems in the same way as we could in the private sector. Therefore, the focus of the current dissertation is on organisational level MA change outside of the social-political-administrative environment and follows the rational management paradigm and the contingency model originating in the business sector. Moreover, Lüder's governmental accounting model and its iteration developed by Chan et al. (1996) emphasise the changes in accounting procedures and techniques rather than those in the MA system which is the subject of the current dissertation.

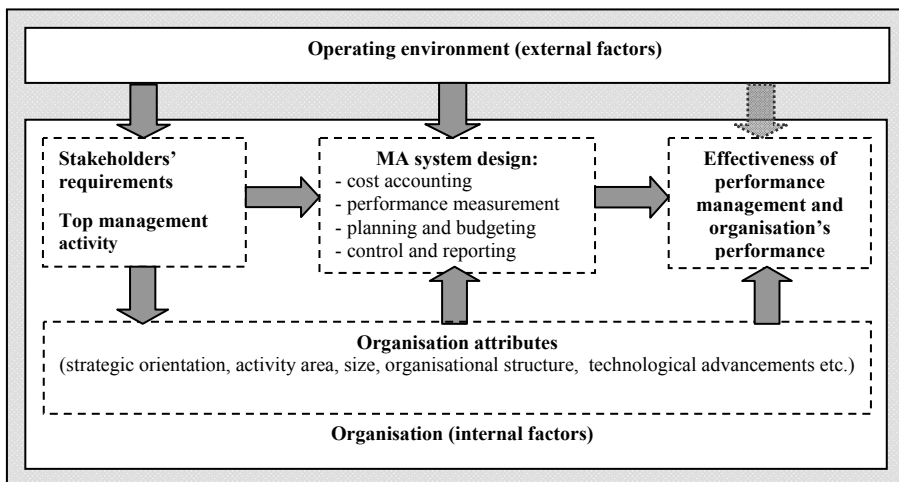


Figure 1.2. The contingency theory framework
Source: compiled by the author

The contingency framework presented in Figure 1.2 illustrates the direct and indirect influence of the operating environment on organisational arrangements (stakeholders' requirements, management activities, strategies, structures, technological advancements, etc.) and on the design of an MA system and on the effectiveness of performance management. Under the contingency framework, the operating environment is considered an essential factor affecting the organisational arrangements, its management control and accounting systems (Khandwalla, 1972; Gordon and Miller, 1976). The operating environment, with its relatively broad scope, can be seen as a complex set of institutional forces outside of an organisation. The significance and impact of the specific forces on the organisation and its arrangements vary, depending on the context. Political and administrative institutions have a greater influence on public sector organisations' operating environments, whereas economic forces are more influential for business sector organisations. The current dissertation identifies the operating context by considering influences from the economic and legal environment. The economic environment is associated with the market dynamics described through the changes in the competition, competitors' actions and customers' needs. The legal environment mainly relates to changes in accounting regulations and public sector governance. The author believes that changes to the economic and legal environment shape the foundations of a dynamic economic context, and for that reason has focused this work on market dynamics and the changes in accounting regulations.

After the influence of the environment has been considered, the precise form and shape of organisational arrangements will depend from one side on the stakeholders' interests or pressure and from the other side on the activities of top management (Hopwood, 2009). In public sector organisations, stakeholders' requirements will be aligned within two interest groups: process stakeholders, who are concerned with the realization of the settled organisation's objectives, and environmental stakeholders, who are interested in obtaining public services for a reasonable amount of money (Atkinson et al., 1997). For the private sector organisation these requirements are primarily associated with the owners' interests. The activity of top management can be considered to be similarly important for both public and private organisations. Thus, the stakeholder requirements together with the management activity generate the particular characteristics of organisational arrangements and determine the MA system's design. When the stakeholders' requirements are inconsistent with the activities of top management and an existing MA system, there will be a need for changes in organisational arrangements. Changes to organisational arrangements can also affect the design of the MA system. The broader array of stakeholders and interests associated with public sector organisations generates a need for a broader view of the organisations' performance so as to reflect the interests of all those stakeholders. MA systems reporting the required aspects of performance can in turn affect the performance management effectiveness of the organisation.

An appropriate MA system should provide superior information to improve the decision-making of individuals and enhance the performance of the organisation (Chenhall, 2003). In other words, accounting systems should help managers to visualise, measure and evaluate the desired outcomes or goals of the organisation, so having a positive influence on the overall performance of the organisation. Conversely, where the MA system is inappropriately designed for its context, the information required by management will not be available and there will be less effective performance.

According to the contingency theory framework (Figure 1.2) the performance or effectiveness of performance management, as influenced by the environment, the organisation and the MA system, represent the final result of the presented contingency model. The link between an MA system's design and organisational performance can be seen as of lesser relevance than the common effect of other organisational variables. In general, the overall effect on the performance has been considered the most desirable and practical outcome of the model. Nevertheless, in practice the broad set of factors that can influence performance makes predicting and directing organisational performance complicated for managers. In addition, the complex and often non-linear relationships between the variables make it difficult to observe the influences on performance, to verify results, and derive universal implications for theory, although some studies of MA in business have researched the effects MA has on organisational performance. For instance, Baines and Langfield-Smith (1997) found that changes in advanced MA practices (greater reliance on non-financial information), together with increased focus on differentiation strategies due to intensified competition, have led to improved organisational performance. De Geuser et al. (2009) found that the balanced scorecard not only improves the integration of the management processes and empowers people but also has a positive impact on organisational performance. Chuan et al. (2008) revealed in Chinese companies that greater use of non-financial measures will lead to better organisational performance. Interestingly, Waweru et al. (2004) found evidence of MA change and performance, where those companies reporting declining financial performance were more likely to change their MA practices. With regard to the public sector, the fact that the variables involved are complex and that performance is often delineated ambiguously means that tracking the effect of MA on overall organisational performance can be very challenging.

Basically these relations and influences are apparent in different environments whether stable or dynamic. In a stable environment there is little motivation to drive changes in MA and practically no environmental forces forcing them. However, in a dynamic environment, where changes are a natural and integral part of the operating context, there are more environmental pressures to redesign the organisational structure and to change MA. The design of an MA system depends directly on the organisational attributes, activities of stakeholders and managers, and indirectly on environmental variables. Considering the more frequent and radical changes in the dynamic environment and in the organisational variables, we might also expect more changes in the design of an

MA system. These changes inevitably also influence the basic role of the MA system to convey the information necessary for effective management.

Researchers have argued that the lack of clear classification and absence of sufficient data are methodological weaknesses that have led to contingency studies being fragmentary and contradictory (Langfield-Smith, 1997). Nevertheless, contingency theory has made significant contributions to MA research on a range of issues in the business sector, for instance the design and role of accounting and control systems (Chenhall and Morris, 1986; Chenhall and Langfield-Smith, 1998), budgeting and strategic planning (Merchant, 1981; Baines and Langfield-Smith, 2003; Tillema, 2005). Chenhall (2003) provides a comprehensive overview of the developments in empirical contingency-based research in business organisations in the developed market economies since the 1980s. However, since the 1990s there has been little research into MA in Eastern European countries. The nature and magnitude of the changes in the economic and legal environment of those countries are rather different from changes experienced by advanced market economies. Therefore, examples drawn from these rather dynamic settings can offer valuable insights to complement theories addressing MA change and its contingent factors.

Management accounting contingent factors

Contingency theory has evolved to be among the predominant research approach in MA and management control studies of business organisations (Chenhall, 2003; Ferreira and Otley, 2009). These studies have investigated different contextual factors and the constructs operating between them. The focus of the current dissertation is on two categories of variable:

- firstly, according to the contingency location, these can be classified into environmental (external) and organisational (internal) factors (Chenhall and Morris, 1986; Anderson and Lanen, 1999; Luther and Longden, 2001; Baines and Langfield-Smith, 2003; WaWeru et al., 2004; Malina and Selto, 2004; Tillema, 2005);
- secondly, concerning the nature of the impact, these can be grouped as change drivers and barriers (Innes and Mitchell, 1990; Cobb et al., 1995; Williams and Seaman, 2001; Kasurinen, 2002; Sulaiman and Mitchell, 2005; Chanegrih, 2008).

The first category factors derived directly from contingency framework explain how appropriate an MA system is to its operating context. The second category factors concentrate on the influences within an MA change process. These two categories can be viewed as two complementary perspectives. The first perspective helps to explain the variation of MA design between the organisations, while the second examines more closely the forces that speed up or slow down the MA change process. Although, the same factor can explain the design of an MA system in a particular context, it can also be considered a driver of change in MA. For instance, a high level of competition can explain the need for more frequent and customer related measures and the high reliance on customer or market related performance measures. However, if the level of

competition is described as an increasing variable and interpreted more as a dynamic concept –rather than a reflection of inconsistencies in the MA system design illuminated by the increasing competition – it explains the movement towards stronger application of customer related performance measures. Hence, these two complementary categories can offer more insights about the reasons and the process of MA change. Subsequently, the first (MA design related) category of factors will be examined in more detail. The second category of factors (change drivers and barriers) will be discussed more profoundly in the next MA change section (sub-chapter 1.3.)

This study applies the division of environmental (external) and organisational (internal) factors derived from contingency theory. Table 1.4 gives an overview about the contingency factors applied in MA studies. The most widely studied environmental factors in MA practices in an advanced market economy are environmental uncertainty and hostility (Khandwalla, 1977; Otley, 1978; Chenhall and Morris, 1986; Chapmann, 1997; Anderson and Lanen, 1999; Hartmann; 2000; Luther and Longden, 2001; Baines and Langfield-Smith, 2003; Tillema, 2005) and national culture (Hofstede, 1984; Harrison, 1992; O’Conner, 1995; Chanegrih, 2008).

The primary dimensions of environmental uncertainty are associated with market dynamism and competition intensity (Simons, 2000) that characterise the dynamics of the economic environment. Scholars have pointed out that an environment so difficult to predict will have an impact on the broad scope of MA information (Chenhall and Morris, 1986), and will associate with more open and externally focused MA systems (Chenhall, 2003), which are the essential characteristics of sophisticated accounting. Organisations facing greater perceived environmental uncertainty (e.g. Langfield-Smith, 1997; Baines and Langfield-Smith, 2003) tend to make greater use of non-financial measures. Similarly, those organisations with greater growth opportunities (Abernethy and Lillis, 1995) associate more with the stronger application of non-financial information. Conversely, organisations with lower environmental sensitivity emphasise financial measures more (Moers, 2006). Environmental hostility from intense competition stresses the importance of formal control (Khandwalla, 1972; Otley, 1978; Libby and Waterhouse, 1996) and adoption of more sophisticated accounting systems (Laitinen, 2001; Baines and Langfield-Smith, 2003; Waweru et al., 2004).

Table 1.4. Summary of factors applied in contingency-based MA studies.

Factors location	Factor	Author (year)
Environmental (external) factors	Environmental uncertainty and hostility	Khandwalla (1977), Otley (1978), Chenhall and Morris (1986), Chapman (1997), Anderson and Lanen (1999), Hartmann (2000), Luther and Longden (2001), Baines and Langfield-Smith (2003), Tillema (2005)
	Changes in economic and legal environment	Anderson and Lanen (1999), Vamosi (2000), Luther and Longden (2001), Waweru et al. (2004)
	National culture	Hofstede (1984), Harrison (1992), O'Conner (1995), Lapsley and Pallot (2000), Devlin et al. (2002), Chanegrih (2008)
Organisational (internal) factors	Size	Bruns and Waterhouse (1975), Merchant (1981), Libby and Waterhouse (1996), Luther and Longden (2001), Laitinen (2001), Waweru et al. (2004)
	Technology	Khandwalla (1972), Merchant (1984), Dunk, (1992), Brignall (1997), Williams and Seaman (2001), Baines and Langfield-Smith (2003), Waweru et al. (2004)
	Strategy	Miles and Snow (1978), Gupta and Govindarajan (1984), Simons (1987), Chenhall and Morris (1995), Anderson and Lanen (1999), Laitinen (2001), Malina and Selto (2004)
	Organisational structure	Gordon and Miller (1976), Nanni et al. (1992), Scott and Tiessen (1999), Baines and Langfield-Smith (2003)

Source: compiled by the author

In addition, Chapman (1997) proposes that accounting has a planning role to play in conditions of uncertainty but there must be substantial interactions between accountants and other managers to cope with changing conditions. Merchant (1990) suggests that high environmental uncertainty is associated with the importance of budgets in planning and evaluation processes, the requirement to explain variances, and with substantial levels of interaction between accountants and other managers. Wickramasinghe and Alawattage (2007) outline that in hostile environments, managers tend to rely on frequent information processing to assess danger, and also employ sophisticated MA systems. Generally, environmental elements that are hard to predict have an impact on the sophistication and roles of MA, and the detailed findings that the

statement encapsulates can offer valuable insights for studies focused on the dynamic economic context.

In addition to market dynamics and increasing competition, the frequent changes in economic and legal environments cause environmental uncertainty in the dynamic and developing economies of the former Soviet territories. The fundamental economic restructuring and the rapid changes in the legal or economic environment provide potential sources of environmental uncertainty, which will in turn influence the design and use of MA and control measurement systems (Anderson and Lanen, 1999; Vamosi, 2000; Luther and Longden, 2001; Waweru et al., 2004). It seems logical to assert that in conditions of significant economic transformation and rapid development, changes to legal accounting regulations can affect and facilitate changes in the MA field. Researching the public sector, Christensen (2002), Saleh and Pendlebury (2006) and Olorilanto (2008) investigated the changes prompted by the adoption of accrual-based accounting in governmental institutions, but without any intense focus on the development of MA systems. Evidence on the influence of legal accounting regulations on the MA and control systems is, however, limited. That limited knowledge in developing economies may be a result of a narrow understanding of the MA concept, which is often perceived as an accounting domain with a certain freedom of implementation and not as a function necessary to support effective management.

In Estonia, accounting regulations have moved swiftly to reflect accounting principles accepted in market economy countries. The transition has been encouraged by amendments to the accounting law enacted in 2003 that governs both businesses and the public and governmental sectors. The recent changes in accounting regulations are related to the developments in the implementation of accrual-based accounting in the budgeting of the public sector. Considering the accounting framework formation process that occurred during and after the economic transition period, it is reasonable to distinguish the environmental aspects affecting companies' MA systems at the general economic environment level and at the legal accounting environment level.

A dynamic economic environment is also associated with greater environmental heterogeneity in terms of diverse customer, technological and other characteristics affecting the MA system that could respond to those diversities (Wickramasinghe and Alawattage, 2007). To survive and operate successfully in dynamic environments, organisations need to continuously adapt their performance measurement systems to support effective management decision making. Evidence from previous performance measurement studies shows that environmental dynamics are important drivers influencing the adoption of more complex performance measurement systems (Chenhall and Langfield-Smith, 1998). Similarly, economic reorientation in Estonia and other Eastern European countries is very likely to have shaped the MA system arrangements of the countries' organisations. It is possible that heightened competition has increased the need to adopt more sophisticated and market-sensitive MA systems in Estonia and other Eastern European countries. Therefore, the further insights

into the changes producing more market-sensitive MA systems may contribute to our understanding about MA change in this setting. This leads to the following question: *what are the dominant environmental factors influencing the design and changes of MA systems in a dynamic economic environment?*

Contingency studies connecting the national culture with the MA and control systems have mostly relied on the cultural values dimensions proposed by Hofstede (1984). Nevertheless, research trying to account for the variety in MA system design with cultural dimensions, such as power distance, individualism-collectivism, and uncertainty avoidance, have not provided any obvious explanation of the variety of MA changes. In the public sector, the diversity of management style and divergence of accounting practice have been studied by Lapsley and Pallot (2000). They describe the diversity of response to New Public Management pressures by reference to structural, procedural, participatory and marketisation management styles, and the quality of the MA information was an important factor in operationalising New Public Management concepts. Devlin et al. (2002) confirmed that culture has an impact on government accounting innovations.

The organisational factors that explain much of the variation in MA design and the changes to MA in advanced market economies are size (Bruns and Waterhouse, 1975; Merchant, 1981; Libby and Waterhouse, 1996; Luther and Longden, 2001; Laitinen, 2001; Waweru et al., 2004), technology (Khandwalla, 1972; Merchant, 1984; Dunk, 1992; Brignall, 1997; Williams and Seaman, 2001; Baines and Langfield-Smith, 2003; Waweru et al., 2004), strategy (Miles and Snow, 1978; Gupta and Govindarajan, 1984; Simons, 1987; Chenhall and Morris, 1995; Anderson and Lanen, 1999; Laitinen, 2001; Malina and Selto, 2004) and organisational structure (Gordon and Miller, 1976; Nanni et al., 1992; Scott and Tiessen, 1999; Baines and Langfield-Smith, 2003). In Eastern European economies there have been few studies of MA system design or changes in the MA field that might have offered an explanation of the organisational influences on MA. The current dissertation attempts to fill that gap by exploring some of the issues and particularly the influence of size and technology (activity area) on MA. Strategy and organisational structure specifics are touched on only briefly and are not included in the main analysis. The distinction comes about due to the difficulty of capturing the numerous changes of structure that characterise organisations in the dynamic environment of Eastern Europe and linking those changes to changes observed in MA. Similarly, the dynamic setting and structural changes tend to cause organisations to alter strategies frequently or to publish rather ambiguously worded strategies that are very difficult to link firmly with changes to MA or the design of MA systems. However, the exclusion of the strategy and organisational structure from the deeper analysis does not mean that these factors are not relevant in influencing the MA design in organisations.

Khandwalla (1972) found that large firms had more diversified product lines and were more likely to be structured in divisions and to use more sophisticated methods of control. According to Merchant's (1981) study, large companies are

more decentralised and use more sophisticated budgets in a participative way. The advantages of smaller organisations include flexibility and an ability to react quickly and adapt to a competitive and changing environment. Garengo et al. (2005) characterise a small and medium sized enterprise as a company that usually has no planning (particularly strategic planning), or where such planning is limited to the operational levels on which performance is measured. As organisations grow, the need to handle greater quantities of information also increases and size is an important driver influencing the adoption of more complex performance measurement systems (Chenhall and Langfield-Smith, 1998). Managers of larger organisations have to handle increasing quantities of information and to institute controls such as rules, documentation, specialisation of roles and functions, extended hierarchies and greater decentralisation down hierarchical structures (Child and Mansfield, 1972). Similarly, Laitinen (2001) argues that the MA systems applied by large companies may be ineffective in small companies, and that administrative innovations are more sensitive to the size of the organisation than any technical innovations. In other words, the size of an organisation causes more variation in administrative developments than in technical developments. Garengo et al. (2005) state that performance measurement in small and medium sized enterprises are mainly characterised by operational and financial aspects. Previous research on the link between size and MA practices emphasises that size labels are important in explaining variations in MA practices between organisations (Bruns and Waterhouse, 1975; Merchant, 1981; Libby and Waterhouse, 1996; Luther and Longden, 2001; Laitinen, 2001; Waweru et al., 2004). Similarly, in the public sector, Woods (2008) revealed that the controls applied in local government are influenced by organisational size. However, there are few studies addressing organisation size and MA in the public sector. In dynamic environment settings with fast economic growth like Estonia, it is reasonable to assume that, as in the more stable economic contexts, size will exert an influence on variances in the design of MA systems, particularly in the case of large and small businesses. It follows that larger organisations tend to rely more on sophisticated MA systems, incorporating more complex performance measurement, than smaller ones do.

Prior research on the technology variable in advanced economies has found it to comprise the task, information and operation technology contingent factors. The latter include the nature of the operational process, its degree of routine, how well means-end relationships are understood and the amount of task variety (Emmanuel et al., 1995). Although there has been little research on the influence of technology on MA practices in Eastern Europe, it can be presumed that the changes in operating technologies, quality requirements, and information technology have also affected the changes in MA. Previous contingency studies conducted in advanced market economies have found that more standardised and automated process technologies are served by more traditional formal management control systems with highly developed process controls (Khandwalla, 1972), extensive use of budgeting (Merchant, 1984) and strong budgetary controls (Dunk, 1992). More contemporary studies have underlined the indirect

effects or relevant influence of the technology variable. For instance, technology measured by task variability and difficulty only moderates the intervening linkages between MA and the control system's change and performance (Williams and Seaman, 2001). Baines and Langfield-Smith (2003) argue that the increased use of advanced manufacturing technology will not increase the use of advanced MA practices, whereas Waweru et al. (2004) suggest the opposite, that the changes in technology represent a dominant contingent factor affecting changes in MA.

The contrasting findings about the changes in operational technology are probably explained by its indirect, and hence difficult to measure, effect on MA practices. Nevertheless, as explained by Chenhall (2003), the technology influence on MA design depends largely on the specifics of the task (routine or non-routine tasks) and the knowledge of the link between means and ends (complete and incomplete knowledge). Differences in MA practices can be explained by varied operating tasks and different understandings of the means-ends relationship in the activity area (such as manufacturing or services). The possible influence of service area on MA design has attracted less attention. Most MA studies focus on the practices of manufacturing organisations (Bhimani, 1994; Ittner and Larcker, 1998; Laitinen, 2002; Henri, 2010). Few service sector studies focus on individual cases in a particular industry (e.g. Ittner et al., 2003, in financial services; Beekes et al., 2010, in professional services). However, despite the expansion of the service sector, there is still only limited knowledge of MA system design and performance measurement attributes in service companies. Differences between service and manufacturing organisations' operations and tasks would imply that the designs of their MA systems would also vary, especially with regard to the performance measurement element. These differences should be reflected in MA systems in order to achieve and maintain effective measurement of performance. This dissertation focuses on the differences, that is, on performance measurement and how it differs in service orientated and manufacturing organisations.

The specific issues concerning strategy and organisational structure are not the main focus of the dissertation and are touched on only briefly. Strategy, defined and measured in so many ways, has been well covered in contingency studies with particular focus on businesses. Research suggests that conservative strategies like the defenders, the harvest strategy and cost leadership are best served by centralised control systems, specialised and formalised work and simple co-ordination mechanisms (Miles and Snow, 1978; Porter, 1980). Entrepreneurial orientation strategies such as the prospector, the build strategy, and product differentiation are linked to an absence of standardised procedures, decentralised evaluation, and flexible structure and processes (Laitinen, 2001; Baines and Langfield-Smith, 2003). The changes in strategic orientation are associated with the changes in the MA system and performance measurement principles. Baines and Langfield-Smith (2003) found that the change towards a differentiation strategy will result in the increased use of advanced MA practices. Links between the strategy and changes in performance measurement

were investigated by Malina and Selto (2004) who showed that performance measures might promote good decision making and further, communicate strategy efficiently, on the proviso that the objectivity and accuracy of the measures, and the cost versus benefit balance of the measurement, could be assured, and the importance of attributes does not appear to vary according to strategy.

Organisational structures can be formed based on the vertical, horizontal and integrated structures or on the functional areas, production lines, geographical areas, and different team and project structures. The suitability of an accounting system's design depends on its ability to fit with these structures and to adapt to changes in the organisation when necessary. Changes in organisational structures are often characterised by increased reliance on team-based structures, which are associated with changes in the way performance measures are applied. For instance, Baines and Langfield-Smith (2003) found that a greater use of team-based structures results in greater reliance on non-financial MA information, so widening the role of MA. Similarly, Scott and Tiessen (1999) discovered that team-based structures were associated with the combined use of financial and non-financial performance measures. Thus, changes in organisational arrangements extend the role of MA from one of deliverer of basic financial data to one of provider of complex information that enables team members to make the best decisions in light of changed conditions (Nanni et al., 1992; Baines and Langfield-Smith, 2003).

The findings from the advanced and more stable economies explain the variation in sophistication of MA designs as primarily determined by an organisation's size, technology, strategy and structure. However, comparable research on MA system design and change practices in dynamic economic environments is scarce. The few studies conducted offer only modest explanations of the organisational influences on MA system design and its changes. This suggests that investigation of the influence of organisational arrangements on MA change in a dynamic setting may generate more profound understanding of MA changes. This leads to the following research question: *what are the dominant organisational factors influencing the design and changes of MA systems in a dynamic economic environment?*

In conclusion, the contingency-based studies have recognized that the organisations operating in different environments and with different characteristics design their MA systems differently. The effectiveness of the MA system is dependent on its ability to fit the operating context. Inconsistencies between an MA system and its operating context can give rise to changes in that MA system. The contingencies explaining the accounting innovations in the public sector are mainly composed of the administrative and political influences on the accounting information users and producers. However, the focus of the current dissertation is on the design of MA systems and the changes made to them, and consequently the basic contingency theory framework proposed by Otley (1980) has been applied.

The influencing contingencies are divided into two categories: factors that explain the suitability of an MA system, and factors associated with the MA change process. This section focused on the first group of factors, where the suitability of an MA system was discussed in relation to environmental (external) and organisational (internal) factors. The research findings from advanced market economies indicate that the external factors exerting an influence are uncertain and hostile environment and national culture. Evidence from developing economies suggests that changes in economic and legal environments are crucial factors leading organisations to question the effectiveness of their MA systems. Therefore, in the dynamic settings the changes in economy can be reflected more accurately by market dynamics and changes in accounting legislation. However, the insufficient amount of research on dynamic economic environments begs the question: what are the dominant environmental factors that influence the design and changes of MA systems in a dynamic economic environment?

Findings from studies conducted in advanced market economies indicate that the organisational characteristics most important to explaining the effectiveness of an MA system are size, technology, strategy and structure. In the context of a dynamic economy, organisational influences on MA design remain largely unexplored. There are both similarities and differences in the factors influencing MA to be found in the dynamic and advanced stable economy settings. In order to pinpoint them, it is relevant to consider the question: what are the dominant organisational factors influencing the design and changes of MA systems in a dynamic economic environment? The answer will provide valuable insights into the environmental and organisational influences on MA design and changes to business and public sector organisations that could support effective management.

The second category of factors – the driving and hindering forces associated with the MA process will be discussed in detail in the next section.

1.3. The management accounting change concept

The following section discusses the MA change process, and its driving and hindering forces. Subsequently, the various change attributes used in previous MA change studies are discussed. The next section examines MA sophistication as a change dimension, and the last part of the section outlines the MA change concept that is applied in the dissertation.

The management accounting change process

MA change can be seen from different perspectives. For example, contingency theory, institutional theory and actor-network theory are perspectives that are widely applied in MA research. Contingency theory sees MA as a technical rationality which depends on the external environment and internal arrangements of organisations. Change in MA is viewed as mechanistic and is a result

of the misalignment between the MA system and its context (Otley, 1980). Institutional theory interprets MA as a socially constructed phenomenon which can be explained by institutionalisation (Burns and Scapens, 2000). In other words, new MA methods bring rules, people's actions become routines, and routines become new institutions. Actor-network theory interprets MA as a technology of control which is subject to actors' roles through networks; MA change involves human efforts and technological influences (Robson, 1992). Wickramasinghe and Alawattage (2007) see MA change as an inevitable and challenging phenomenon. They clarify it as movement from the mechanistic to the post-mechanistic approach; mechanization in technology has changed to digitalization, production orientation in management has changed to customer orientation, and conventional methods in MA have changed to new methods (Wickramasinghe and Alawattage, 2007). Thus, the definition of MA change is largely dependent on the approaches to MA. In relation to the dissertation's aim of expanding understanding of MA change in the dynamic economic environment, the author considers the contingency approach meaningful in explaining the influence of context on MA changes. In addition, rapid economic growth in Estonia creates an opportunity to look at MA change as the implementation of not only conventional market economy MA practices, but also new and sophisticated practices. Therefore, the author combines both mechanistic and post-mechanistic views when investigating MA change

The current dissertation views MA change as a process whereby a chain of events causes change actions and outcomes which are influenced by a variety of change factors. According to the contingency framework, organisations need to adapt their structures to changing contexts in order to find the best fit and support organisational performance. In this dissertation, MA change is defined as *shifts in an organisation's MA elements towards market economy practices and their sophisticated forms within the dynamic economic context*. In line with the contingency framework, the former MA definition assumes that shifts in the MA system are a result of an organisation's continuous efforts to move through effective performance measurement towards effective performance management. In other words, changes in MA systems help to enhance the fundamental management information base, leading to better communication within an organisation.

Changes in an MA system are often part of changes to wider management processes. Therefore, MA changes may be influenced by a wide range of management decisions and changes in the organisation. These interconnections between accounting change and organisational change can enhance or weaken new organisational arrangements and performance measurement effectiveness (Hopwood, 2009). Figure 1.3 illustrates the basic construct of the MA change process, comprising change factors, change actions and change outcomes derived from the general change process proposed by Groot and Lukka (2000). Change factors are divided into drivers and barriers, and influence change actions by stimulating or inhibiting changes in an organisation and its MA system. Change drivers can lead to reorientation in existing strategies or

operations, and this affects developments in MA systems and change outcomes. Change barriers inhibit the development of MA systems. Change actions include searching for suitable accounting methods and system design in implementing organisational reorientation. Change outcomes comprise changes in organisational arrangements and MA systems as an interrelated part of the organisational change process.

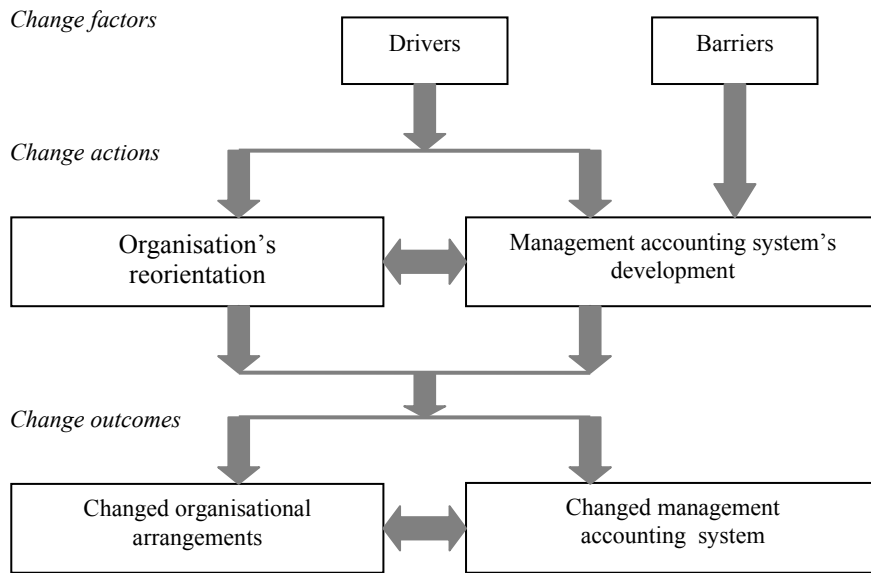


Figure 1.3. The MA change process as part of organisational change.
Source: compiled by the author based on Groot and Lukka (2000).

It is relatively hard to measure the implications of MA changes or the direct effects of a new applied method on organisational efficiency or final performance, and in practice these appear to be multidimensional (Groot and Lukka, 2000). Predicting change outcomes as a result of the frequency and high number of changes is more difficult in a dynamic environment than in a more stable context. However, it has been proposed that superior performance can be achieved by simultaneously combining all the elements, not by changing individual parts (Milgrom and Robert, 1995). This is also consistent with the complementary approach proposed by scholars, where improvements in performance can be achieved by applying multiple methods simultaneously and in an integrated fashion (Brignall and Ballantine, 2004). Therefore, it is likely that simultaneous changes in all MA elements, rather than individual changes, may lead to more effective performance management and enhanced performance.

Driving and hindering forces of the management accounting change process

The following discussion reviews the driving and hindering forces of MA change based on the main findings from advanced and developing market economies. Innes and Mitchell (1990) developed the first set of factors explaining MA change derived from business organisation practices. They explain the influencing factors in terms of motivators, facilitators, and catalysts, and these have been widely used by other researchers (Laitinen, 2001; Luther and Longden, 2001; Chanegrih, 2008). Motivators are factors which influence change in a general manner. MA researchers have shown that tight competition is a key motivating factor for MA change in advanced market economies (Innes and Mitchell, 1990; Laitinen, 2001; Baines and Langfield-Smith, 2003; Waweru *et al.*, 2004). Similarly, in the developing and more dynamic economic context, increasing competition has to be considered as an essential motivator for change. Facilitators are the factors which are necessary but not sufficient for a change to occur. Empirical studies have revealed that the support of top managers (Vamosi, 2000; Laitinen, 2001) tends to be the most crucial facilitator, but other facilitators include statutory accounting, accounting software developments, and adequate number of accounting staff facilitating the MA changes (Innes and Mitchell, 1990). Finally, a third set of factors – catalysts – are directly related to the timing of change, and include loss of market share, poor financial performance, launch of competing products, and arrival of a new accountant (Innes and Mitchell, 1990).

However, the division of change drivers into motivators, facilitators and catalysts can be complicated. As pointed out by Groot and Lukka (2000), catalysts are often not clearly distinguishable from other driving factors in the accounting change process. For instance, the arrival of a new accountant could be seen as a catalyst or a motivator of change. Therefore, this study distinguishes between two driver groups – motivators and facilitators – whereas catalysts are not examined separately. Motivators represent a group of variables which create a need for change and are related to changes in the environment and the organisation (e.g. changes in competition, changes in state regulations, scarcity of financing, changes in stakeholders' interests, changes in organisational arrangements). Facilitators include variables that support the change process, but do not cause the changes (top manager's attitude, changes in information needs, availability of accounting competence, advances in information technology and accounting software).

Influencing factors can provoke hindering forces as well as driving forces of change. Cobb *et al.*, (1995) further developed Innes and Mitchell's (1990) accounting change model by including barriers to change, leaders, and momentum for change. Facilitators and motivators may be necessary to create the potential for change, but action by individuals is needed to overcome the barriers to change and sufficient momentum is required to maintain the pace of change (Cobb *et al.*, 1995). In addition, Kasurinen (2002) further elaborated on the accounting change model by dividing the barriers to change into confusers

(e.g. uncertainty of the project's role in the future of the organisation), frustrators (e.g. existing reporting systems) and delayers (lack of clear-cut strategies, inadequate information systems). Unfortunately, these categories are often difficult to apply in empirical studies, because one variable can belong to several categories. For instance, depending on the context, lack of clear-cut strategies can have a delaying effect on change as well as a confusing effect.

Nevertheless, behavioural aspects which are barriers to change have received significant attention, especially from proponents of institutional theory. The most deeply studied change barriers are various forms of resistance to change (Scapens and Roberts, 1993; Cobb *et al.*, 1995; Malmi, 1999; Burns and Scapens, 2000; Granlund, 2001; Siti-Nabiha and Scapens, 2005; Ribeiro and Scapens, 2006). Burns and Scapens (2000) divide resistance to change into three separate but interrelated elements:

- formal and overt resistance due to competing interests,
- resistance due to a lack of capability (knowledge and experience) to cope with such change, and
- resistance due to 'mental allegiance' to established ways of thinking and doing, embodied in existing routines and institutions.

Burns and Scapens (2000) state that the effects of these different sources of resistance on the processes of MA change are likely to be difficult to predict, and will depend, to a great extent, on the institutions of the specific organisation. Focusing on the ceremonial way in which a new system of value-based management was implemented, Siti-Nabiha and Scapens (2005) revealed that decoupling can occur through resistance to accounting change, thereby simultaneously involving both stability and change attributes.

The other way to systematise hindering variables is to divide them into external and internal barriers. Garengo *et al.* (2005) outline the two main barriers to introducing performance measurement for small and medium-sized enterprises: exogenous barriers (e.g. lack of financial and human resources), and endogenous barriers (e.g. short-term strategic planning and incorrect perceptions of the benefits of performance measurement systems). Nevertheless, the division of barriers into internal and external categories is not always straightforward. For instance, lack of competent financial staff can be considered an internal factor, but it also relates to the external environment if qualified and competent people are simply not available. Therefore, instead of using Cobb *et al.*'s (1995) enhanced Innes and Mitchell's model, this dissertation takes a more general approach to barriers as a group inhibiting MA system change.

The driving and hindering forces of change are included in Lüder's (1992) public sector accounting change model which proposes the following categories of change variables: stimuli, variables related to information producers and users, and implementation barriers. In line with Innes and Mitchell's (1990) model, where motivators, facilitators and catalysts can have a stimulating effect on MA change, Lüder (1992) states that changes due to fiscal stress or financial crisis (stimuli) generate a further need for additional or improved information

by managers, which in turn facilitates the accounting change process. Lüder's (1992) barriers identify the features of the political or bureaucratic environments that have a hindering effect on accounting change by increasing the cost or time required to implement the change. Thus, the stimuli and barriers categories are analogous to Innes and Mitchell's (1990) model. However, as outlined at the beginning of section 1.2, Lüder's model includes the perspective of information users and producers without a deeper focus on changes within the MA system and its elements. Moreover, according to Lüder's model, changes in accounting are determined by the implementation of a new governmental accounting system, which reflects the influence of the state rather than organisational efforts to modernise their MA systems. Therefore, this dissertation uses the generalised Innes and Mitchell's (1990) categories, focusing on the motivators, facilitators and barriers of MA change at the organisational level.

In conclusion, a variety of factors play a part in the MA change process. Figure 1.4 represents the set of MA change drivers and barriers relating to the MA change process. Change drivers cause and support the shift from the initial to the changed MA system, whereas barriers inhibit the change process. MA change takes place, for instance, when new accounting information systems are implemented, or when cost centres and cost allocation bases are redefined. The MA system as an object of change passes from its initial structures to changed ones, as it moves through the shift labelled 'management accounting change'.

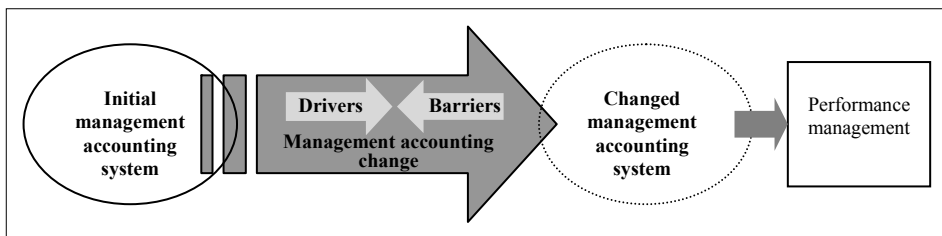


Figure 1.4. Influence of drivers and barriers on an organisation's MA change.
Source: compiled by the author

The speed and outcome of the change process of an organisation depends on the influence of drivers and barriers in a particular situation. In practice, this change process may not be a linear one as in the figure above. The various influences from change drivers and barriers can accelerate, slow down or redirect this process. However, the general path of MA change signifies the passage of the initial system to the changed one. The changed MA system, as a change process outcome, can influence performance management effectiveness.

Previous studies have shown that the process of MA change is affected by factors that can drive or hinder the process. Change motivators and facilitators can drive changes in MA systems, and barriers can inhibit these changes. In developed market economies, practice has shown that tightening competition

and financial difficulties can motivate changes in MA systems. Top managers' support, accounting software developments, adaption of statutory accounting and sufficient number of accounting staff can facilitate MA changes. Barriers to change include lack of competencies among financial staff and managers, inadequate information systems, the rigidity of the existing accounting system and resistance to change. In dynamic and developing economies, driving and hindering aspects can have similar influences on MA change. However, little attention has been given to MA change in the dynamic economic environment, and the scarce research findings are not sufficient to explain the similarities or possible differences in MA change forces in different environments. Therefore, it is reasonable to formulate the following research question: *what are the driving and hindering forces for MA change in business and public sector organisations operating in a dynamic economic context?* The current dissertation attempts to broaden the understanding of MA change by exploring these forces in business and public sector organisations operating in a dynamic economic environment.

Management accounting change in previous studies

The heterogeneity of MA change has received increasing attention from more recent MA researchers (Quattrone and Hopper, 2001). As described by Burns and Vaivio (2001), the epistemological nature of MA change comprises several dimensions. Distinctions can be made between change seen as progress or regression (Wickramasinghe and Alawattage, 2007), evolution or revolution (Bromwich and Bhimani, 1994), normative claim or empirical phenomenon (Burns and Vaivio, 2001) or reverse phenomenon of stability or process (Burns and Scapens, 2000). The wide range of MA change attributes and constructs applied in empirical studies offer good examples to illuminate the multidimensionality of change phenomena. For instance, Libby and Waterhouse (1996) concentrate on the numbers of MA changes and several researchers follow the same principle (Williams and Seaman, 2001; Waweru *et al.*, 2004; Sulaiman and Mitchell, 2005), whereas others focus on the adaptation of new methods and tools (Vamosi, 2000; Laitinen, 2001; Szychta, 2002; Chanegrih, 2008), and MA system sophistication (Chenhall, 2003; Tillema, 2005; Henri, 2010). A number of studies on MA change do not clearly emphasise the categories of change variables (e.g. Vamosi, 2001; Szychta, 2002). However, the lack of a defined structure and typology for MA change gives rise to potential problems of comparability across different studies and generalisability of their results (Quattrone and Hopper, 2001; Sulaiman and Mitchell, 2005). The lack of a clear typology and concept of MA change is one of the main shortcomings of previous studies. A more fruitful understanding of the studied phenomenon requires clarification of the MA change concept. Therefore, the following section discusses MA change objects and attributes in order to explain the nature of change.

There are two focal aspects that require deeper attention: firstly, the specifications of the change object, and secondly, the identification of change attri-

butes and measures in relation to the change object. In previous empirical MA studies, change objects generally relate to:

- changes appearing within the system and its design (e.g. Libby and Waterhouse, 1996; Luther and Longden, 2001; Sulaiman and Mitchell, 2005; Tillema, 2005), and
- changes taking place in the use of information delivered by the system (e.g. Baines and Langfield-Smith, 2003; Baird *et al.*, 2004).

Examples of the first perspective include: the application, modification or replacement of different costing methods and calculation techniques; and the implementation of new performance measures or new control systems. The second perspective concentrates on using information for different purposes and managerial activities – such as planning, organising, motivating, decision-making, measuring performance and controlling – without special attention to the design of the MA system. This dissertation investigates the changes appearing within MA systems and the factors behind these changes.

Despite the challenging concept of change, two main attributes of change can be expressed: the magnitude and the direction of change. Previous MA studies, in both more advanced and developing market economies, have focused on change magnitude in relation to MA elements (location of change) and on change direction. Table 1.5 presents an overview of the previous studies investigating changes in the design of MA systems.

Table 1.5. Summary of MA change attributes and measures applied in previous change studies.

MA change attribute	Types of measure	Author (year)
Change magnitude	Number of changes	Libby and Waterhouse (1996), Williams and Seaman (2001), Waweru <i>et al.</i> (2004), Sulaiman and Mitchell (2005)
	Change intensity (from no change to total revision) Levels of change (e.g. addition, modification, replacement, adoption or implementation of new methods or systems)	Laitinen (2001) Sulaiman and Mitchell (2005), Vamosi (2000), Szychta (2002), Chanegrih (2008)
Change direction	Sophistication of MA system	Neely (1999), Bitici <i>et al.</i> (2000), Chenhall (2003), Garengo <i>et al.</i> (2005), Henri (2006)
	MA systems' scope (quantification, focus, and time horizon)	Chenhall and Morris (1986), Tillema (2005)
	Changes in the perceived benefits derived from changed MA techniques or methods	Luther and Longden (2001), Malina and Selto (2005), Wnuk-Pel (2010)

Source: compiled by the author

Change magnitude explains the rate or intensity of changes during a particular period, which allows differentiation between stable and changing systems. Libby and Waterhouse (1996) were among the first to measure the magnitude of change in MA and control systems by measuring the absolute number of changes in these systems in Canadian manufacturing organisations during a three-year period. They found that the elements of MA and control systems which support decision-making and control changed more frequently than components that support planning or directing, or are concerned with product costing.

Empirical MA change studies present consistent evidence regarding change magnitude and location. For instance, Libby and Waterhouse (1996) found that during three years of study those components of MA and control systems that supported decision-making changed more frequently than components that supported planning or directing, or were concerned with product costing. They explained that the rigidity of the cost accounting element was a result of the influence of financial accounting, and that the other elements of the MA system can probably change more freely. Similarly, Vamosi (2001) found that the cost calculation practice of a studied company in Hungary remained almost unchanged after its privatisation. Laitinen (2001) revealed that, in technology companies in Finland during a five-year period, the smallest change was in cost accounting and the largest change was in performance measurement. Higher-level changes relating to decision making, planning and control were noticeable in Chanegrih's (2008) study in France.

In the conditions of a developing economy, Sulaiman and Mitchell (2005) found that MA changes were taking place in the decision making, planning and control. Additionally, they found evidence of higher-level changes in costing systems during a five-year period in Malaysian organisations (Sulaiman and Mitchell, 2005). However, they do not offer a precise explanation for this finding. Waweru *et al.* (2004) outline the increased use of contemporary MA practices in South Africa in relation to costing and performance measurement. They relate these findings to the consequences of economic reforms and global competition in the South African economy. However, this contradicts evidence from Vamosi (2001) about the effects of privatisation on MA changes in Hungary where cost calculation practices remained unchanged. On the basis of these findings, it can be expected that a dynamic economic context may influence some, but not necessarily all, MA elements. The rigidity of cost accounting is probably even greater in the public sector, where state accounting regulations determine the cost structure and approaches applied in organisations, and where the link between financial and MA is clearly tighter than in the elements of planning, controlling and performance measurement. Moreover, the findings about MA change in the Eastern European context are limited with regard to the influence of the economic environment on the location and magnitude of MA change.

Change magnitude measured by the absolute number of changes relates mainly to the location of change in a particular MA system's element or tool. But the number of changes does not convey the extent of these changes. The

magnitude of change can be described more precisely by differentiating between minor and major changes (e.g. complete revision) to the system. This can be better captured with the intensity of change in relative terms or adoption rates. For instance, in his study among Finnish technology firms, Laitinen (2001) used relative scales from no change to total revision. There are also studies, mainly case-based studies, which look at MA changes in general without using specified scales. For example, Vamosi (2000) analysed the adoption of new accounting tools in Hungary without a specified scale and explained MA changes within institutional settings. Szychta (2002) studied MA change in Polish enterprises by measuring the implementation rate of different accounting methods and tools.

In general, change magnitude indicates that change is revolutionary, taking a quantum leap, or evolutionary, one with a natural movement path (Bromwich and Bhimani, 1994). Complete revision, or the adoption of a new accounting system, conveys more of the revolutionary features, whereas minor changes or modifications to the system convey the evolutionary features of change.

The direction of change helps to explain the change process firstly by means of, and secondly by the perceived benefits of new or changed MA methods and tools. The sophistication of an MA system and changes in the perceived benefits derived from changed MA techniques, illuminate the second essential feature of change, namely, its direction. The first option for addressing the change is MA sophistication, which allows to label the MA change process as progress or regress. The sophistication of MA systems has received significant attention from several MA scholars (Kaplan and Norton, 1992; Neely, 1999; Bjørnenak and Olson, 1999; Bitici *et al.*, 2000; Chenhall, 2003; Garengo *et al.*, 2005; Tillema, 2005; Henri, 2006). Sophisticated MA incorporates the increasing breadth of information that organisations face. The most widely used sophistication categories, proposed by Chenhall and Morris (1986), look at the aggregation, integration, timeliness and scope of MA information; the last category – scope – is divided into sub-categories differentiating between quantification (financial and non-financial), focus (internal and external), and time horizon (historical and future events).

In line with the general links between context and the effectiveness of accounting information systems, Gordon and Miller (1976) suggest that the more dynamic an environment, the more frequent and wide-ranging the information that is required. Obviously, frequent information helps managers to follow more precisely the trends in the operating environment, but it also creates the need for more sophisticated MA systems. Similarly, the wide range of information about customers, internal processes, employees or innovations provides a broader picture of various performance dimensions and therefore requires sophisticated MA structures. Consequently, a dynamic environment moves MA systems towards greater sophistication, involving a broader scope of information which combines financial and non-financial, internal and market-related processes, and operative and strategic perspectives. In other words, as explained by Wickramasinghe and Alawattage (2007), organisations in dynamic environments should

develop decentralised structures and adopt sophisticated information processing. Therefore, this dissertation considers the abovementioned categories of MA information essential for organisations operating in a dynamic economic environment. When designing their MA systems, organisations need to pay attention to the wide scope of information, focusing on the financial/non-financial, internal/external, and historical/future performance categories.

The second option for assessing the direction of change is to evaluate the perceived benefits of new or changed MA methods and tools (Luther and Longden, 2001; De Geuser *et al.*, 2009; Wnuk-Pel, 2010). For instance, Luther and Longden (2001) find that the recent changes to the economic environment in South Africa have promoted MA generally, but they refer particularly to the changes in strategic real-time MA being at the expense of historic management and financial accounting. Likewise, Anderson and Lanen (1999) indicate the increasing importance of MA information in Indian firms, where resources were diverted from external reporting, auditing and tax accounting areas. In relation to performance measurement, Bourne *et al.* (2000) emphasise that a performance measurement system can only be effectively implemented and used, when the company perceives the benefits of the system. This might be problematic, especially for smaller organisations which often do not understand the potential advantages of implementing complex performance measurement systems. Furthermore, evaluations of change direction are the result of subjective appraisals by individuals. This reflects the effect of a particular tool that has been implemented and relates mainly to the use of certain aspects of management information rather than with the overall shifts of the changed MA system for the organisation, which is the focus of the current dissertation. Because the current dissertation interprets MA change as a shift towards increasing application of market economy MA practices and its sophisticated forms by organisations operating in dynamic economic settings, the main attention is on MA developments along the sophistication dimension. The following discussion explores in more depth the sophistication issues that help to reveal the essential dimension of MA change direction.

Sophistication as a management accounting change dimension

The direction of MA change describes the shift in a system's design towards more sophisticated or less sophisticated structures, over the course of time (Chenhall, 2003; Tillema, 2005). The variation in MA sophistication enables exploration of the substantial facets of the change phenomenon. In general, MA change in advanced and developing market economies is explained by the application of traditional and contemporary cost accounting and performance measurement methods and tools. The cost accounting developments focus mainly on the reduction of distortions in the cost information of processes or products. For instance, Bhimani's (1996) discussion of cost accounting practices in UK companies included overheads allocation and activity-based costing, the use of costs for decision-making and standard costing. Saez-Torrecilla *et al.* (1996) investigated cost calculations (e.g. full and direct costing issues) and

standard costing in Spanish companies. Groot (1996) described cost management in Dutch companies. Describing MA developments in Finland, Virtanen *et al.*, (1994) outline cost accounting issues such as product cost calculations, product costing principles and methods, and new costing methods (activity-based costing, value chain analysis, target costing, life-cycle costing). Cost management developments have been studied by Groot (1996), Israelsen *et al.*, (1996), Scherrer (1996), and Anderson and Lanen (1999). Change direction described by budgeting and reporting developments relates more to adjustments made in response to changes in management information needs and changes in organisational structure.

As a result of the shortcomings of traditional performance measurement systems and tools, developments in performance measurement have gained the attention of a number of scholars (Johnson and Kaplan, 1987; Kaplan and Norton, 1992; Neely, 1999; Henri, 2006). Johnson and Kaplan (1987) addressed the issue of financial measures being insufficient to reflect changes in the environmental circumstances of modern organisations. Greater reliance of non-financial measures has been reported by Libby and Warehouse (1996), and Baines and Langfield-Smith (2003). Attention has been directed to the replacement of traditional measurement systems, which are usually based on cost information, with contemporary developments in performance measurement. The recognition of more integrated and dynamic measurement systems is emphasised by Kaplan and Norton (1992) and Henri (2010). These developments in performance measurement relate to the broadening scope of MA information in the current context. Kaplan and Norton (1992) suggest attention is directed to the balance between four different dimensions, which are based on the nature of the indicators (financial and non-financial) and the object of the indicators (internal process-oriented and external market-oriented). Malina *et al.* (2007) outline the importance of the cause-and-effect properties of a balanced scorecard by providing a more diverse, accurate and balanced set of measures for organisational performance.

The dynamic approach, an important performance measurement development, has recently gained scholars' attention. A dynamic performance measurement system includes systems for reviewing measures and objectives in order to quickly adapt the performance measurement system in response to changes in the context, and to systematically assess the organisation's strategy in order to support continuous improvement (Bitici *et al.*, 2000; Neely *et al.*, 2002; Garenago *et al.*, 2005; Henri, 2010). Growing interest in integrated and dynamic measurement systems can also be connected to the changing role of MA in organisations, from simple financial information provider towards internal consultancy of an organisation's management (outlined in section 1.1). Anderson and Lanen (1999) reveal performance measurement findings from India, which represents a developing and dynamic economy. They describe the changes as mirroring the changes in Western firms, where performance measurement incorporates more of an external perspective. Nevertheless, the Indian firms in the study continued to rely on manufacturing productivity measures, and non-

financial measures were considered to be of similar importance to cost-based information.

In general, the sophistication dimension helps to distinguish between various (high and low) levels of MA sophistication. Figure 1.5 illustrates MA change along the sophistication dimension. Change seen as progress indicates movement towards a more complex and advanced MA system, which incorporates multidimensional performance measurement (including financial and non-financial measures; internal and external measures) and contemporary accounting methods (e.g. activity-based costing, target costing, and flexible budgeting) in the organisation. MA system regress describes the application of more simplified or general aggregated cost and performance information instead of previously used more sophisticated systems.

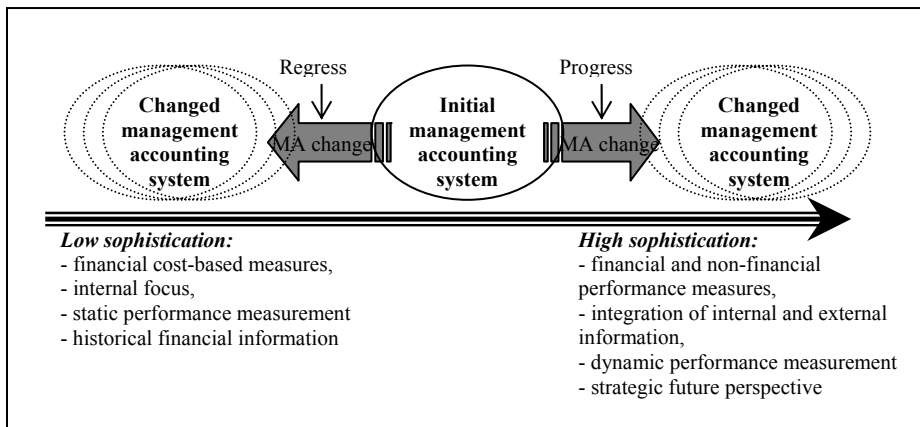


Figure 1.5. MA change along the sophistication dimension.

Source: compiled by the author

In addition, MA sophistication relates to changes along two sub-dimensions: technical and conceptual (Bjørnenak and Olson, 1999). The technical dimension focuses on developments in accounting processes and activities; the conceptual dimension focuses on developments in methodology and procedures. Examples of technical changes include the application of accounting software, modification of cost objects (customers, products etc.) and cost centres, specification of cost items, changes in managerial calculations, or adjustments in budget or reporting formats. Usually, these changes signify adjustments in MA which aim to increase the accountability of the system.

Direction of change along the conceptual dimension refers to the shifts in MA methodology which include a complete revision or the introduction of new accounting methods and tools, and typically incorporates several MA elements. For example, the replacement of full costing with variable costing not only influences the cost accounting element, but budgets and performance reports

also need to be redesigned. Likewise, the application of activity-based costing demands a number of innovations in cost accounting, because activities, the cost drivers of activities, and product costs have to be specified according to the new method. Furthermore, these changes also influence cost calculation procedures, the nature of MA information and its use by management. Consequently, the implementation of new accounting methods and performance measurement tools may lead to new administrative procedures, policies and rules (Gosselin, 1997; Burns and Scapens, 2000). Moreover, conceptual change may lead to innovations in administrative procedures or organisational structures (Damanpour, 1997). Usually, conceptual changes take place jointly with technical changes. Organisations are likely to introduce a new cost accounting or performance measurement system together with new software. In addition, the implementation of new accounting software may lead to adjustments in the accounting system or new opportunities for further developments in elements of the system.

Although the differentiation between technical and conceptual changes has gained little attention in previous empirical MA studies, the author considers that both dimensions are essential to characterising the direction of MA in the changing environment more precisely. In the context of economic reorientation and structural change, conceptual changes can be considered more valuable than just technical ones. Whereas the technical dimension helps to shed light on MA change in only technical terms, the conceptual dimension indicates changes in thinking. This approach allows fruitful knowledge to be identified concerning methodological transformation in MA systems in the context of the economic reorientation from central planning towards market economy. The former can have effects on MA information scope and aggregation, where the main aim of accounting was to assure centralised state control and not to support economically rational management in organisations. The current dissertation assumes that changes in the operating context have created the need for more rational management and, therefore, changes in MA systems that offer better support for increased rationality are expected. Evidence from advanced market economies suggest that changes are most likely to occur in performance measurement, controlling and planning. Although research is scarce, evidence from more dynamic economic environments suggest that organisations reflect market economy MA practices, both conventional and contemporary. However, the development of MA systems is studied mainly at the general sophistication level without a special focus on technical and conceptual changes. Therefore, the current dissertation intends to gain more evidence about MA practices in dynamic economic environment distinguishing *the indications of the technical and conceptual changes in relation to MA elements in this setting*.

Similar to developments in the business sector, the recent introduction of New Public Management elaborates on the focus of public sector performance and the dimensions of stakeholder interest. The high number of stakeholders presents the main feature of public sector organisations. Tillema *et al.* (2010) distinguish between three groups of stakeholders and their interests: funding bodies, formerly the most important group, with their interest in financial

performance; statutory boards; and purchasers, with their growing importance for new performance dimensions such as the quality and quantity of public services. These changing interests shape performance measurement systems, in which traditional and new performance views need to be integrated and balanced. This will stimulate public sector organisations to design and redesign their performance measurement systems.

Mussari (1995) has pointed out that the fostering of “performance orientation” in the public sector has resulted in the growing use of performance management tools. Although the balanced scorecard was initially applied to the business sector, Kaplan (1999) pointed out that its potential to improve the management of public sector organisations is even greater. The balanced scorecard as a performance measurement and management tool has been applied in various public sector organisations, notably in health care (Peters *et al.*, 2007; Qudrat-Ullah, 2007) higher education (Chen *et al.*, 2006; Lawrence and Sharma, 2002), the police service (Elefalk, 2001), governmental organisations (Wilson *et al.*, 2003), and museums (Gstraunthaler and Piber, 2007). Therefore, the author also considers the balanced scorecard suitable for the public sector, where traditional financial measures struggle to capture the nature of an organisation’s performance in order to address management and control issues. Describing the different aspects of a balanced scorecard, Chen *et al.*, (2006) have summarised its potential not solely as a performance measurement system, but also as a strategic management system and a communication tool.

In conclusion, integrated and dynamic performance measurement has received increased attention in public sector organisations. However, the public sector developments discussed above are not studied in depth in dynamic economic conditions. Moreover, there is little evidence about the effects of integrated and dynamic performance measurement systems on performance management in public sector organisations from previous centrally-planned economies. Therefore, it is reasonable to raise the question, *how are sophisticated MA tools applied in public sector organisations and how do those tools influence performance management practice in a dynamic setting?*

The framework for the management accounting change concept

In conclusion, MA change includes studies from various angles, and a variety of factors play a part in the MA change process. Although the models and approaches discussed above have proposed slightly different classifications for influencing variables, they help to explain the different objects and attributes of MA change. The current dissertation proceeds from the contingency approach, which explains the interplay between environmental and organisational characteristics, and MA systems, where a mismatch between a system and its context creates a tension and pressure for change. The combination of mechanistic and post-mechanistic approaches enables investigation of MA change in a dynamic context where organisations implement conventional and sophisticated forms of market economy MA practices. The author agrees with those who see MA change as a process comprising change factors, actions and outcomes. Environ-

mental factors can have either a supportive or hindering effect on changes to organisational arrangements and internal systems. The internal context of the organisation can also present either opportunities or constraints for quick adaptation to environmental responses.

Despite few commonalities among researchers about the meaning of MA change, the author finds that the basic features of change can be expressed and measured by the direction and magnitude of change. Change direction helps to explore the shifts in MA sophistication by technical and conceptual dimensions throughout the elements of MA. Previous MA change studies about organisations operating in advanced market economies showed that change locations are broadly similar. Performance measurement, controlling and planning comprise the elements where change is most likely to occur, and costing appears to be the most rigid MA element. The most widely recognised performance measurement developments are the integrated and dynamic measurement systems. These development have also influenced performance measurement systems in public sector organisations, where the broad perspectives of organisational performance can be better captured by integrating the financial/non-financial and internal/external dimensions of performance measures.

As outlined previously in this chapter, MA change has been widely studied in the context of advanced economies but less studied in dynamic economic environments, where changes in organisations' operating context are significant. Evidence from the scarce research in the dynamic setting suggests that organisations reflect MA practices from market economies; they increasingly notice market-related measures, but at the same time rely on traditional cost-based performance information. Therefore, the focus of the current dissertation is on MA change as a process and its empirical evidence in a dynamic economic environment. The main difference between previous MA studies and the current dissertation is that previous studies have investigated MA change either within a general contingency framework or without the clear specification of the change concept.

In general, a dynamic economic environment has an impact on the effectiveness of an MA system. Theorists have proposed that a dynamic setting can widen the scope of MA information and, therefore, cause development towards a higher level of MA system sophistication. Hence, a dynamic economic context can support the application of a wider perspective on accounting information and enhanced roles in supporting an organisation's management. In addition, in the context of considerable economic change, it is meaningful to emphasise the importance of conceptual sophistication. Conceptual changes shed more light on MA shifts towards conventional and contemporary practices that enhance the rationality concerns in the organisations.

Figure 1.6 represents the dissertation's framework of the MA change concept covering the change factors that are involved in the current dissertation. The appropriateness of the MA system depends on its ability to meet the needs of the dynamic economic environment and organisational attributes. The MA change process is initiated by the inconsistencies between an MA system and

the environmental and organisational context, leading to a completely new or renewed MA system (changed MA system). Environmental and organisational factors can affect the initial MA systems, driving or hindering the MA change process, and these factors can explain the variation in the sophistication of MA systems. A changed MA system in an organisation can further influence overall performance management and its effectiveness.

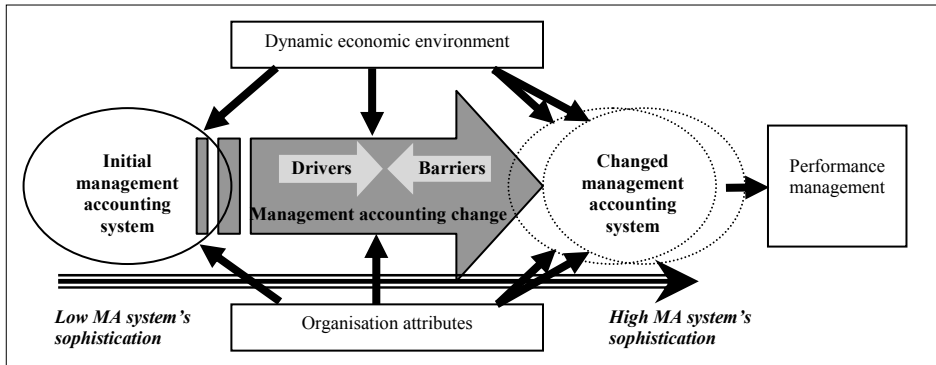


Figure 1.6. MA change concept framework.
Source: compiled by the author

The main focus is on the dimensions of two factors: environmental-organisational, and drivers-barriers. Environmental and organisational factors explain the appropriateness of MA systems within the particular context, and changes in the context can cause MA change to occur. Drivers and barriers represent the main influencing forces in the MA change process. In addition, driving factors are divided into motivators and facilitators. These factors are practical to use in empirical studies; the environmental-organisational (external-internal) dimension clarifies the source of influence, and the drivers-barriers dimension gives the possible explanation for speeding up or slowing down the MA changes taking place in an organisation. These factors explain why differences in MA design change occur.

The dissertation aims to broaden understanding about MA change, seeking the dominant environmental and organisational influencing factors, and the driving and hindering forces of MA change in a dynamic economic context. The dissertation addresses the indicators of conceptual and technical sophistication, and the impact of the implementation of sophisticated MA tools on performance management within organisations operating in a dynamic setting.

The dissertation analyses MA change, focusing on the direction of change, shifts in MA sophistication and the location of changes along to MA elements (outlined in section 1.1). An increase in the level of detail and the application of contemporary accounting and performance measurement tools will be considered as a progressive change towards higher MA system sophistication.

These trends include the MA change dimensions explained by technical and conceptual developments. Organisations already using detailed and contemporary accounting tools during the investigation period represent so-called 'early adapters' and will be considered as organisations with a sophisticated MA system. However, the main focus of the dissertation is directed towards the issue of change, and the studies conducted attempt to explore the evidence from practice which indicates movement towards more sophisticated MA systems, the changes to elements of MA systems and the factors influencing these changes. The main outcome of the dissertation is to broaden the understanding of MA change by contributing to the existing scarce sources of empirical evidence about the influences of MA change in a dynamic economic context. Better understanding of the MA change process, and its driving forces and barriers, can offer valuable insights into the sophistication of MA in business and business organisations in dynamic settings.

Granlund and Lukka (1998) examined the drivers of convergence and divergence of MA practices, including economic and institutional perspectives. They claim that the drivers of convergence have started to dominate those of divergence, providing examples of a global tendency to homogenize the design of MA systems and general ideas. The economic pressures of convergence, such as the deregulation of markets, increased competition, advanced production and information technology, have also been indicators of economy policy in Estonia since the beginning of the 1990s. In addition, the harmonization of financial accounting legislation, the potential influence of global firms on their subsidiaries, and joining the European Union, might have also influenced the MA system practices of Estonian companies towards greater convergence. The results of the empirical studies included in this dissertation enable parallels with MA changes in developed market economies to be illustrated and also allow the potential distinctive features of MA change in dynamic economic contexts to be determined.

1.4. Research questions

The current dissertation aims to provide an in-depth understanding of MA change and the factors that influence it. The analysis happens in the context of public and private sector organisations operating in a dynamic economic environment. The choice of setting is influenced by the scarcity of empirical findings on MA practices in the former planned economies of Eastern Europe. Since the 1990s, the economic reorientation from planned to market economy structures has given rise to widespread structural change in those countries, and the changes have created a particular dynamic environment featuring high fluctuations of economic development, changes to legal systems and tightening competition. These changes have created high levels of uncertainty not only for the business sector, but also for public sector organisations. The focus of this dissertation is on MA developments in Estonian organisations that have been

influenced by the dynamic economic environment. The main research question of the current dissertation is as follows: *what are the main influencing factors and characteristics of MA change in business and public organisations operating in a dynamic economic environment?* The general research question will be answered by five more detailed sub-questions. The detailed research questions and their position within the MA change concept framework are illustrated in Figure 1.7.

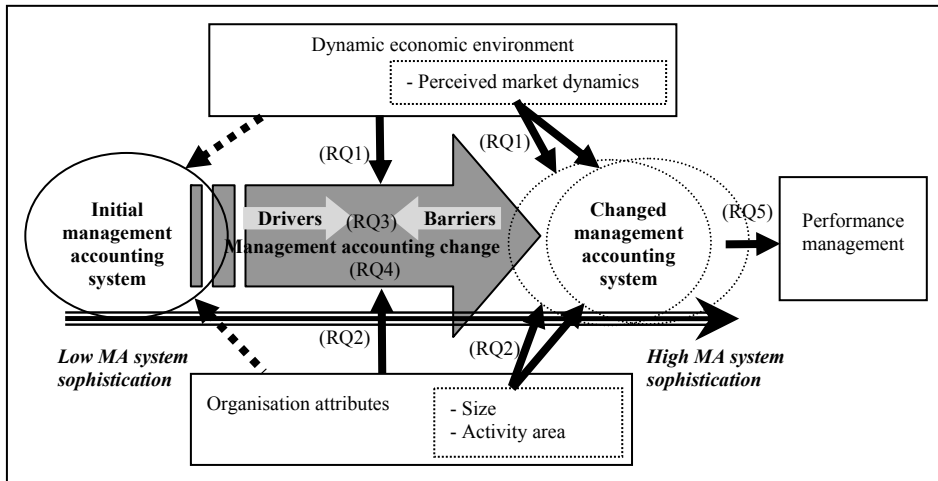


Figure 1.7. Research questions as they relate to MA change concept framework.

Note: Full arrows denote empirically studied relationships; dashed arrows denote theoretical relationships between phenomena.

Source: compiled by the author

The research findings from stable advanced market economies indicate that the dominant stimuli influencing MA system design and change are environmental uncertainty and hostility. That, in turn, suggests that the broad adoption of more complex and sophisticated MA systems is a prerequisite for survival in an uncertain and hostile environment. However, the challenge facing scholars of MA, as pointed out in section 1.1, is that the development of market economy structures in a dynamic setting marked by high levels of uncertainty and fluctuations in the economic environment makes the adoption of sophisticated MA systems far less likely and favours the retention of traditional financial cost-based approaches. Therefore, as the little available evidence from developing economies confirms, perceived market dynamics as a reflection of economic dynamics can critically affect the level of MA system design and sophistication. With regard to the environmental influences on the design of and changes to MA systems, the first research question explored in Study 1, Study 2 and Study 3 is as follows:

RQ1: What are the dominant environmental factors influencing the design and changes of MA systems in a dynamic economic environment?

Findings from advanced market economies indicate that size, technology, strategy and structure are the main organisational factors affecting MA system design. However, explanations of the differences in MA and performance measurement practices in earlier empirical studies are often ambiguous. The size of an organisation is one factor that, fairly reliably, seems to have a significant effect on MA design, where greater MA sophistication is associated with larger organisations. As section 1.2 suggested, less attention has been paid to the potential of area of activity as an explanation of differences in MA practices as the majority of MA studies look at manufacturing organisations. As a result, little attention has been paid to MA and performance measurement practices in the growing service sector. The differences in internal processes and management focus found between manufacturing and service organisations should be a predictor of variations in their performance measurement systems as well, just as there are sure to be differences and similarities in factors influencing MA in the dynamic and more stable advanced economies. Again the issue is one of a lack of research undertaken on the organisational influences on MA design in the dynamic economic context. It is that knowledge gap that stimulated the interest in seeking a deeper understanding of the organisational factors influencing MA systems change and explanations of the divergence in MA design within the context of a dynamic economy. Continuing with the mapping of MA change factors (Figure 1.7.), the second research question (RQ2) discussed in Study 1, Study 2 and Study 3 is as follows:

RQ2: What are the dominant organisational factors influencing the design and changes of MA systems in a dynamic economic environment?

As outlined in section 1.3, those factors can have different impacts on the MA change process. The discussion in the section on the MA change concept led to the categorisation of the various influencing factors as either driving forces supporting faster change (motivators and facilitators) or as hindering forces inhibiting MA change (barriers). The practice observed in developed market economies shows that motivators are tightening competition and financial difficulties. Facilitators of MA change include: top managers support, accounting software developments, adoption of statutory accounting regulations and sufficient numbers of accounting staff. MA change inhibitors are: a lack of competency among financial staff and managers, inadequate information systems, the rigidity of an existing accounting system and resistance to change.

In the dynamic and developing economic context the driving and hindering aspects can have similar influences on an MA change process. However, the scarce research findings set in a dynamic economic context are not sufficient to explain the similarities or differences between MA change forces in different environments. The presence of driving and hindering forces of MA change can

reveal inconsistent replacement of accounting approaches originating from a previous centrally planned economy with the sophisticated forms of accounting practice inherent in market economies. In addition, these forces can explain the new iterations of MA systems brought about as a result of environmental and organisational influences. In addition, the specification of the influences has important implications for explaining the success of the MA change process in organisations. Consequently, with regard to the factors influencing the MA change process (Figure 1.7), the third research question (RQ3) addressed in Study 1, Study 2 and Study 4 is as follows:

RQ3: What are the driving and hindering forces for MA change in business and public sector organisations operating in a dynamic economic context?

The theoretical discussion about MA change attributes and dimensions revealed change direction to be a relevant feature of the process. MA change direction describes the MA system's shifts along sophistication levels. Advanced market economy practices are concerned with identifying more sophisticated MA methods and performance approaches while continuing to use conventional methods and approaches. Research evidence from more dynamic economic environments suggests that organisations have adopted market economy MA practices, both conventional (less sophisticated, traditional) and contemporary (more sophisticated), and, in the course of time, the wider application of sophisticated and complex approaches can be expected in dynamic economies too. Previous studies of the developments in MA systems in dynamic economic contexts have looked mainly at the general sophistication level without any special focus on technical and conceptual changes. The MA change along technical and conceptual dimensions (Figure 1.7.) described in the previous MA change concept (Section 1.3.) help to specify the nature and direction of MA change in a more precise manner. Therefore, the fourth research question (RQ4) discussed in all the empirical studies is as follows:

RQ4: What are the indications of technical and conceptual changes in relation to MA elements in a dynamic economic context?

Progress towards the development of more sophisticated MA tools covers various organisational aspects, which influence the change process and outcomes in practice. The New Public Management concept, popular in Estonian public sector management and worldwide, encourages the spread of business-like MA and performance measurement practices in public sector organisations. The use of the balanced scorecard exemplifies this diffusion process. For public organisations, it gives an opportunity to combine and balance different performance measurement dimensions based on the customer, internal processes, learning and growth, and financial performance indicators. MA developments in public sector organisations are influenced by governmental and stakeholder

interests, and organisational characteristics. The whole change process and change outcomes can be described by the continuous interaction of these influences moving towards more sophisticated systems. Even in advanced market economies few studies expressly explore MA change processes in public sector organisations and how they influence performance management, and in developing economies information on MA developments within the public sector are even more limited. In order to generate more in-depth knowledge on MA systems' sophistication and its influence on performance management, the fifth research question (RQ5) addressed in Study 4 is as follows:

RQ5: How are sophisticated MA tools applied in public sector organisations and how do those tools influence performance management practice in a dynamic setting?

This sub-chapter presented the research questions relating to MA change in the context of the dynamic economy. The discussed MA change indicators and factors are considered as the main aspects of the empirical studies.

1.5. Research approaches and methods of the studies

This sub-chapter describes the development of the studies and introduces the data gathering methods used in them. The selected sample organisations represent both private and public sector organisations, and manufacturing and service fields of activity. Table 1.6 gives an overview about the research approaches and methods applied in the four studies in the empirical part of the dissertation.

Study 1 aimed to investigate the MA practices of Estonian manufacturing companies, exploring the main impacts on them with a contingency-based approach. For Study 1, a survey was sent to 181 of the largest manufacturing business organisations in 2000. 62 companies replied, a 34.3% response rate. The questionnaire was compiled based on a synthesis of previous empirical studies with adjustments made to reflect the legal accounting and economic environment in Estonia (Appendix 1). The survey results were analyzed using both qualitative and quantitative analysis. The results obtained explored the main impacts of MA system design and were compared with the previous empirical studies available to the author at that time. Additionally, the main aspects of the Estonian accounting and business context were considered.

Study 2 is based on structured interviews with the medical managerial staff of 13 public sector hospitals. The interview questions applied in Study 2 were based on the synthesis of previous studies with essential adjustments for the hospital context (Appendix 2). The aim of the Study 2 was to explore the impact of recent developments in management reform and MA systems in hospitals with a contingency-based approach. The interview data were analysed mainly by qualitative methods supplemented by quantitative analysis. The discussion of

the results of Study 2 considered the theoretical advances in the MA field alongside the developments in Estonian public hospitals.

Table 1.6. Research approaches and methods of the studies

Studies	Study nature	Aim of study	Data gathering method	Studied year or period	Data
Study 1	Exploratory survey	Investigate the management accounting practices of Estonian manufacturing companies, exploring the main contingencies in them	Questionnaire	1997–1999	62 manufacturing organisations (business sector)
Study 2	Exploratory field study	Examine the main impacts of developments in management reform on the management accounting systems in hospitals	Interviews	2000–2002	13 hospitals (public sector)
Study 3	Comparative survey	Investigate the dynamics of the usage of performance measurement methods and indicators, and influencing factors in business companies	Questionnaire	2004–2007	61 service and manufacturing organisations (business sector)
Study 4	Descriptive case study	Examine the impact of the design and implementation of the balanced scorecard concept on the development of performance management of museums	Interviews and observations	2008–2010	Museum (public sector)

Study 3 presents questionnaire survey data gathered from service and manufacturing business organisations in Estonia in 2007. Usable responses were received from 61 companies resulting in a 42.9 % response rate. The questionnaire was compiled in a working group according to the previous theoretical and empirical studies (Appendix 3). In respect of the enormous changes in Estonia’s social and economic environment (e.g., economic reforms, the development of market economy structures, and joining the EU in 2004), it is logical that there were considerable changes in performance measurement during the years 2004–2007. The purpose of Study 3 is to investigate the dynamics of the usage of performance measurement methods and indicators, and its influential factors in service companies. In addition, this study examines the influence of perceived

market dynamics (measured by the perceived changes in customer needs and competitor strategies) and organisation's size and area of activity (service and manufacturing) on the MA system's design. The survey data were examined through quantitative data analysis. The dynamics of performance measurement patterns in service organisations were compared with the results of manufacturing. The findings were discussed in conjunction with the previous empirical studies.

Study 4 presents a case study based on interviews and observations conducted in one public sector cultural organisation, a museum (Appendix 4). Study 4 aims to examine the impact of the design and implementation of the balanced scorecard concept on the development of performance measurement and management of museums. The interviews were conducted with managers who were involved in the balanced scorecard development process in the museum. The empirical data were analysed with a qualitative method. The described developments in the Study 4 represent an alternative way enhance the sophistication of performance management in a public sector organisation using the balanced scorecard approach originating in the business sector.

The current dissertation examines the MA change practices since 1997 representing the time during and after the major macroeconomic restructuring in Estonia when the country moved from a planned economy structure to a market economy. However, from the previous studies there are no solid suggestions, when these changes start to affect the restructuring of MA systems within the organisations. Obviously, after the economic transformation, it can take decades before the new structures are accommodated by various institutions and organisations. Therefore, the findings from organisational practices are associated more with the dynamic context, where the substantial and continuous changes in the development of the economy and legal institutions represent the main environmental characteristics. This dissertation is based on the assumption that the stability in the applied MA systems is more likely to be exceptional than a common phenomenon. For this reason, the number of changes in the MA system has been considered not appropriate to apply, because it would capture only the high frequency of change without the additional interpretation of the nature of the change and the forces that influence it.

2. EMPIRICAL STUDIES

3. DISCUSSION OF RESULTS AND CONCLUSIONS

The current chapter provides an overview and discussion of the results obtained from the empirical studies conducted. Following a summary of the main findings of the studies, there is a discussion of the main influencing factors, management accounting (MA) developments and practical implications for managers. Subsequently, there is a summary of the major conclusions of the dissertation and, finally, its limitations are outlined along with suggestions for further research.

3.1. The main findings

The aim of the dissertation is to provide an in-depth understanding of MA change and the factors influencing it demonstrated through the example of business and public organisations operating in a dynamic market economy context. The main research question – *What are the main influencing factors and characteristics of MA change in business and public organisations operating in a dynamic economic environment?* – has been divided into five more detailed questions, and the main findings in relation to each question are outlined.

The first research question (RQ 1) – *What are the dominant environmental factors influencing the design and changes of MA systems in a dynamic economic environment?* – was raised in order to identify the essential environmental factors that influence the MA change process and system design. Study 1 investigated MA change influencing factors in the business sector, namely in manufacturing companies during the period 1997–1999. Study 2 examined these influences in the public sector, using the example of health care organisations in the period 2002–2004. In addition, Study 3 explored MA design in relation to performance measurement practices in business sector organisations in the period 2004–2007.

Table 3.1 provides an overview of the main environmental factors in both the economic and legal accounting environments influencing the MA change process as revealed by Studies 1 and 2. The dominant factors for both sectors were related to the changes in the level of competition (creating competition between public service providers in the public sector) and the changes in the legal accounting environment. Study 1 revealed that the central factors influencing business organisations' MA change processes are influences on the economic environment, such as changes in the production and market structure, a need for more detailed cost and performance information (about client groups, sales regions), the benchmarking of cost and MA methods, and MA training programmes. The results from Study 2 showed that in health care organisations, shifts in regulatory power and increasing market orientation due to the principles of New Public Management and changes in the financing system affect the development of MA systems. In addition, changes in the legal

accounting environment and financial accounting (implementation of accrual-based accounting, introduction of depreciation accounting and service costing based on full-costing principles) were important MA change factors in the health care organisations studied.

Table 3.1 Summary of environmental factors involved in MA change.

Factor group	Factors	Findings	
		Business sector (manufacturing organisations)	Public sector (health care organisations)
Economic environment	Tightening competition, creation of competition between public service providers	Study 1	Study 2
	Changes in the production structure	Study 1	
	Changes in the market structure	Study 1	
	Need for more detailed cost and performance information about client groups and sales regions	Study 1	
	Benchmarking of cost and MA methods	Study 1	
	Training programmes about different MA themes		
	Shifts in the regulatory power to the regional authorities		Study 2
	Increasing market orientation		Study 2
Legal accounting environment	Changes in legal accounting environment	Study 1	Study 2
	Changes in legal accounting regional authorities		
	Implementation of accrual-based accounting principles		Study 2
	Introduction of depreciation accounting and service costing based on full-costing principles		Study 2

Study 3 provided findings on the variance in MA system design with regard to perceived market dynamics. The findings showed that companies with higher levels of perceived market dynamics had applied more sophisticated performance measurement systems than those with lower levels of perceived market dynamics. MA design sophistication with regard to performance measurement developments was reflected by greater use of:

- flexible budgeting and rolling forecasting as performance planning methods
- a balanced scorecard approach
- market share as a performance indicator.

These findings only partly support the explanatory power of perceived market dynamics on the manner in which MA systems sophistication diverges. Nevertheless, the author considers the influence of perceived market dynamics on the sophistication of performance measurement to be noteworthy.

The second research question (RQ2) – *What are the dominant organisational factors influencing the design and changes of MA systems in a dynamic economic environment?* – was posed to identify the main organisational factors that influence the MA change process and system design. Study 1 and Study 3 investigated these factors in business sector organisations, and Study 2 in public sector organisations. A summary of the main organisational factors influencing MA change from Study 1 and Study 2 is presented in Table 3.2. The dominant organisational MA change factors regardless of sector were: the need for more detailed cost and performance information about divisions and organisational units; the availability of competent financial staff; dissatisfaction with the performance measurement system; and changes in managerial practice. In addition, Study 1 revealed the significance of advances in information technology and changes in the organisational structure affecting MA change for business organisations. The results from Study 2 showed that in the public sector health care organisations the introduction of new technology and internal communication between the managerial levels of the organisation was an important influencer of the MA change process.

Table 3.2 Summary of organisational factors involved in MA change.

Organisational factors	Findings	
	Business sector (manufacturing organisations)	Public sector (health care organisations)
Need for more detailed cost and performance information about divisions and organisational units	Study 1	Study 2
Availability/unavailability of competent financial staff	Study 1	Study 2
Changes in managerial practice	Study 1	Study 2
Dissatisfaction with the performance measurement system	Study 1	Study 2
Advances in information technology	Study 1	
Changes in the organisational structure	Study 1	
Internal communication between the managerial levels of the organisation		Study 2
Introduction of new technology		Study 2

Study 1 and Study 3 provided the findings about the influence of size on the differences in the design of MA systems. Study 3 also confirmed the influence of area of activity over one element of MA, performance measurement. Both

studies were concerned with MA practices from the business sector; Study 1 analysed MA system design in manufacturing organisations, and Study 3 in manufacturing and service organisations. Study 1 revealed that larger companies tend to rely more on sophisticated MA systems than smaller ones do. More specifically, the findings highlight that the larger companies apply more:

- comprehensive accounting principles (e.g. more detailed cost centre specification and cost classification)
- detailed budgets and more sophisticated performance measurement systems (e.g. to evaluate the performance of different products, business units, sales regions or customer segments).

The findings of Study 3 only partly supported the significance of size in explaining how MA system design diverged in relation to the performance measurement element. However, the same set of findings showed that the larger companies use the balanced scorecard approach and market share indicators to a greater degree, whereas smaller firms tend to place more emphasis on the separation of variable and fixed costs and on revenue indicators. For business organisations operating in a dynamic economic environment, the influence of the organisation's size on performance measurement and MA system design is similar to that observed in advanced and more stable economies.

The power of activity area – service or manufacturing – to explain the differences in one MA system's element, performance measurement, did not find strong support in the Study 3 findings. There were more similarities than differences between the service and manufacturing organisations in their use of performance measurement tools and indicators. Nevertheless, a number of differences can be outlined. Study 3 revealed that cost budgeting and market share found wider application in the service sector, while manufacturing companies pay more attention to quality management and the separation of fixed and variable costs. In addition, the increased usage of non-financial performance indicators (customer satisfaction, employee satisfaction, organisational growth, and innovation) was remarkable, namely in the service companies.

The third research question (RQ3) – *What are the driving and hindering forces for MA change in business and public sector organisations operating in a dynamic economic context?* – was investigated using specific categories derived from theory. The influencing factors were grouped according to their ability to motivate, facilitate or hinder changes in MA (Table 3.3). Three empirical studies revealed the various examples of these factors in each category. Study 1 demonstrated the influences in the manufacturing business sector. Study 2 and Study 4 illustrated the influences in the public sector using health care and cultural organisations as example fields. The findings reveal that changes in competition, legal accounting regulations, and organisational arrangements are the common motivators of MA change, regardless of sector. In addition, in the public sector, MA change is related to a broader range of motivators, such as stakeholder influence, changes in financing principles, and with the introduction of new technology (Study 2 and Study 4).

Table 3.3 Summary of motivators, facilitators and barriers influencing MA change.

Factors category	Factor	Findings	
		Business sector organisations	Public sector organisations
Motivators	Changes in competition	Study 1	Study 2
	Changes in legal accounting regulations	Study 1	Study 2, Study 4
	Changes in organisational arrangements (growth, structure)	Study 1	Study 4
	Tightening state regulations (e.g. application of Diagnosis-Related-Groups system)		Study 2
	Changes in financing principles and scarcity of financial resources		Study 2, Study 4
	Owners' and stakeholders' influence		Study 2, Study 4
	Introduction of new operating technology		Study 2
Facilitators	Top management support	Study 1	Study 2, Study 4
	Increased management information needs	Study 1	Study 2, Study 4
	Availability of competent accounting staff	Study 1	Study 2, Study 4
	Advances in IT and software developments	Study 1	
Barriers	Lack of competent accounting knowledge and financial staff	Study 1	Study 2, Study 4
	Continuous changes in organisational structure	Study 1	Study 2
	Undeveloped accounting software	Study 1	

There was little variation in the facilitators of MA change between the sectors. The significance of management support, increased management information needs and the availability of competent accounting staff to facilitate MA developments is commonly stressed across the organisations studied, regardless of sector. Only advances in IT and software developments were additional relevant MA change facilitators for business organisations (Study 1). As for the barriers, undeveloped accounting software was perceived as an important hindrance by business organisations (Study 1). Other barriers, such as lack of competent accounting knowledge and continuous changes in organisational structure, were reported as significant factors hindering MA changes in similar ways in both public and private sectors.

In addition, Study 1 revealed that during the period 1994–2001, MA in Eastern European countries was still in its infancy. Evidence gleaned from presentations at the European Accounting Association's Annual Congresses 2004–2011 (see Table 3.4), indicates that MA research in these countries is still

very modest in comparison with the other European countries. Table 3.4 demonstrates that the presentations on MA in the Eastern European countries during the period does not make up more than 6.5% of the total presentations on the MA topic, and also illustrates that presentations relating to other European countries dominate.

Table 3.4 Structure of the management accounting (MA) presentations at the Annual Congress of the European Accounting Association 2004–2011

Presentations dedicated to MA area		2004	2005	2006	2007	2008	2009	2010	2011
Eastern European countries	No	1	1	7	6	5	7	4	5
	%	0,01	0,01	5,5	4,9	5,1	6,5	2,7	3,4
Other European countries	No	93	76	94	85	76	76	103	97
	%	87,7	78,4	74,6	69,1	77,6	71,0	69,6	66,9
Other countries	No	12	20	25	32	17	24	41	43
	%	11,3	20,6	19,9	26,0	17,3	22,5	27,7	29,7
Total number of MA presentations	No	106	97	126	123	98	107	148	145
	%	100	100	100	100	100	100	100	100

Moreover, the presentations from the years 2004–2011 were, for the most part, made by the same researchers covering various MA themes in only five Eastern European countries – Czech Republic, Estonia, Poland, Romania and Slovenia. Likewise, in the publications dedicated to international accounting, the scarcity of MA research in Eastern Europe is noticeable. These findings can offer only a very narrow picture about the MA developments in this region.

The intention of the fourth research question (RQ4) – *What are the indications of technical and conceptual changes in relation to MA elements in a dynamic economic context?* – was to examine the nature of the direction of MA change. The developments in MA systems were studied via two dimensions of sophistication – technical and conceptual developments. Findings were obtained from all four empirical studies. Study 1 and Study 3 investigated MA changes in business organisations during the period 1997–1999 and 2004–2007 respectively. Study 2 investigated the trends in public sector health care organisations 2002–2004 and Study 4 investigated a museum in the period 2007–2009. The overview of the major findings summarised in Table 3.5 illustrates the MA changes occurring in the organisations studied. There were considerably more business organisations studied (62 companies in Study 1 and 61 in Study 3) than public sector organisations (13 organisations in Study 2 and one in Study 4) so the research offers a wider base for analysis in the business sector than for the public sector.

Table 3.5 The major findings on MA systems' developments along the technical and conceptual dimensions.

Dimension	Findings	MA element	Business sector organisations	Public sector organisations
<i>Technical developments</i>	Application of more detailed cost centres	CA	Study 1	Study 2
	Separation of fixed and variable costs	CA	Study 1, Study 3	Study 2
	Consistent implementation of accrual-based accounting	CA		Study 2
	Introduction of depreciation accounting	CA		Study 2
	Developments in product costing	CA		Study 2
	Implementation of new accounting software	CA, PL, CO, PM	Study 1	
<i>Conceptual developments</i>	Application of variable costing	CA	Study 1	
	- traditional approaches			
	Application of contribution margin	PM, CA	Study 1, Study 3	
	Forecasting until the end of the business period	PL	Study 3	
	Mid-term business planning	PL	Study 3	
	Strategic planning	PL	Study 3	
	Performance-based incentive systems	PM	Study 3	
	- contemporary approaches			
	Implementation of activity-based costing	CA	Study 1, Study 3	Study 2
	Implementation of key performance indicators	PM	Study 3	
	Application of balanced scorecard	PM	Study 1, Study 3	Study 4
Application of non-financial indicators (customer and employee satisfaction, organisational growth and innovation)	PM	Study 3		
Quality management	PM	Study 3		

Abbreviations: CA – cost accounting, CO – control and reporting, PL – planning and budgeting, PM – performance measurement

In general, indicators of conceptual developments for business organisations comprise traditional approaches (application of variable costing and contribution margin approach, forecasting until the end of the business period, mid-term business planning and performance-based incentive systems) and also

contemporary approaches (implementation of activity-based costing and key performance indicators, application of balanced scorecard and quality management).

Empirical findings offered more evidence on technical developments in the business sector during 1997–1999 (Study 1) than 2004–2007 (Study 3). However, a few steps concerning the conceptual changes (application of variable costing, contribution margin approach, activity-based costing) are evident during 1997–1999 (Study 1). The wider conceptual MA changes took place during 2004–2007 (Study 3) and broadened the scope of MA information. Study 3 reveals that during the years 2004–2007 the changes in the performance measurement systems in business organisations were associated with the increased usage of:

- traditional approaches, such as the contribution margin approach, mid-term business planning, strategic planning and performance-based incentive systems
- contemporary approaches, such as activity-based costing, quality management, integrated performance management systems (key performance indicators, balanced scorecard), external (customer satisfaction) and internal non-financial performance indicators (employee satisfaction, organisational growth and innovation).

The findings on the design of MA systems in business companies revealed a number of interesting results. In particular, findings from Study 1 covering 1996–1997 revealed the following problems concerning MA system design:

- broadly defined cost centres indicating the lack of detailed cost information
- internal reporting based to a large extent on financial accounting statements
- little reliance on the contribution margin approach
- poorly related budgeting and reporting systems
- performance measurement based mainly on aspects relating to the internal (main operational functions and product groups) and to a lesser extent on the external (client groups and sales regions).

The findings from Study 3 indicated the employment of traditional cost-based financial approaches during 2004–2007, in combination with non-financial and integrated performance measurement approaches in the companies studied. The performance measurement and management tools in those companies were connected (Study 3):

- to a larger extent with traditional cost accounting methods (cost budgeting, direct costing, and the separation of fixed and variable costs), monthly performance reporting, forecasting until the end of the business period and the performance-based intensive systems
- to a lesser extent with the value based management approaches (economic value added and discounted cash flow calculations, early warning systems), customer and market oriented, organisational growth and other non-financial aspects.

Findings from Study 2 reveal that, for the public sector organisations involved, technical developments include:

- a wide range of cost accounting changes
- the application of more detailed cost centres
- separation of fixed and variable costs
- consistent implementation of accrual-based accounting
- introduction of depreciation accounting.

The findings revealed only two important changes in the conceptual developments in the public sector – the implementation of activity-based costing in Study 2 and the application of the balanced scorecard in Study 4.

Due to the low number of public sector organisations studied, the results of the empirical studies do not reflect the general changes to MA in the public sector. The empirical findings have to be interpreted as examples of MA changes taking place in the case organisations. The findings of Study 2 showed that for the public sector organisations involved, the MA system existed only at the top management level and not at the lower management levels where the system primarily used aggregated information. MA information was mainly based on financial accounting statements without special internal reports for managers or cost information about detailed cost centres (departments, equipment). The economic issues about medical service costs or budget outcomes were the concern of accounting staff. Similarly, Study 4 showed that before the application of the balanced scorecard, there was little knowledge among employees about the strategic objectives and performance outcomes of different organisational units. Study 2 and Study 4 revealed that managers considered MA system developments highly important, which can be interpreted as a positive shift in the attitude to MA in the Estonian public sector organisations studied.

Turning to the location of change, MA developments relate mainly to cost accounting and performance measurement (Table 3.5). The majority of the surveyed business organisations made changes in cost accounting during the period under scrutiny and the majority of respondents planned to make similar changes to their cost accounting systems in the future, which would yield more detailed and segmented cost information (Study 1). Similarly, Study 2 indicated cost accounting was the main location where changes have been carried out in the public sector organisations. The modernisation of cost accounting methods has produced increasingly accurate cost information, and also affects the accuracy of performance measurement information. The sophistication of the planning and controlling element relates only to the technical developments via the implementation of accounting software.

In general, the studies' findings indicate steps are being taken towards more sophisticated MA system design that mirrors the practices of developed economies. However, despite the rise of modern performance measurement approaches, the empirical studies showed that the design of MA systems in business organisations was characterised more by internal considerations than

external market oriented ones. Indications of MA system sophistication are presented in both public and business sector studies.

The fifth research question (RQ5) – *How are sophisticated MA tools applied in public sector organisations and how do those tools influence performance management practice in a dynamic setting?* – intended to describe the complexity of the MA development process through the example of the application of the development of a balanced scorecard for a public sector organisation. The results are presented in Study 4, which presents a possible way to develop the performance measurement system of a public sector organisation using a balanced scorecard. Study 4 illustrates that connecting non-financial and financial, internal and external indicators for performance measurement purposes presents an opportunity to develop a comprehensive tool to enhance management performance in public sector organisations. The same results indicated that designing the balanced scorecard and compiling a strategic development plan increased the awareness of organisational members of the strategic objectives and the focus of different operational units on supporting the objectives.

The main findings from Study 4 on the influence of implementing a balanced scorecard (an example of a sophisticated MA tool) on public sector performance management practice are as follows:

- it helped to clarify the relevant cause and effect linkages by deployment of general missions and strategic goals
- it assisted in determining the performance indicators at the organisational and operational unit levels in relation to strategic goals
- it formed a framework for discussion and cooperation for operational units
- it provided a tool for managers to link all stakeholder groups' interests and to manage the linkages.

In addition, Study 4 provided evidence of the varied roles of MA within the organisation. From one side, the findings indicated the enabling role of MA in supporting better understanding of objectives and operational unit strategies. From the other side, the findings indicated that MA may play an interactive role by promoting better communication between functional areas and management levels.

Study 4 revealed that the development of the balanced scorecard influenced the focus of performance management through:

- the strategy development for whole organisation and operational units
- the creation of efficient value-chain activities
- the development of practical performance measures offering wider performance perspectives (financial, stakeholders, internal processes and learning and growth) for operational units
- the detailed approach in analysing the operational units performance and its influence
- the shift towards more complex sophisticated performance measurement systems.

In general, Study 4 demonstrated how to obtain a deeper understanding of the main aspects of and connections between management levels, organisational units, and their performance via MA sophistication, in both business and public sector organisations. This, in turn, highlights the opportunity to support the effectiveness of the organisations and rational management within the organisations. However, the development of a complex performance measurement system for an organisation is certainly context dependent, and the resulting performance measurement solutions will not be applicable in all organisations.

3.2. Discussion of results

This sub-chapter discusses the results of the dissertation's findings outlining the main implications for theory and practice.

Management accounting change factors

The current dissertation aims to provide an in-depth understanding of MA change and its influential factors in business and public organisations operating in a dynamic market economy context. The political and economic reorientation in Estonia since it regained independence in 1991 has brought widespread changes to the operating environments of all organisations but none more have been more far-reaching than those due to legal accounting regulations. This dynamic context has caused the MA systems at use in the country to change fundamentally in both technical and conceptual terms. The findings of the dissertation did however reveal a number of similarities and differences with previous theoretical and empirical MA change research.

Burns and Scapens (2000) argue that MA change is a relatively slow process, but this study provides rather different evidence – that changes in MA in a dynamic economic context can be very rapid. There is evidence of a progress throughout MA systems, where the major part of these developments is associated with two MA elements, namely cost accounting and performance measurement. Although, the dissertation did not measure the magnitude of change in quantified terms, the changes in organisations' MA systems can be considered comparatively rapid, with a great intensity of changes taking place in a relatively short period of time. These changes have rarely been revealed by previous MA changes studies (Libby and Waterhouse, 1996; Williams and Seaman, 2001; Laitinen, 2001; Luther and Longden, 2001; Waweru *et al.*, 2004; Sulaiman and Mitchell, 2005; Tillema, 2005; Chanegrih, 2008) which predominantly report the incremental changes in the organisations' MA practice in different countries.

This dissertation's empirical findings reveal that the dominant MA change motivators were similar for both business and public organisations. Tightening competition for business organisations and creation of competition between public service providers and tightening state regulations are the main drivers of change. These results are in line with a number of previous MA changes studies

(Johnson and Kaplan, 1987; Innes and Mitchell, 1990; Brignall, 1997; Luther and Longden, 2001; Waweru et al., 2004). Therefore, competition is one of the common factors influencing MA changes regardless of economic context, be it more stable or dynamic.

The introduction of the new Estonian Accounting Law, based on internationally acknowledged accounting principles, in 1995 provided a favourable context for accounting changes in business and, following the amendments in 2003 extending the scope of the legislation, for public organisations too. The empirical studies conducted as part of this dissertation indicate the driving influence of the legal accounting environment on MA development. However, these influences were more indirect than direct. Following the enactment of the Estonian Accounting Law in 1995, the first priority was given to financial accounting developments, where first businesses, and then after the amendments of 2003, public organisations were required to conceptually redesign their financial accounting systems. Empirical findings from Studies 1 and 2 revealed the high reliance of managers from both sectors on compulsory financial accounting reports. This can be explained by the high demands of reconstructing the compulsory financial accounting systems at the initial stages of accounting transition.

Nevertheless, the need for more detailed information and dissatisfaction with the performance measurement in motivating further MA changes can be considered as an obvious reaction of managers concerning the shortcomings of financial accounting reports in supporting rational management. Therefore, the conceptual changes in financial accounting characterising the Estonian dynamic context and to some extent the other previously planned economies in Central and Eastern Europe served as a precondition for the development of MA systems. The results of this study align with the arguments of Virtanen et al. (1996) and Scherrer (1996), that the evolution of financial accounting has influenced the development of cost accounting and MA. The main difference between the dynamic context of a previously planned economy and the less dynamic contexts of advanced market economies is that the former has forced through conceptual changes in financial accounting in a short time period relative to the latter. In Estonia, where the fundamental accounting principles are similar for public and business organisations, the public organisations' accounting developments can be considered as a rather unique situation. Proceeding from the empirical findings and previous discussion is the following proposition:

Proposition 1: In the conditions of a dynamic economic context, reform of the legal accounting regulations is a necessary motivator of initial MA change and for further developments to occur.

The findings of this dissertation on the changes in financing principles driving public sector MA development are consistent with previous studies by Anderson and Lanen (1999) and Vamosi (2001), where scarcity or changes in financing represent the MA drivers that enable possible savings or enhance

effective management. The results from Study 2 related these MA changes to the cost accounting element. The author views cost accounting development as an essential step towards more accurate cost information and detailed costing of services. Furthermore, as long as the external pressures on public sector organisations to enhance efficiency remain, further developments in other MA elements can be expected, facilitated by more sophisticated tools, for instance the implementation of key performance indicators or zero-based budgeting.

Consistent with the previous studies, the dissertation revealed that top management support plays an important role in motivating MA change in organisations (Innes and Mitchell, 1990; Vamosi, 2001; Cadez and Guilding, 2008; Hopwood, 2009) and confirms that importance in both business and public sectors regardless of whether the economic context is stable or dynamic. Concerning the MA changes in public sector practice, the empirical results in Study 2 revealed that MA systems were almost never devised at departmental level. Economic and budgetary outcomes were not the concern of medical managers. Therefore, the findings of the above-mentioned study in that respect match those about hospitals in Sweden (see Aidemark, 2001a) and in the UK (see Lapsley, 2001). Pettersen (2001) suggests that accountable management is the means through which public sector management could be reformed, and that seems to be borne out by the empirical studies of the current research. Certainly public organisations need to balance operational efficiency and effectiveness, and economic efficiency and effectiveness. This approach presumes internal information communication between the management levels within the organisation and discussions about the cause-effect relationship of performance indicators.

Dissatisfaction with current systems can also explain the changes taking place in organisational cost accounting. Cooper (1989) when referring to business organisations suggested that the time to redesign the cost system is when managers notice that the profit margins are hard to explain. A similar argument may be applied in the public sector too; MA revision is necessary when managers are not able to explain the variations in performance. This research reveals dissatisfaction with existing systems and the need for more detailed information as important motivators of MA changes in public (Study 2) and business (Study 1) sector organisations. Moreover, an internal initiative to change has been highlighted as key to a successful change by Hyvonen and Järvinen (2006). Dissatisfaction with the existing systems can be considered as one possible source for internal change initiatives. The previous discussion about the influence of the economic environment and top management on MA change gives rise to the following argument, that the diffusion of business-like MA practices through public sector organisations is dependent on the changes in the regulative accounting environment and on top management's change initiatives.

In addition, the dissertation's empirical findings offer supplementary evidence about the importance of training programmes on influencing MA change. These findings are similar to the evidence from Belgium (Bruggeman *et al.*,

1996), Denmark (Israelsen *et al.*, 1996), Finland (Virtanen *et al.*, 1996), Poland (Sobanska and Wnuk, 1999; Wnuk-Pel, 2010), Hungary (Vamosi, 2001). We can conclude that the influence of MA training programmes on increasing peoples' understanding of new or existing systems is noteworthy across nations.

The empirical findings indicate that the advances in IT and software were an important MA change facilitator in the business sector (Study 1) though not in the public sector (Study 2) organisations. This result can be explained by the centralised nature of IT investment decisions in the public sector. Similarly, Björnenak (1997) points out that the flow of government recommendations explains the adoption of new accounting innovations. According to the author's knowledge there were no introductions of new governmental IT systems in the health care sector in Estonia during the period of study. However, the most recent developments in Estonian health care sector implementing a digital prescription system and digitalising patient records will most likely have a considerable impact on MA systems. These developments would seem to offer fruitful avenues for further studies.

Empirical findings on MA change barriers seem to illustrate universal problems, such as undeveloped accounting software and a lack of competent accounting knowledge and financial staff for all organisations regardless of operating context. However, one barrier found to hinder business organisations (Study 1), continuous changes in organisational structure, is a significant characteristic of MA changes in the dynamic economic context.

Previous MA change studies have highlighted resistance to change or fear of redundancies (Bruggeman *et al.*, 1996; Malmi, 1999; Burns and Scapens, 2000; Granlund, 2001; Siti-Nabiha and Scapens, 2005; Ribeiro and Scapens, 2006). Resistance to change was not among the main research interests of the empirical studies in this dissertation but it is important to point out that those studies did not reveal any signs of resistance to change hindering the MA changes in Estonia. This may be a result of Estonian people associating change with a better future or being used to changes owing to their frequency in the economic and legal environments of the country. Future research focusing on the resistance to changes in MA and its consequences at the individual and organisational level would be interesting, especially in a dynamic context.

Changes in management accounting elements

In line with Chanegrih's (2008) findings that top management heavily influences the most important and complex changes, and operational modifications and other technical types of change to a lesser extent, it can be argued that in a favourable economic and legal environment the top managers' intentions and support are among the most crucial aspects in driving conceptual MA change within business and public organisations.

The MA change indications in the studies conducted relating to the technical and conceptual developments were mainly associated with the cost accounting element. This is one of the differences from previous empirical findings from advanced market economies, where cost accounting has been found to be more

resistant to change. Most of these studies report more changes in the planning, controlling and performance measurement elements; and costing appears to be the slowest MA element to change (Libby and Waterhouse, 1996; Williams and Seaman, 2001; Laitinen, 2001; Chanegrih, 2008). The current dissertation shows different results, which can be explained as an intrinsic characteristic of the dynamic economic context, where the cost accounting changes are more considerable than in advanced market economies. Similarly, Sulaiman and Mitchell (2005) showed that in the developing (dynamic) economy context of Malaysia the significant changes in organisations' MA systems were related to the cost accounting. Similarly, Szychta (2002) describing the MA changes in Poland devotes a major part of the findings to the issues related to cost accounting. Nevertheless, assuming the further convergence of developing economy MA practices towards highly developed market economy practices, than subsequent MA developments should be focused more on the planning, controlling and performance measurement issues.

Concerning the changes in product costing principles, the implementation of variable costing alongside full costing in organisations manifests itself as a conceptual change in cost accounting towards developed market economy traditional practices. A similar tendency, although with a smaller variable costing application rate, has been demonstrated by Szychta (2002) in Polish enterprises. These results are somewhat similar to the changes during the 1950s and 1960s in Finland described by Virtanen *et al.* (1996), where the remarkable shifts from full costing to variable costing due to the changed market conditions took place. A large proportion of organisations in Estonia still follow full costing principles, which can not be considered as providing appropriate information in assuring effective and efficient management.

The introduction of more detailed cost centres can be considered as progressive movements towards greater sophistication in Estonian organisations. However, the findings from Study 1 and Study 2 both revealed that the cost centres were still too broadly classified (being mainly at the organisation or department level), which allows for only aggregated cost calculations and creates problems in using the cost information for management decisions. Similar results have been reported in Poland, another formerly planned economy country, by Sobanska and Wnuk (1999), and Szychta (2002). Interestingly, Study 1 revealed that those business organisations, which had implemented the variable costing and the contribution margin approaches, ranked MA change drivers such as availability of competent financial staff and changes in managerial practice most influential. This may be attributed to increased application and awareness of modern management techniques due to education and retraining programs.

When we consider the degree to which cost accounting serves as a basis for other MA elements and for information used by various management activities, the conceptual changes in cost accounting have an effect on the understanding of managers about how they use and interpret the information. As stressed by Vamosi (2001) these changes in managers' understanding require more time to

take effect than the changes in system design. Findings from Study 2 revealed that the lack of economic concern of medical professionals is very similar to that described about hospital staff in Sweden (Aidemark, 2001b) and in the UK (Lapsley, 2001). Changing managers' understanding and attitude can be considered as a major challenge for executive management operating in the dynamic environment created by relatively rapid political reforms and economic restructuring.

Increased implementation of the contribution margin approach in performance measurement presents next piece of evidence about the conceptual changes towards traditional market economy MA practices in the studied business organisations (Study 1 and Study 3). In terms of the MA change direction, the findings reveal that the developments comprise not only movements in direction of wider application of traditional market economy practices (variable costing, contribution margin approach), but also the shifts towards higher level of sophisticated contemporary practices. The dissertation's findings clearly indicate the application of cost accounting and performance measurement tools being recognised as innovative and complex tools (e.g. activity-based costing, balanced scorecard). However, the results from Study 1 and Study 3 indicate the relatively low incidence of activity-based costing and use of balanced scorecards in Estonian organisations. These results are consistent with the previous findings from other countries that new costing models spread slowly (Malmi, 1999; Chanegrih, 2008; Wnuk-Pel, 2010).

Study 3 revealed a number of progressive tendencies with regard to the scope of MA. Between 2004 and 2007 the companies had increased their use of performance measurement methods and indicators, integrating the external market-oriented aspects with internal process-oriented ones, as well as their non-financial aspects with financial ones. This tendency confirms the movement towards integrated and more balanced performance measurement systems, which aligns with the findings by Garengo *et al.* (2005) gathered from more stable economic settings. Additionally, the empirical findings from Study 3 indicated the shift towards a more balanced view of performance in manufacturing and service organisations, representing important conceptual movements towards greater sophistication of performance measurement systems 2004–2007. Increasing application of more balanced measures reflect the diffusion of contemporary MA practices throughout business organisations in Estonia. The design of the balanced scorecard for the museum in Study 4 offers an example of the contemporary developments to MA tools taking place among public sector organisations. However, these developments are accompanied by the dominance of financial based performance measurement tools, which reflect a traditional view of performance as well. The results of the current research align with the evidence from previous studies in confirming the primary importance of financial performance measures in highly developed countries (e.g., Groot, 1996; Bruggeman *et al.*, 1996; Israelsen *et al.*, 1996; Ramos, 2000; Ittner *et al.*, 2003). Some signs of these trends have also been identified in another Eastern European country, Poland (Szychta, 2002).

In addition, the dissertation's empirical studies support the argument of Granlund and Lukka (1998) about the worldwide convergence of MA practices. Although, the dissertation focuses on the MA changes in one particular country, the findings of this study can be translated into other countries with similar dynamic economic contexts. Therefore, author formulates the following proposition:

Proposition 2: The economic transition towards market economy structures supports the convergence of MA practices.

In addition, the study's findings revealed a number of differences regarding the design of MA in business organisations, which can be explained by size and to a certain extent by perceived market dynamics and activity area. Larger companies have more often implemented the contribution margin approach in their internal reporting and the balanced scorecard for performance measurement than smaller companies. The importance of size regarding a balanced scorecard application is consistent with the findings in previous literature about advanced market economies: larger companies have a greater ability to implement innovative MA tools (Innes and Mitchell, 2001; Baines and Langfield-Smith, 2003; Ittner and Larcker, 2009). Apparently the level of sophistication of a MA system tends to increase in line with company size in a dynamic economic context too.

The findings of this dissertation show that the perception of market dynamics only explains a few differences in implemented performance measurement methods and indicators. Nevertheless, Study 3 results shows that companies operating in more dynamic market environments tend to use more flexible planning and performance measurement instruments (flexible planning, rolling forecasting, and a balanced scorecard) as well as market share as an external performance indicator. These findings are consistent with the empirical studies by Langfield-Smith (1997), Baines and Langfield-Smith (2003), and Moers (2006). Therefore, the changing economic environment is to a certain extent linked to more flexible and complex performance measurement tools that merge external-internal, financial-non-financial views of performance and increasing MA sophistication in a transition economy context. It seems that the low explanatory power of perceived market dynamics can be explained by the considerably higher level of overall market dynamics in comparison with less dynamic and stable economic environments.

Although service companies' performance measurement innovations were fairly similar to those of manufacturing companies, the study emphasises service companies' stronger reliance on non-traditional indicators (e.g. customer satisfaction and employee satisfaction). Whereas manufacturing companies found the quality measures and quality management issues more significant. In service companies, the importance of employees' satisfaction can be explained by perceptions of how these companies address service quality, which will produce superior performance and competitive advantage (Schneider *et al.*, 2009). Results from Study 3 showed that service companies pay more attention

to employee satisfaction as an internal performance indicator than manufacturing companies. Although this dissertation's empirical findings could not offer strong support for area of activity explaining the differences in the nature of MA outlined in previous studies (Shields, 1998; Laitinen, 2001), the research does indicate that the developments to MA in the swiftly expanding service sector, where the new philosophies or techniques are likely to arise is worth investigating.

Management accounting change outcomes

The general implications of MA change outcomes and directions for further developments in organisations' management accounting systems derived from the studies are as follows.

The dissertation's results exposed that rationality and economy issues are generally considered the concern of accountants and not of managers. This was especially evident in the public sector organisations where budgets are the only aspects of finance discussed by department managers, but the budget outcomes were not part of their daily activities. Therefore, within the studied public organisations there was practically no evidence of MA functioning and financial responsibility reaching the lower management levels like units or departments. In order to find reasonable and sustainable ways to be more efficient and effective in future, developments to MA systems are necessarily required.

Therefore, managers should be more concerned about the just how appropriate their MA system and the information it delivers is to their organisation and how well it responds to their real information needs. When the MA system is delivering MA information that is inconsistent with that required for effective management, change is most likely indispensable. Such inconsistency may be caused by the changes in the economic and legal environment or within the organisation itself. Therefore, to make an MA change process successful demands special attention to ensuring the necessary competences in the MA field are present among accounting personnel and the organisation's managers. The shortage of qualified accountants and slow advances in managerial competency can serve as a crucial inhibitor of the application of contemporary or sophisticated MA techniques in organisations.

The dissertation's empirical findings indicate changes occurred first in relation to cost accounting and subsequently in performance measurement, which provides the insight that in the dynamic context resulting from the economic turnaround and changes in the legal accounting environment, the priorities for transformation are associated with adjustments to cost accounting information. Afterwards the changes in the performance measurement gain in importance in the organisations. Less attention paid to budgeting and reporting issues during MA change indicates an unbalanced MA system development, where unevenly developed MA elements inhibit the deployment of the full potential of the whole MA function. Firms whose MA systems do not offer timely budgeting and reporting information are receiving inadequate support for their planning and management control functions, which in turn affects the firm's overall performance management.

Moreover, findings from Study 1 and Study 2 confirm the presence of the following deficiencies in MA system design in the business and public sector organisations examined:

- broadly defined cost centres may make cost assignment and allocation problematic, causing a lack of detailed and adequate product cost information, which begs the question of the rationality of management decisions and reduces overall efficiency
- high reliance on financial accounting statements as a source for internal reporting, which is considered unsatisfactory for management purposes due to the over-aggregated information that barely offers sufficient depth for rational management in the organisations.

In addition, Study 1 and Study 3 revealed the following deficiencies in the business organisations investigated:

- relatively little use of the contribution margin approach, which indicates the complicated nature of conceptual developments adoptions
- poorly related budgeting and reporting systems, which indicates possible inconsistency between accounting information and its use for clearly defined rational purposes
- performance measurement based to larger extent on the internal data (operational functions and product groups) and to a lesser extent on market-related measures (client groups and sales regions), which indicates the rather narrow scope of MA information used by the studied business organisations.

These deficiencies in MA systems make it complicated to visualise the impact of management decisions on performance and to enhance economic rationality among managers. In addition, studies 1 and 3 relating to business organisations revealed indications of progressive MA changes supporting better performance management. The modernisation of the cost accounting methods implemented increases the accuracy of the cost information, which has explicit impacts on the accuracy of the performance measurement information as well. Study 3 revealed the increasing implementation of contemporary performance measurement approaches and instruments signifying important conceptual changes in performance measurement systems. However, parallel with these innovative approaches was the increasing application of basic and more traditional accounting tools (e.g. contribution margin application and mid-term business planning), which represent the conceptual change inherent to the dynamic context, were accounting tools previously deployed in the centrally-planned economy are replaced by market-driven accounting tools.

Addressing the public sector, Study 4 revealed that balanced scorecard implementation helped visualise the connections between organisational units and management levels. Better visualisation and enhanced dialogue across the organisation can reveal opportunities to improve the effective use of resources and strengthen the strategic view of the lower levels, which in turn helps to improve overall performance management.

Changes in the management accounting role

Although there was no research question about MA role changes, the findings of the studies help to frame a number of observations relating to Estonian organisations. The proposed arguments from previous studies (Merchant, 1990; Chapman, 1997) stating that in conditions of high uncertainty, accounting has an important planning role to play were not supported by the dissertation's empirical studies. On the contrary, in the dynamic setting where uncertainty could be expected to be high, the findings about planning and budgeting issues during 1997–1999 were not considered as important tools or priorities for change in moving towards traditional market economy practices and sophisticated structures (Study 1). Moreover, the plans and budgets in the Estonian business organisations studied unlikely to be seen as enabling tools to visualise the possible action alternatives for managers that would lower uncertainty, and so secure the fulfilment of performance objectives in the future. Although application forecasting, mid-term and strategic planning tools were used increasingly between 2004 and 2007 the limited use of planning and budgeting tools in general among the studied organisations was remarkable (Study 3). This result can be explained as an essential indication inherent to the dynamic context. The limited number of organisations covered by Study 2 does not offer sufficient data about budget purposes and their use for managerial purposes in the public sector, and therefore, further research about the use of MA information in the dynamic context in general and especially in the public sector is required.

The findings of Study 4 demonstrate the diffusion of business-like practices to the public sector in Estonia as exemplified by a museum. It is impossible to verify or discuss the overall diffusion of business-like practices to the public sector on the basis of one case organisation, but generalisability was not an intention of Study 4. Instead the results paint a broader picture of the complexity of MA change in the context of performance measurement and management development in a public sector organisation. A more balanced view of external-internal and financial-non-financial indicators explains the path required for the organisation to achieve its strategic goals. This presents a way to increase the sophistication of the MA system and give it a diagnostic role in measuring performance and helping managers to plan, make decisions, organise and control the performance of the organisation.

The author agrees with the argument by Tillema et al. (2010) that changing stakeholder interests prompt public sector organisations to design and redesign performance measurement systems. Luther and Longden (2001) found the balanced scorecard to have relatively high importance as an MA technique, which ties in with the relevance of stakeholder requirements and can be seen as a possible catalyst of change. Whether the new non-financial and other more traditional financial performance dimensions will be balanced and integrated throughout organisations depends on the power positions of the various stakeholders. Performance measurement developments do not offer unified solutions to the problem of how to measure performance in public sector organisations. The

dilemma of how to measure the essence of complicated public sector performance remains. However, the sophistication of MA systems offers a more detailed view of the performance connecting diverse performance dimensions, and an opportunity to manage organisations in a more holistic manner.

Study 4 demonstrated that the balanced scorecard enabled the deployment of a systematic approach in visualising and communicating the interdependencies of an organisation's internal units and their impact on the fulfilment of strategic goals and overall organisational performance. These dynamic setting findings about the diagnostic and enabling roles of MA bear similarities to the evidence from more stable environments (Simons, 2000; Kaplan, 2001; Malina and Selto, 2004; Chen *et al.*, 2006; Sundin *et al.*, 2009). Although, owing to the current dissertation's main focus being on the change aspects related to design in MA systems and the relatively low number of organisations studied in the public sector, it is hard to define the role of MA in the studied organisations. The findings from the empirical studies do permit drawing the preliminary conclusion that the MA scorekeeper role dominates in the organisations studied. Nevertheless, the dissertation has recognised the indications of diagnostic and enabling roles, which the author associates with clear signs of developments in MA towards an internal consultant role emerging in response to the influences from the dynamic economic environment.

In general, the empirical findings about business and public organisations presented in the previous chapter, demonstrate that MA is a dynamic phenomenon. The dissertation's results offer an array of indirect evidence supporting the arguments made by Alver *et al.* (1996) that in the course of transition from a centrally planned to a market economy the role of accounting information has changed from a passive to a more active one in the stimulation of economic activity in organisations. The author considers that in addition to causing organisations to reorganise structures, a dynamic economic environment creates an obvious need for management information of a wider scope than was acceptable previously, which again stimulates MA to take an active role in enabling more rational management decision-making and effective performance management.

3.3. Conclusions

The objective of the current dissertation was to provide an in-depth understanding of MA change and its influential factors in business and public organisations operating in a dynamic market economy context. The dissertation was motivated mainly by the shortcomings of previous MA research in clearly conceptualising the management accounting change in different economic environments and also by the scarce research evidence on the main influencing factors and characteristics of organisational MA change in the dynamic market economy context. The focus of the current dissertation is on the MA change in the dynamic economic context in general, which covers those countries that

have undergone fundamental economic transitions and fluctuations in their economic development. The dissertation concentrates on Estonian organisations in particular. The results of dissertation offer descriptive evidence about progressive developments in MA practices in Estonian business and public organisations affected by economic environment and organisational influences following economic reforms. These MA changes are explored by reviewing the array of similarities and differences in comparison with the developments in more stable advanced market economic contexts.

It is necessary to emphasise that the meaning ascribed to MA change varies considerably in prior studies. Furthermore, the different philosophical orientations and methodological approaches of the authors often lead to a vagueness surrounding the MA change concept. This can be explained by the complex relations between the MA change phenomenon and its context, which has driven the emergence of multiple views and factors of MA change being applied by researchers. Nevertheless, the overview of previous change studies in the theoretical part that addressed the range of essential MA change aspects was what helped to work out the dissertation's framework of the MA change concept. The framework developed is based on the MA changes along the sophistication dimension influenced by the environmental and organisational factors. Prior findings about advanced market economy practices suggest that in the more dynamic economic environment marked by high levels of uncertainty, the application of broadly scoped and non-financial information is required, and in times of high environmental uncertainty MA has an important planning role, which presumably leads to the more intensive application of sophisticated MA systems in the context with higher dynamics.

This study defines MA change as the shifts in the organisation's MA elements towards market economy practices and its sophisticated forms within the dynamic economic context. Contingency theory applied in the studies provided a logical approach to study the motivation and outcome of these changes in relation to MA practices. Factors influencing MA change were rather similar to those identified in advanced MA economies. The influencing factors were divided into two categories: first, environmental and organisational factors explaining the appropriateness of applied MA systems; and second, the MA change process associated factors (drivers and barriers). Findings revealed the influences from the tightening or creation of competition and changes in legal accounting framework were recognised as universal dominant environmental factors to drive the MA changes in organisations. The environmental factors spanned a wider spectrum for public organisations. Shifts in the regulatory power and changes to financing principles were important influences for public sector organisations. The dissertation's findings suggest the following proposition:

Proposition 1: In the conditions of a dynamic economic context, reform of the legal accounting regulations is a necessary motivator of initial MA change and for further developments to occur.

The increasing need for management information, the availability of competent accountants, changes in managerial practice and dissatisfaction with performance measurement are indicated as the universal drivers of MA changes for both sectors. Therefore, the author argues that in the dynamic setting, MA development in general and the diffusion of business-like MA practices to public sector organisations in particular, is dependent on the changes in the economic and regulatory accounting environment, but also on the competence of accounting staff and top management initiatives to change MA systems.

Furthermore, changes in the organisational structure for business organisations and the need for better communication for public organisations facilitated the MA change process. The facilitating influence on the MA change process came from top management support, the increased needs of managers for information and the availability of competent accounting staff to both business and public organisations. Lack of competent accounting knowledge and financial staff, and undeveloped accounting software represented the barriers to MA change that inhibited this process in the organisations studied regardless of sector, which are similar findings to those reported in advanced market economies. An interesting result, namely the continuous changes in organisational structure, which can be considered as an inherent feature of the dynamic context, signified the barrier that slowed down the MA change process.

The current dissertation has interpreted MA change from two perspectives: first, as an application of developed market economy MA practices, and second, as developments along the technical and conceptual sophistication dimensions. An interesting feature of MA change in Estonian organisations is that due to the economic restructuring they had an opportunity to develop the traditional financial or cost based and innovative accounting tools simultaneously. Hence, the nature of MA change represents a combination of the introduction of traditional market economy based practices and the application of contemporary accounting tools, expressed by the system's sophistication.

The dissertation findings demonstrated that the MA changes in Estonian organisations incorporate both technical and conceptual developments. The replacement of the full costing method integral to planned-economy thinking with variable costing, an essential tool in the market economy, is the main characteristic of cost accounting change. The increasing use of contemporary approaches, like activity-based costing and integrated performance management systems have directly affected the modernisation of cost accounting methods and the increased accuracy of cost and performance information as well. The increasing use of externally and internally oriented non-financial performance measurement methods and indicators characterise the shift towards more sophisticated MA systems, specifically more integrated and balanced performance measurement systems, in the organisations studied. The shifts towards greater MA sophistication place further demands on an organisation's managers dealing with the ever more complex information systems in organisations.

The following characteristics have marked the shifts in the MA systems of Estonian business organisations:

- 1997–1999 the focus of MA changes is on conventional and technical developments (Study 1), on issues of cost information accuracy; and MA systems reflect the prevalence of narrow-scope MA information and production oriented and less sophisticated MA practices;
- 2004–2007 MA changes relate mainly to conventional and contemporary conceptual developments (see Study 3), indicating the movement towards stronger implementation of broad-scope MA information and more sophisticated MA practices. MA systems include more market and customer-oriented, integrated and balanced performance measurement systems, but are marked by the remarkable dominance of traditional financial performance measures and an internal production orientation.

The dissertation findings support the contention that in the initial stages of accounting transition towards market economy practices, MA focuses on simpler cost determination and performance measurement approaches. Later we can track a shift from simple to more sophisticated approaches.

These MA developments indicate that the studied Estonian organisations follow international performance measurement patterns, where financial performance measurement tools dominate non-financial ones and the adoption of integrated multidimensional and innovative performance measurement tools increases. The findings support the argument about the global convergence of MA practices (Granlund and Lukka, 1998) by offering additional evidence of MA changes in a dynamic economic context. The findings suggested the following proposition:

Proposition 2: The economic transition towards market economy structures supports the convergence of MA practices.

In future, when the pressures exerted by the changes in the regulatory environment are less dominant influencers of Estonian organisations, then organisational factors will most likely become the more crucial stimulus for organisations to develop their MA systems. In general, Estonian organisations can expect to be implementing similar changes to enhance the complexity and sophistication of their MA systems as other organisations worldwide.

With regard to the specifics of the studied dynamic context, the dissertation revealed that MA change differs from that found in more stable settings mainly in the following aspects:

- technical and conceptual MA changes associate more with the cost accounting and performance measurement and less with budgeting and reporting, and consequently illustrating the unbalanced development of the MA system as a whole
- low attention to the development of budgeting and reporting reflects low levels of support from MA for planning and control purposes
- the continuous changes in organisational structure, inherent to the dynamic context, prolongs the MA change process in moving to more effective MA systems that would enhance the economic rational management.

The current research revealed that in a dynamic economic context the variations in MA sophistication are largely dependent on size and to a lesser extent on market dynamics, and area of activity. Larger organisations apply more comprehensive cost accounting principles, and use more detailed budgets and more sophisticated performance measurement systems. The study found that the organisation with the higher perceived market dynamics had applied more sophisticated performance measurement approaches including flexible budgeting and rolling forecasting, a balanced scorecard and had placed greater reliance on the market share performance indicator. Concerning the area of activity, the service organisations' performance measurement tools associate more with the employees and customer related measures, whereas manufacturing organisations rely more on production quality and punctual delivery measures.

The dissertation has offered some evidence of the historical passive MA scorekeeper role being substituted with a more active consulting role. The public sector case study (Study 4) illustrated the role of the implementation of sophisticated MA tools on public sector organisation performance management in a dynamic setting. The findings revealed that a balanced scorecard served as a tool for dialogue and communication between different operational units creating more efficient value chain activities among the units, and also from another perspective, between operational and top management levels.

In addition, the results and practical implications of the dissertation offered a number of insights into enhancing the effectiveness of MA systems in business and public organisation practice. Although, in the health care (Study 2) and business organisations (Study 2), the findings highlighted that major changes have occurred in the product-costing area, the continuing reliance for internal reporting on aggregated cost data and financial accounting reports signifies the need for further improvements in these MA elements. In addition, the deficiencies in the MA systems deployed in business organisations suggest the following avenues for further improvement:

- enhancing the sophistication of budgeting and internal reporting
- linking the budgeting and reporting systems more consistently
- broadening the scope of performance measurement

The above improvements would support improved MA functionality and the more systematic use of MA information. The competences of managers and accountants are vital in supporting these changes in MA elements. Hopefully, the awareness of the potential of a well-functioning MA system to provide essential management information to support more effective achievement of goals and decision-making will increase among the organisations over time, and that in turn will positively impact organisational performance. To sum up, the findings generated about changes to MA within the dynamic environment can offer valuable insights into business and public sector organisations and will be of interest to those seeking to enhance effective performance management within organisations.

3.4. Limitations and suggestions for future research

The current dissertation has a number of limitations that must be considered. The theoretical limitations include the deficiencies arising from the selected theoretical perspective and research approach. The changes in MA practice may not be capable of complete explanation through the contingency perspective alone. Other approaches, such as institutional or network related perspectives may further the explanations of MA changes in practice. Various contingencies influence MA systems, so different social constructs can affect those systems too. New theoretical developments explaining MA change in business, but especially in the public sector, are therefore necessary. The current dissertation focused only on the technical characteristics of MA and left out the behavioural aspects related to the MA information. However, the behavioural aspects could offer fruitful explanations for MA change and its consequences for performance measurement.

The methodological limitations include deficiencies in the selected research methods. Public sector organisation MA practices were investigated with case studies, which may give rise to personal bias on the part of researchers and interviewees. Business sector organisations were investigated by means of a survey, which does not permit the researcher to reveal any more details of the studied phenomenon than the questions can establish. The comparatively low number of complete questionnaire responses may have caused a generalisation bias. The author acknowledges the potential threats of these research methods to the validity and reliability of the findings, but has taken steps established by prior research to minimise these threats in the data gathering phase of all the empirical studies. It would be useful to expand the knowledge of business organisation MA changes in a dynamic context with the addition of case studies. Concerning the findings from the public sector, the limited number of organisations covered by studies does not offer sufficient data about the use of MA information for budgeting or other managerial purposes. Therefore, further research on actual uses of MA information in the dynamic context in general and especially in the public sector is required. In addition, longitudinal approaches would provide more valuable insights.

Other potential future research might address the following: First, the causes of the unsystematic use of accounting information for clearly defined and useful purposes identified in the bulk of the organisations examined by this study. The use of MA information represents a common research area for both business and public sector. Second, how will increasing digitalization and IT developments influence MA changes in public and business organisations? Third, the increasing complexities of MA systems can cause tensions between the system and its users, and a study of that issue could provide additional insights for scholars and managers alike. Fourth, individual and organisational level resistance to MA change and its consequences in a dynamic context merit further research. Fifth, how factors already investigated (size, market dynamics, foreign capital involvement and area of activity), can indirectly affect the

changes in MA design in addition to the direct effects reported in the literature. Therefore, future research, in which combinations of context, MA practices and other internal characteristics, like strategy, organisational structure and culture are included, could enhance the explanation of the differences in MA design in different contexts. Six, the process by which central government selects the accounting practices that are recommended for adoption in public sector organisations merits serious investigation, particularly because the dissertation revealed the influence of changes in regulations on MA developments, especially in relation to the public sector.

To sum up, the current dissertation intended to offer a deeper understanding of MA change and its influence in a dynamic economic environment. Hopefully, it will encourage further research into the MA change phenomenon in various organisations and contexts.

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APPENDICES

Appendix I. Questionnaire of Study I

KULUARVESTUS JA FIRMASISENE ARUANDLUS EESTI TOOTMISETTEVÕTETES

Tartu Ülikooli majandusarvestuse õppetooli uurimus

I ETTEVÕTTE TAUSTINFORMATSIOON

1. Ettevõtte nimi
2. Ettevõtte peamiseks tootegrupideks on (nimetada):
 - 1.
 - 2.
 - 3.
3. Ettevõtte toodete üldarv on (märkida arvuliselt) :.....toodet.
4. Ettevõtte toodangu tootelaad on (märkida sobiv variant):
 1. masstoodang suurele arvule klientidele
 2. masstoodang väiksele arvule klientidele
 3. tellimustöö suurele arvule klientidele
 4. tellimustöö väiksele arvule klientidele
 5. muu (nimetage).....
5. Ettevõtte tootmislike (välja arvatud abitootmislike) allüksuste (tsehhide) arv on:allüksust; neist lõpptoodangut väljastavate allüksuste arv on:.....allüksust.
6. Ettevõtte täiskohaga töötajate arv 1999.a. lõpus kuulus järgmisse vahemikku (märkida üks sobiv variant):
 1. kuni 50 töötajat
 2. vahemikus 50 – 100 töötajat
 3. vahemikus 101 – 250 töötajat
 4. vahemikus 251 – 500 töötajat
 5. üle 500 töötaja
7. Finantsteenistuse töötajate arv (raamatupidajad, pearaamatupidaja, ökonomistid, analüütikud, finantsjuht, siseaudiitor, controllerid jt) oli 1999.a. lõpus:.....töötajat.
8. Ettevõtte realiseerimise netokäive oli 1998.a. (märkida üks sobiv variant):
 1. kuni 20 miljonit EEK
 2. vahemikus 20 – 50 milj. EEK
 3. vahemikus 51 – 100 milj. EEK

4. vahemikus 101 – 200 milj. EEK
5. vahemikus 201 – 499 milj. EEK
6. üle 500 milj. EEK

9. Kas ettevõttes on kasutusel **arvestusalased tarkvara** paketid?

jah () ei ()

Kui jah, siis millised. Palume loetleda:.....

10. Palume määrata ettevõtte iseseisvus (sõltumatus) **sisemiste arvestussüsteemide** (eelkõige kuluarvestuse, planeerimise ja sisemise aruandluse süsteemide) **arendamist puudutavate otsuste langetamise vabaduse** seisukohast (märkida üks sobilik variant). Teie ettevõtte on:

1. Kontserni mitte kuuluv ettevõtte, mis on sisemiste arvestussüsteemide kujundamisel iseseisev
2. Kontserni kuuluv ettevõtte, mis on sisemiste arvestussüsteemide kujundamisel iseseisev
3. Kontserni kuuluv sisemiste arvestussüsteemide kujundamisel sõltuv ettevõtte
4. Kontsern (emaettevõtte), mis koordineerib kontserni teiste ettevõtete arvestussüsteemide arengut

II KULUD ETTEVÕTTE RAAMATUPIDAMISSÜSTEEMIS

11. Kas ettevõtte kontoplaani on aastatel 1996–1999 muudetud?

jah () ei ()

12. Kui jah, siis kas ettevõtte **kontoplaani muudatused** aastatel 1996–1999 olid tingitud (märkida kõik sobilikud variandid):

1. Muudatusetest organisatsiooni funktsionaalses struktuuris
2. Muudatusetest tootmise tehnoloogias
3. Muudatusetest toodangu struktuuris
4. Muudatusetest turu (klientide) struktuuris
5. Vajadusest detailsema juhtimisinfo järele
6. Muu (märkida).....

13. Ettevõtte kontoplaanis on kulud liigitatud järgmistest kriteeriumidest lähtuvalt (märkida kõik sobilikud variandid):

1. Kasumiaruande skeemi nr 1 järgi (materjalikulu, palgakulu, kulum jne)
2. Kasumiaruande skeem nr 2 järgi (tootmis-, turustus-, üldhaldus- jne kulud)
3. Allüksuste (tsehh, jaoskond jne) lõikes
4. Muu kriteeriumi järgi (nimetage)

14. Ettevõttes eristatakse tootmislikke ja mittetootmislikke kulusid (üldhaldus-, turustus-, uurimis- ja arendus- jne kulusid):

jah () ei ()

15. Kui eristatakse tootmislikke ja mittetootmislikke kulusid, siis mittetootmislike kulude osakaal kogu kuludest 1998.a. oli (märkida ligikaudne protsent):
..... %.

III KULUARVESTUS

Kohustuslik aruandlus ei anna juhtimiseks vajalikul tasemel detailset ja objektiivset informatsiooni. Viimase saamiseks on vajalik ettevõttesisese arvestussüsteemi rakendamine. Ettevõttesisene arvestussüsteem hõlmab eelkõige ettevõttesisest kuluarvestuse, planeerimise ja aruandluse süsteeme. Ettevõttesisene kuluarvestus koosneb kolmest peamisest valdkonnast: kululiikide arvestusest, kulobjektide (kulukandjate) arvestusest ja kulukohtade arvestusest.

Kululiikide arvestus

Kululiikide arvestuse ülesandeks on määratleda ettevõttes esinevad kulud ja nende käitumine erinevates tegevussituatsioonides. Kululiikide eristamise aluseks on tootmislike (tootmistöötajate palk, materjal, tootmisseadmete amortisatsioon, energia kulu jne) ja mittetootmislike kulude (juhtkonna kulud, müügi-kulud jne.) määratlemine. Tootmiskulud jaotuvad omakorda tehnoloogilisteks ja tootmise üldkuludeks.

16. Ettevõttesiseselt liigitakse (täiendavalt) tootmiskulusid (märkida kõik sobilikud variandid):

1. Tehnoloogilisteks ja tootmislikeks üldkuludeks
Tehnoloogilised kulud (nt tehnoloogiline kütus, seadmetega seotud elektrikulu) tekivad otseselt tootmise tehnoloogilises protsessis ehk tootmisseadmete kasutamisel. Tootmise üldkulud (nt tsehhi ventilatsioon, tsehhi küte) on vajalikud tootmise infrastruktuuri tagamiseks.
2. Muutuvateks ja püsivateks kuludeks
Muutuvad kulud on kulud, mis muutuvad funktsionaalselt tegevusmahuga. Püsivad kulud on kulud, mis jäävad erinevate tegevusmahtude juures teatud ajaperioodil muutumatuks.
3. Otseseks ja kaudseteks kuludeks
Otsesekulud on kulud, mida saab otseselt kanda arvestusobjektile (tootele, tootegrupile, kliendigrupile, regioonile jne). Kaudkulud on kulud, millel puudub vahetu seos arvestusobjektiga ja nende kandmiseks arvestusobjektile tuleb rakendada teatud jaotusbaase.
4. muu (nimetage).....
5. ettevõttesisene täiendav tootmiskulude liigitus puudub

17. Palume iseloomustada ettevõtte kui terviku **tootmiskulude struktuuri** järgmise tabeli põhjal (märkida ristiga vastavasse veergu):

Ligikaudne % tootmis- kuludest	< 20%	21– 30%	31– 50%	51– 75%	> 75%	Ei eristata vaadeldavaid kulugruppe
Kuluelement						
Otsene materjalikulud						
	< 5%	6– 20%	21– 30%	31– 40%	>41 %	XXX
Otsene tööjõukulud						
Tootmise üldkulud						

18. Kas ettevõtte tootmise üldkulud on täiendavalt eristatavad? (märkida kõik sobilikud variandid)

1. On täiendavalt eristatavad (nimetage)aspekti järgi
2. On täiendavalt eristatavad ressursijärgsete kuluelementide (nt abimaterjalid, elekter, küte, põhivara kulum, põhivara remont ja hooldus jt) lõikes
3. On täiendavalt eristatavad muutuvate ja püsivate kulude lõikes
4. Ei ole täiendavalt eristatavad

19. Kas ettevõtte tootmiskulude kalkuleerimisel kasutatakse kulustandardeid (märkida üks sobilik variant)?

1. Maksimaalse efektiivsuse tagamisele suunatud standardeid
2. Kasutatakse möödunud perioodide põhjal välja töötatud standardeid
3. Kasutatakse ideaalsest lähtuvaid (raskesti saavutatavaid) standardeid
4. Ei kasutata kulustandardeid

Kulukohtade arvestus

Ettevõtte kulude arvestus ja analüüs kulukohtade lõikes peab näitama, millistes konkreetsetes punktides ettevõtte majandustegevuse protsessis tekivad kulud. Kulukohana vaadeldakse teatavat määratletavat osa või punkti ettevõtte tegevusprotsessist, milles on eristatav teatud kululiigi teke.

20. Ettevõttes kasutatakse kulukohtade klassifikatsiooni:

jah () ei ()

Töögrupp oleks äärmiselt tänulik, kui Te lisaksite ümbrikusse koos vastatud ankeediga Teie ettevõtte kulukohtade klassifikaatori (ehk loetelu).

21. Palume märkida millistel tehnoloogilistel tasanditel on tootmise üldkulud eraldi määratletavad. Juhul, kui teataval tasandil toimub tootmise üldkulude määratlemine, siis palume täiendavalt nimetada millised tootmise üldkulud on konkreetsel tasandil mõõdetavad.

	Jah	Ei	Vastaval tasandil mõõdetavateks kuluelementideks on:
Seade (masin)	()	()	
Tootmisliin (seadmete kompleks, tehnoloogiline protsess)	()	()	
Jaoskond	()	()	
Tsehh	()	()	
Ettevõtte kui tervik	()	()	

Kuluobjektide (kulukandjate)arvestus

Kuluobjektide ehk kulukandjate arvestus näitab mille tarvis on kulusid tehtud. Kuluobjektina võib käsitleda tooteid, tootegruppe, tellimusi, allüksuseid jne.

22. Ettevõttes käsitletakse kuluobjektidena (märkida kõik sobilikud variandid):

1. Tooteid, tootegruppe
2. Tellimusi
3. Tegevusvaldkondi
4. Müügipiirkondi
5. Tarbijaklasse
6. Muu (nimetada)

23. Kas Teie ettevõttes toodete omahinna kalkuleerimisel jaotatakse toodetele:

	jah	ei
Ainult otsesed muutuvkulud	()	()
Kõik muutuvad tootmiskulud	()	()
Kõik muutuvkulud (sh müügi- ja juhtimiskulud)	()	()
Kõik tootmiskulud (sh püsikulud)	()	()
Kõik ettevõtte kulud (sh mittetootmislikud kulud)	()	()

24. Millistest järgnevatest jaotusbaasidest lähtudes jaotatakse (eelkõige omahinna kalkuleerimise eesmärgil) mittetootmislikud kulud toodetele (märkida kõik sobilikud variandid):

1. käive
 2. tööliste palgakulu
 3. põhimaterjalide maksumus
 4. tööaja tunnid
 5. masintunnid
 6. tootmistsüklite arv
 7. muud (nimetage)
-

25. Tootmise üldkulude jagamisel toodetele kasutatavate jaotusbaaside (käiturite) arv ettevõttes on järgmine (märkida number):.....

26. Tootmise üldkulud jaotatakse kuluobjektidele erinevatel tehnoloogilistel tasanditel kasutades järgmisi jaotusbaase (kirjutada kasutatavad jaotusbaasid vastavate kulude (ridade) ja tehnoloogiliste tasandite (veergude) ristumise kohta)

Tehnoloogiline tasand \ Tootmise üldkulude elemendid	Seade (masin)	Tootmisliin (seadmete kompleks, tehnoloogiline protsess)	Jaoskond	Tsehh	Ettevõtte kui tervik
Abimaterjalid					
Elekter					
Küte					
Põhivara kulum					
Põhivara remont ja hooldus					
Muu (nimetada)					

27. Kas ettevõttes on kasutusel tegevuspõhine kuluarvestus (ABC ehk Activity Based Costing)?

jah () ei ()

28. Teenindavate allüksuste (nt remondi, hoolduse) kulude kandmiseks toodetele kasutatakse (märkida üks sobilik variant):

1. Eraldi jaotusbaase allüksuste lõikes
2. Kogu ettevõttes ühtseid jaotusbaase
3. Teenindavate allüksuste kulusid ei kanta toodetele

Kuluarvestus hinnakujundusel

29. Hinnakujundusel ettevõttes lähtutakse:

1. Kõikidest ettevõtte kuludest, millele lisatakse juurdehindlus
2. Tootmislikest kuludest, millele lisatakse juurdehindlus
3. Turuhind
4. Muust põhimõttest (nimetada).....

30. Kui sagedasti toimub ettevõttes toote omahinna ja turust lähtuva müügihinna võrdlus (märkida üks sobilik variant)?

1. igakuiselt
2. üks kord kvartalis
3. üks kord poolaastas
4. üks kord aastas
5. muu periood (märkida).....
6. ei toimu toote omahinna ja müügihinna võrdlust

Kuluarvestussüsteemi areng

31. Kas viimase viie aasta jooksul on toimunud ettevõtte **kuluarvestussüsteemis** suuremaid muutusi?

jah () ei ()

32. Kui jah, siis:

1. kuluarvestuse süsteemi korrastatakse pidevalt
2. suuremad muutused leidsid aset 1995–97 aastal
3. suuremad muutused on aset leidnud 1998–99 aastal

33. Võimaluse korral täpsustage lühidalt muutuste iseloomu:.....

.....

34. Kas ettevõtte praegune kuluarvestussüsteem rahuldab Teid?

jah () ei ()

35. Kas on kavandatud või planeeritud muutuseid praeguses kuluarvestussüsteemis?

jah () ei ()

36. Kui jah, siis palume kirjeldada kavandatud ja planeeritud muutuste iseloomu:

Kavandatavad (mitte otsustatud) muutused:

.....

Planeeritavad (otsustatud, kuid mitte rakendatud) muutused:

.....

.....

IV ETTEVÕTTESISENE KULUDE PLANEERIMINE

Ettevõttesisene kulude planeerimine on üks osa ettevõttesisest arvestus-süsteemist. Kulude plaanid koostatakse erinevate tasandite lõikes. Sõltuvalt ettevõttest võib tasandite arv erineda.

37. Milliste ettevõtte tasandite lõikes koostatakse kulude plaanid (märkida kõik sobilikud variandid)?

1. Ettevõtte kui terviku kohta
2. Allüksuste (tsehhide) lõikes
3. Allüksuste siseselt (jaoskondade, osakondade) lõikes
4. Muutuvate ja püsivate kulude lõikes

38. Kas ettevõttes kalkuleeritakse plaanilist omahinda:

1. Tootegruppide lõikes
2. Toodete lõikes
3. Plaanilist omahinda ei kalkuleerita

V ETTEVÕTTESISENE ARUANDLUS

39. Kas ettevõttes on sisse viidud kohustuslikust aruandlusest erinev ettevõtte-sisene aruandlussüsteem (märkida üks sobilik variant)?

1. Jah, on sisse viidud
2. Ei, kuid on plaanis lähema aasta jooksul rakendada
3. Ei ole sisse viidud ning ei ole plaanis lähitulevikus rakendada

40. Milliseid ettevõttesiseseid aruandeid ja kui sagedasti ettevõttes koostatakse? (märkida ristiga vastavasse lahtrisse)

Aruanne	Periood	Kuu	Kvartal	Aasta
Eelmiste perioodide käivete aruanne				
Tellimuste arvu ja mahu aruanne				
Laekumata arvete ja maksmata arvete aruanne				
Tootlusaruanne (tootmisvõimsuste kasutamine)				
Varude jääkide aruanne				
Tegevuskulude aruanne				
Püsikulude aruanne				
Kasumiaruanne				
Rahavoogude aruanne				
Bilanss				

41. Ettevõtte sisemises aruandluses kasutatav kasumiaruande vorm (tootegrupid, tegevusvaldkondade jm lõikes) lähtub (märkida kõik sobilikud variandid):
1. Kasumiaruande skeemist nr 1
 2. Kasumiaruande skeemist nr 2
 3. Jääktulujärgsest kasumiaruandest eristades muutuvaid ja püsivaid kulusid
 4. Mitmetasemelisest jääktulujärgsest kasumiaruandest eristades nii muutuvaid-püsivaid kui otseseid-kaudseid kulusid)
 5. Muust põhimõttest (nimetada).....
 6. Ettevõttesisest kasumiaruannet ei koostata
42. Ettevõttes koostatakse kasumiaruanne sisemistest vajadustest lähtudes (märkida kõik sobilikud variandid):
1. Igakuiselt
 2. Üks kord kvartalis
 3. Üks kord poolaastas
 4. Üks kord aastas
43. Ettevõtte tegevustulemused (kasum jt) tuuakse välja järgmiste segmentide lõikes (märkida kõik sobilikud variandid)?
1. Funktsionaalsete valdkondade (tootmine, müükt jt) lõikes
 2. Müügipiirkondade lõikes
 3. Tootegruppide/toodete lõikes
 4. Kliendigruppide lõikes
 5. Muu (nimetada).....lõikes
44. Ettevõttesiseselt mõõdetakse tegevusvaldkonna rentaablust (kasumlikkust):
1. Vastava valdkonna muutuvate kulude järgselt
 2. Otsekulude (muutuvate ja püsivate kulude) järgselt
 3. Peale seda, kui teatud jaotusbaasi alusel on jaotatud ka üldhalduskulud jt tegevusvaldkonnaga kaudselt seotud kulud
 4. Ettevõttesiseselt tegevusvaldkonna rentaablust ei mõõdata

VI KOKKUVÕTE

Kui oluliseks Te peate ankeedis käsitletud **ettevõtte-sisese arvestuse (kularvestuse, ettevõttesisese planeerimise ja aruandluse) valdkonna** arendamist Teie firma arengu seisukohast lähtudes (palume hinnata 7 palli skaalas; 7 – väga oluline, 1- ei oma mingit tähtsust; tõmmata vastavale numbrile ring ümber)

1 2 3 4 5 6 7

45. Kas Teie arvates ettevõttesisene arvestussüsteem (kularvestuse, planeerimis- ja aruandluse süsteem) rahuldab juhtimisvajadusi?

1. rahuldab täielikult
2. rahuldab osaliselt
3. ei rahulda

Appendix 2. Protocol of questions for the interviews used in Study II

Uurimuse 2 intervjuude küsimused.

Majanduskeskkonna aspektid

1. Kui oluliseks peate kuluarvestuse informatsiooni teie taseme juhtimisotsuste tegemiseks?
2. Kas muutused raviasutuste finantseerimissüsteemis mõjutavad asutusesisese kuluarvestuse süsteemi arengut?
3. Kas asutusesisese kuluarvestuse süsteemi areng peaks mõjutama asutuste finantseerimist?
4. Kas teile kättesaadav kulude informatsioon on oma detailsuselt piisav juhtimisotsuste tegemiseks?
5. Kas teile on juhtimisotsuste tegemiseks vajalik kulude liigitus püsiv- ja muutuvkuludeks?
6. Kas teile on juhtimisotsuste tegemiseks vajalik kulude liigitus otsesteks ja kaudseteks kuludeks?

Organisatsioonilised aspektid

1. Milline juhtimistasand varustab teid käesoleval ajal kuluinformatsiooniga?
2. Kas praegune teile kättesaadav kuluinformatsioon rahuldab teid?
3. Millisel tasandil peate vajalikuks tegevuse tulemuse (kasum, kahjum) hindamist?
4. Millise operatiivsusega tagasisidet peate vajalikuks oma taseme kuludest detailse ülevate saamiseks?
5. Millisel tasandil peate vajalikuks kuluarvestuse väljaarendamist?
6. Milliste spetsialistide tegevusvaldkonda peaks kuluarvestuse korraldus ja arendamine kuuluma?
7. Kas uute tervisetehnoloogiate (uued ravimid, protseduurid, ravimeetodid, ennetusviisid jms) kasutuselevõtmine nõuab kuluarvestuse edasiarendamist?
8. Kas peate vajalikuks kasutatavate seadmete tasuvusarvestuste teostamist enne seadmete muretsemist (analüüsimeks kas on piisavalt patsiente seadme kasutamiseks)?
9. Kas investeringutele seadmetesse ja aparatuuri peaks järgnema edaspidine nende kasutamise seotud kulude üksikasjalik arvestus ning analüüs?
10. Kas peate vajalikuks kasutatavate seadmete amortisatsioonikulude arvestamist osutatavate teenuste hinnakujundamisel?

Lisaks palume esitada järgmised materjalid teie asutuse kohta:

- 1) asutuse organisatsioonilise struktuuri skeem
- 2) asutuses kasutatav raamatupidamise kontoplaan (kontode loetelu)
- 3) asutustesiseste finantsplaanide ja aruannete vormid (vormide päised)
- 4) asutuse juhtorganitele esitatavate finantsplaanide ja aruannete vormid

Appendix 3. Questionnaire of Study III

KESK- JA IDA-EUROOPA ETTEVÕTETE TEGEVUSTULEMUSLIKKUSE UURING

ETTEVÕTTE TAUSTINFORMATSIOON

A. Ettevõtte nimi

B. Ettevõtte asutamise aasta

C. Ettevõtte asukoht (linn)

D. 2006. a töötajate arv (aasta lõpus)

E. 2006. a müügitulu (ilma käibemaksuta)

E.1. Sealhulgas riigi/kohaliku omavalitsuse tellimus

F. 2006. a lõpu bilansimaht

G. Palun valige, millises tegevusharus ettevõtte tegutseb:

- a) autotootmine,
- b) keemia-farmaatsiatööstus,
- c) tarbekaupade tootmine,
- d) finantsteenused,
- e) IT-telekommunikatsioon-meedia,
- f) transport, energia ja kommunaalteenus,
- g) muud tooted/teenused

H. 1. Mis on ettevõtte peamiseks tegevusaladeks?

(Maksimaalselt 3 tegevusala, küsimuse G detailiseerimiseks)

G.1. Otseste klientide arv

.....

H. Ettevõtte staatus (palun märkida kõige olulisem)

a) iseseisev ettevõtte või kontserni emaettevõtte

b) kontserni kuuluv tütarettevõtte

kontserni kuuluv sidusettevõtte

I. Omanike struktuur (kokku 100%)

I.1. Riik/kohalik omavalitsus

c)

--	--	--	--

 %

I.2. Teised omanikud

I.2.1. Institutsionaalne strateegiline investor				%
I.2.2. Institutsionaalne finantsinvestor				%
I.2.3. Eraisik(ud)				%

I.3. Suurima välisosaniku päritolumaa _____

J.1. Teie ametikoht organisatsioonis _____

Turu keskkond

1. Palun hinnake turuga seotud muudatuste sagedust skaalal: **1** – muudatusi esineb väga harva ja **7** – muudatusi esineb väga sageli.

	Praegu							3 aastat tagasi						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1.1. Muudatused klientide vajadustes														
1.2. Muutused klientide eelistustes toodangu omaduste osas														
1.3. Muutused klientide tundlikkuses hinna- kvaliteedi suhte osas														
1.4. Muudatused Teie ettevõtte hinnakujunduse põhimõtetes														
1.5. Muudatused konkurentide hinnakujunduse põhimõtetes														
1.6. Muudatused Teie ettevõtte toodetes														
1.7. Muudatused konkurentide toodetes														
1.8. Muudatused peamiste turuosaliste hulgas														
1.9. Muudatused Teie firma strateegias														
1.10. Muudatused konkurentide strateegias														

2. Palun valige üks järgnevatest vastustest, mis iseloomustaks kõige täpsemalt turu arengu faasi:

Praegu	Formeerumine	Kasv	Küpsus	Kahanemine
--------	--------------	------	--------	------------

3 aastat tagasi	Formeerumine	Kasv	Küpsus	Kahanemine
-----------------	--------------	------	--------	------------

3. Palun alljärgnevate võimaluste seast üks, mis iseloomustaks kõige paremini Teie ettevõtte turu kasvu.

Praegu

Kasv enam kui 20%	Kasv 10% – 20%	Kasv 5% – 10%	Stabiilne turumaht	Kahane-mine 5% – 10%	Kahane-mine 10% – 20%	Kahane-mine enam kui 20%
-------------------	----------------	---------------	--------------------	----------------------	-----------------------	--------------------------

3 aastat tagasi

Kahane-mine enam kui 20%	Kahane-mine 10% – 20%	Kahane-mine 5% – 10%	Stabiilne turumaht	Kahane-mine 5% – 10%	Kahane-mine 10% – 20%	Kahane-mine enam kui 20%
--------------------------	-----------------------	----------------------	--------------------	----------------------	-----------------------	--------------------------

Tulemuslikkuse hindamise aspektid

4. Kuivõrd nõustute järgnevate väidetega skaalal: **1** – ei nõustu üldse, **7** – täielikult nõus. Seejärel hinnake iga väite osatähtsust vahemikus 0–100 nii, et nende osatähtsuste summa oleks kokku 100.

Meie organisatsioon püüdleb selle poole, et:

- 4.1. saavutada meie töötajate individuaalseid eesmärke
- 4.2. saavutada meie klientide individuaalseid eesmärke
- 4.3. tagada meie juhtide ootuste täitmine
- 4.4. tagada meie omanike ootuste täitmine
- 4.5. tagada ühiskonna ootuste täitmine

1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

5. Palun hinnake järgnevate näitjate kasutamist skaalal: **1**: ei kasutata üldse, **7**: kasutatakse väga sagedasti.

- 5.1. müügitulu (käive)
- 5.2. majanduslik täiendväärtus (EVA)
- 5.3. maksu- ja intressieelne tulu (EBIT)
- 5.4. puhaskasum
- 5.5. investeringute rentaablus (ROI)
- 5.6. tarnete õigeaegsus
- 5.7. kuluefektiivsus
- 5.8. arendus (innovatsioon)
- 5.9. turuosa
- 5.10. töötajate rahulolu
- 5.11. klientide rahulolu

Kasutuse sagedus/ulatus													
kasutatakse praegu							kasutati 3 aastat tagasi						
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	2	3	4	5	6	7	1	2	3	4	5	6	7

- 5.12. kliendi kasumlikkus
- 5.13. jätkusuutlik kasv
- 5.14. reageerimiskiirus klientide muutunud vajadustele
- 5.15 reageerimiskiirus konkurentide tegevuse suhtes
- 5.16. reageerimiskiirus turuohtude suhtes
- 5.17. turunduse efektiivsus

1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

Tegevustulemuslikkuse juhtimise (TJ) süsteemi elemendid

6. Palun hinnake järgnevate meetodite kasutamist skaalal: 1 – ei kasutata, 7 – kasutatakse väga ulatuslikult.

- 6.1. otsekuludel põhinev arvestus
- 6.2. muutuv- ja püsikulude eristamine
- 6.3. kulude eelarvestamine
- 6.4. tegevuspõhine kuluarvestus
- 6.5. täiskuludel põhinev siirdehind
- 6.6. muutuvkuludel põhinev siirdehind
- 6.7. turuhindadel põhinev siirdehind
- 6.8. jääktulu (kulukatte) analüüs toodete/teenuste lõikes
- 6.9. jääktulu (kulukatte) analüüs klientide/tarbijate lõikes
- 6.10. jääktulu analüüs allüksuste lõikes
- 6.11. kasutatav majandusliku täiendväärtuse (EVA) leidmine jaoks
- 6.12. kasutatav diskonteeritud rahavoogude (DCF) arvutamine jaoks
- 6.13. strateegiline planeerimine
- 6.14. kesk-pikk (taktikaline) planeerimine
- 6.15. traditsiooniline (jäik, staatiline) eelarvestamine
- 6.16. paindlik eelarvestamine
- 6.17. planeerimine perioodide kaupa
- 6.18. dünaamiline (libisev) planeerimine
- 6.19. tulemuslikkuse võtmenäitajate kasutamine

		Kasutuse sagedus/ulatus													
		kasutatakse praegu							kasutati 3 aastat tagasi						
		1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.1.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.2.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.3.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.4.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.5.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.6.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.7.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.8.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.9.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.10.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.11.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.12.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.13.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.14.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.15.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.16.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.17.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.18.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	6.19.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

- 6.20. tasakaalus tulemuskaart
- 6.21. juhtkonna tulemuspõhine tasustamine (kompensatsioon, töötasud)
- 6.22. teiste töötajate tulemuspõhine tasustamine
- 6.23. eelhoiatuse süsteem
- 6.24. kuuaruandlus
- 6.25. kvaliteedi juhtimine (ISO, EFQM)

1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

7. Palun võrrelge ettevõtte tulemusi oma peamiste konkurentide tulemustega skaalal: **1** – meie tulemus jääb tugevalt alla konkurentide keskmisele, **7** – meie tulemus on tugevalt üle konkurentide keskmise.

- 7.1. müügitulu (käive)
- 7.2. puhaskasum
- 7.3. investeringute rentaablus (ROI)
- 7.4. õigeaegne lepingute täitmine
- 7.5. kuluefektiivsus
- 7.6. arendus (innovatsioon)
- 7.7. turuosa
- 7.8. töötajate rahulolu
- 7.9. klientide rahulolu
- 7.10. kasumlike klientide ligimeelitamine
- 7.11. arenguperspektiiv
- 7.12. strateegilise juhtimise paindlikkus
- 7.13. toodete kiire kohandamine vastavalt klientide muutunud vajadustele
- 7.14. kiire reageerimine turu ohtudele
- 7.15. turunduse efektiivsus

Praegu						
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

3 aastat tagasi						
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7
1	2	3	4	5	6	7

Appendix 4. Main themes of Study IV interviews

Uurimuse 4 "Tasakaalus tulemuskaardi kujundamine ja rakendamine avaliku sektori organisatsioonis" intervjuude peamised teemad:

1. Ülevaade organisatsiooni põhitegevusest ja struktuurist.
2. Organisatsiooni tugevused, nõrkused, võimalused ja ohud.
3. Tulemuslikkuse mõõtmise vajadus ja sellega seotud üksused ja inimesed.
4. Senised tulemuslikkuse mõõtmise ja juhtimise põhimõtted.
5. Arengukava ja strateegiliste eesmärkide kujundamine ning seos tulemuslikkuse mõõtmisega.
6. Tulevased tasakaalus tulemuskaardi üldkontseptsioon ja selle kujundamine organisatsiooni tasandil.
7. Huvigruppide määratlemine ja seostamine tulemuslikkuse mõõtmisega.
8. Osakondade eesmärkide ja tulemuskaartide põhimõtete kujundamine.
9. Osakondade strateegiakaartid ja nende seos organisatsiooni üldeesmärkidega.
10. Huvigruppide, finantside, sisemiste protsesside ja töötajate ning organisatsiooni arengu aspektide kujundamine osakondade lõikes.
11. Tasakaalustulemuskaardi vastavate aspektide eesmärgid ja mõõdikud osakondades.
12. Tasakaalustulemuskaardi rakendamise eeldused ja probleemid.
13. Tasakaalus tulemuskaardi arendamise mõju organisatsiooni tulemuslikkuse juhtimisele.

SUMMARY IN ESTONIAN

Juhtimisarvestuse areng dünaamilises majanduskeskkonnas äri- ja avaliku sektori organisatsioonide näitel

Töö aktuaalsus

Muutused on üheks tänapäeva majanduskeskkonna lahutamatuks osaks. Globaliseeruvad turud, tihenev konkurents, riiklikud reformid ja tehnoloogiline areng on nende muutuste taga olevateks võtmesõnadeks. Majanduskeskkonna muutused avaldavad mõju nii kasumile orienteeritud äriettevõtete kui ka avalike teenuste pakkumisega seotud organisatsioonidele. Seejuures on organisatsioonide ellujäämise ja edukuse üheks kriitiliseks aspektiks juhtimise kvaliteet ja juhtimisotsuste majanduslik ratsionaalsus ning nende sobivus muutuvate tegevustingimustega. Juhtimisarvestus aitab teha majanduslikult nähtavaks otsustega seotud mõjud organisatsiooni tulemuslikkusele. Ilma muutuvast kontekstist tulenevate juhtimisarvestuse süsteemi kohanduste ja uuendusteta jääb aga majandusliku ratsionaalsuse funktsiooni toimimine küsitavaks.

Arenenud turumajanduse riikides on juhtimisarvestuse ja selle muutuste uurimine leidnud laialdast huvi (Drury et al., 1993; Amat et al., 1994; Libby ja Waterhouse, 1996; Bruggeman et al., 1996; Virtanen et al., 1996; Granlund ja Lukka, 1998; Burns et al., 1999; Vaivio, 1999; Burns ja Scapens, 2000; Williams ja Seaman, 2001 etc.). Üldiselt on nende uurimuste põhjal leitud, et juhtimisarvestuse süsteemid on oma olemuselt pigem stabiilse kui muutuva iseloomuga (Libby ja Waterhouse, 1996; Anderson, 1995) või leiavad muutused neis aset väga aeglaselt (Burns ja Scapens, 2000). Seega on arvestuse valdkonda peetud eelkõige konservatiivsuse kantsiks (Sulaiman ja Mitchell, 2005), kus muutused on pigem erandiks. Samas võib teistsuguses, vähem stabiilses majanduskeskkonnas, nt majandusformatsiooni muutuste ja siirdemajanduse tingimustes, olla surve organisatsioonide juhtimisarvestuse süsteemide arenguks oluliselt kõrgem. Senise juhtimisarvestuse teoreetilise baasi ühe puudusena on esile toodud juhtimisarvestuse muutuste mittepiisavat tõlgendust erinevates majanduskeskkondades (Chenhall, 2003). Majanduskeskkond koosneb väljaspool organisatsiooni piire asetsevatest olulistest füüsilistest ja sotsiaalsetest teguritest ning komponentidest (Duncan, 1972). Majanduskeskkonda võib jagada dünaamiliseks ja stabiilseks keskkonnaks. Doktoritöö fookuses olev dünaamiline keskkond hõlmab siirdemajandusega riike, milles leiavad aset majanduse põhimõttelised ümberkorraldused ja majanduse arengus suured varieeruvused. Seevastu stabiilse keskkonnaga riikides puuduvad analoogsed ümberkorraldused ja majanduse areng on stabiilsema iseloomuga.

Sõltuvusteooria kohaselt loovad muutused majanduskeskkonnas vajaduse vastavateks kohandusteks organisatsioonides. Sealhulgas on vajalikud ka juhtimisarvestuse süsteemi arendused, mis võimaldaksid toetada ratsionaalset juhtimist ja organisatsiooni püsima jäämist. Seega on erinevate juhtimisotsuste

langetamise taga oleval juhtimisarvestuse süsteemi efektiivsel toimimisel oluline roll.

Kuigi Kesk- ja Ida-Euroopa riikide plaanimajanduse kokku varisemisest ja majanduse ümberstruktureerimise algusest on möödunud paarkümmend aastat, on nende riikide kohta juhtimisarvestuse alaste süsteemsete uurimuste arv, võrreldes teiste Euroopa riikidega, piiratud (Sobanska ja Wnuk, 1999; Szychta, 2001; Vamosi, 2000; Haldma ja Lääts, 2002; Cadez ja Guilding, 2008; Valanciene ja Gimzauskiene, 2009). Seega on majanduse restruktureerimise mõjud juhtimisarvestusele jäänud põhjalikumalt analüüsimata. Seetõttu on doktoritöö peamiseks ajendiks juhtimisarvestuse teooria ja seniste uurimuste puudulik tõlgendus dünaamilises majanduskeskkonnas aset leidvate organisatsioonisiseste juhtimisarvestuse muutuste olemust. Doktoritöö käsitleb lähemalt juhtimisarvestuse arengu võimalikke eripärasid ja seda protsessi mõjutavaid tegureid dünaamilises kontekstis. Juhtimisarvestuse muutuste põhjuste ja tulemuste fookuse olulisust dünaamilises majanduskeskkonnas on rõhutanud mitmed autorid (Gray ja Roberts, 1991; Anderson ja Lanen, 1999; Luther ja Longden, 2001). Vastavate dünaamilisele majanduskeskkonnale iseloomulike juhtimisarvestuse tunnuste ja neid mõjutavate tegurite võrdlus varasemate uurimustega, mis on teostatud stabiilse arenenud turumajanduse tingimustes, võimaldab avada sügavamalt konteksti mõju juhtimisarvestuse muutustele.

Majanduse restruktureerimine plaanimajanduselt turumajandusele omastele põhimõtetele toob kaasa otsustusõiguse ja juhtimisfunktsioonide kandumise riigitasandilt organisatsiooni tasandile. See omakorda eeldab plaanimajandusele omaste peamiselt tsentraalselt reguleeritud organisatsioonisisestele tingimustele kohandamata arvestuse meetodite asendamist turumajandusele omaste organisatsioonisiseste juhtimisarvestuse põhimõtetega. Samas on uurimused näidanud, et uutes turumajanduslikes tingimustes püütakse juhtimises leida võimalusi jätkamaks samade plaanimajandusele omaste arvestusmeetoditega (Krivogorsky, 2000; Czaban ja Whitley, 2000). Kuigi nende meetodite sobilikkus uues keskkonnas on majanduslikult ratsionaalse juhtimise seisukohalt kaheldav.

Majanduskeskkonna olulised muutused mõjutavad ka juhtimisarvestuse toimimist siirdemajanduse riikide praktikas, pakkudes ideaalse võimaluse vaadelda lähemalt juhtimisarvestuse olemust ja seda mõjutavaid tegureid just dünaamilises kontekstis. Seetõttu vaatleb antud töö vastavaid protsesse lähemalt Eesti organisatsioonide näidetel, kus majanduskeskkond on teinud läbi unikaalsed muutused ja milles plaanimajanduse põhimõtete kasutamine on asendunud turumajandusele omaste struktuuride ülesehitamisega. Eesti viimase 15 aasta majanduskeskkonda võib lugeda dünaamiliseks eelkõige alljärgnevatest põhjustest lähtuvalt. Esiteks, liberaalsetest turumajanduse põhimõtetest tulenev kiirelt kasvav ja tihenev konkurents (majandusvabaduse indeksi järgi oli Eesti 1999. a. 13., 2004. a. kuendal ja 2009. a. 13. kohal maailmas; allikas: Index of Economic Freedom..., 2011). Teiseks, majanduse arengu olulised varieeruvused (sisemajanduse kogutoodangu suurimad kasvud ja langused olid aastatel 1997. a. +11,7%, 1999. a. -0,3%, 2006. a. +10,6% ja 2009. a. -13,9%; allikas: Main economic indicators ..., 2011). Kolmandaks, olulised muutused seadusandluses

ja teistes regulatsioonides nii riigi institutsioonide arendamise kui ka Euroopa Liiduga ühinemisest tingitud harmoneerimise tõttu.

Lisaks võib täheldada, et juhtimisarvestuse alased käsitlused teaduskirjanduses on suuresti tootmisorganisatsioonide kesksed. Samas, kui üha enam kasvava teenindussektori juhtimisarvestuse arengut on suhteliselt vähe vaadeldud. Eeldades, et tootmise ja teeninduse organisatsioonide fookus tulemuslikkuse osas on erinev, on ka nende juhtimisarvestuses hõlmatud tulemuslikkuse hindamine erinev. Seetõttu käsitleb töö juhtimisarvestuse muutuste analüüsimisel ühe täiendava aspektina tegevusvaldkonnast tingitud võimalikke organisatsioonide vahelisi erinevusi.

Majanduskeskkonna muutused ja rahvusvahelised suundumused avaldavad mõju lisaks äri sektorile ka avaliku sektori organisatsioonidele. Viimastel kümnenditel rahvusvaheliselt vastukaja leidnud uue haldusjuhtimise (New Public Management – NPM) suund hõlmab endas suurema läbipaistvuse ja efektiivsema avaliku sektori algatusi (Baird, 2007; Mimba et al., 2007), soovitades rakendada äri sektori juhtimise põhimõtteid (Hood, 1995) ka avalikus sektoris. Samas on rahvusvahelisel tasandil nende initsiatiivide ja põhimõtete rakendamise mõju juhtimisarvestusele tagasihoidlikku käsitlust leidnud.

Avaliku sektori uue haldusjuhtimise põhimõtted on mõjutanud ka riiklikke reforme ja tulemuslikkuse hindamise arenguid Eestis. Samas, ei ole äri sektorile omaste tulemuslikkuse hindamise ja juhtimise põhimõtete mõju avaliku sektori organisatsioonide juhtimisarvestuse arengule Eestis ja teistes Ida-Euroopa riikide praktikas lähemalt üldse uuritud. Seetõttu hõlmab doktoritöö juhtimisarvestuse arengu näiteid ka avaliku sektori organisatsioonide praktikast. Andmed juhtimisarvestuse arengutest avalikus sektoris annavad võimaluse määratleda olemasolevaid kitsaskohti ja edasisi suundumusi juhtimisarvestuse funktsiooni toimimisele. Hästi toimiv juhtimisarvestussüsteem omakorda aitab mõista organisatsiooni reaalselt ressursside kasutust ja selle mõju tulemuslikkuse kujunemisele, ilma milleta on keeruline organisatsioonide efektiivsust suunata.

Üldiselt võib nii Eestis kui ka teistes Ida-Euroopa riikides liikumist arenenud turumajanduse praktikatele omases suunas pidada ootuspäraseks. Samas saab seda väita vaid dünaamilises kontekstis aset leidvate juhtimisarvestuse muutuste andmete analüüsi põhjal, tuues välja nende suundumuste olemuse ja eripärad praktikas. Granlundi ja Lukka (1998) on välja pakkunud, et kuigi maailmas on erinevused juhtimisarvestuse praktikates tähelepanuväärsed, on nende erinevate praktikate ühtlustumine globaalsetest majandusmõjudest tulenevalt siiski viimasel ajal saamas ülekaalu. Seega võimaldab käesolev töö saada enam selgust võimaliku juhtimisarvestuse praktikate ühtlustumise või varieeruvuse kohta dünaamilise majanduskeskkonna tingimustes.

Töö eesmärk ja uurimisülesanded

Töö eemärgiks on selgitada dünaamilises majanduskeskkonnas juhtimisarvestuse muutuste olemust ja seda mõjutavaid tegureid äri- ja avaliku sektori

organisatsioonide näidetel. Töös vaadeldakse majanduskeskkonna ja organisatsiooni mõjusid arvestussüsteemide muutustele lähtuvalt sõltuvusteooriast. Peamine uurimisküsimus on püstitatud järgnevalt: millised on dünaamilises majanduskeskkonnas tegutsevate äri- ja avaliku sektori organisatsioonide juhtimisarvestuse muutuste peamised tunnused ja tegurid? Dünaamilises kontekstis toimuvate juhtimisarvestuse süsteemide muutuste ja seda mõjutavate tegurite parem mõistmine aitab arendada juhtimisarvestuse süsteemide tõhusamat toimimist ja ratsionaalset käitumist organisatsioonide juhtimises. Eesmärgi saavutamiseks on püstitatud järgmised uurimisülesanded:

- 1) anda teoreetiline ülevaade juhtimisarvestuse funktsioonist ja elementidest,
- 2) anda varasemate uurimuste põhjal ülevaade sõltuvusteoorial põhinevast lähenemisest ja juhtimisarvestuse muutusi mõjutavatest teguritest,
- 3) töötada välja juhtimisarvestuse muutuste kontseptsiooni käsitlev teoreetiline raamistik,
- 4) analüüsida Eesti äri- ja avaliku sektori organisatsioonides juhtimisarvestuse muutuseid mõjutavaid keskkonna ja organisatsiooniga seotud tegureid,
- 5) selgitada empiiriliselteel välja juhtimisarvestuse ja tulemuslikkuse mõõtmise muutuste põhjal juhtimisarvestuse arengu tunnused ja neid mõjutavad tegurid teenindus- ja tootmisettevõtete näitel,
- 6) analüüsida tasakaalus tulemuskaardi kujundamise ja rakendamise mõju tulemuslikkuse juhtimisele avaliku sektori organisatsioonides,
- 7) süvendada juhtimisarvestuse muutuste ja seda mõjutavate tegurite alast arusaamist dünaamilise majanduskeskkonna eripära kaudu.

Töö uudsus

Juhtimisarvestuse muutused on arenenud turumajanduse riikides kujunenud üheks populaarseks uurimisvaldkonnas. Samas on antud valdkond eelnevalt vähe käsitletud leidnud viimasel kahel kümnendil olulisi poliitilisi ja majanduslikke ümberkorraldusi tegevates Ida-Euroopa riikides. Seega doktoritöö uudsus seisneb juhtimisarvestuse arengu käsitlemises muutusterohkes dünaamilises majanduskeskkonnas. Lisaks pakub töö mitmeid uusi kontseptuaalseid ja metodoloogilisi aspekte.

Esiteks, ei paku senised uurimused selgeid kontseptsioone ja teid juhtimisarvestuse arengute kohta erinevates majanduskeskkondades. Seetõttu pakub käesolev doktoritöö täiendavaid teadmisi juhtimisarvestuse süsteemide muutustest, vaadeldes nende süsteemide üha suurenevat keerukust (i. k. *sophistication*) dünaamilise majanduskeskkonna kontekstis. Lisaks on üheks peamiseks erinevuseks käesoleva töö ja varasemate uurimuste vahel juhtimisarvestuse arengute jälgimine selle elementide keerukuse mõõtme nii tehnilises kui ka kontseptuaalses plaanis, mida varasemates uurimustes ei ole süsteemselt kasutatud.

Teiseks uudseks aspektiks on ühtse juhtimisarvestuse muutuste raamistiku rakendamine nii äri- kui ka avaliku sektori organisatsioonides. Senised uurimused on analüüsinud neid muutuseid eraldi kas ainult ärisektori või avaliku

sektori organisatsioonide lõikes. Ühtse juhtimisarvestuse raamistiku kasutamist võimaldavad ühelt poolt üha laienev äri sektori põhimõtete ülekandumine avalikku sektorisse uue haldusjuhtimise (NPM) raames (Kaplan, 2001; Aidermark, 2001a; Lawrence ja Sharma, 2002; Modell 2004; Lapsley ja Wright, 2004; Neely et al., 2006; Chen et al., 2006; Peters et al., 2007; Qudrat-Ullah, 2007) ja teiselt poolt Eesti majandusarvestuse seadusandlus (Raamatupidamise seadus), mille ühtsed põhimõtted kehtivad nii äri- kui ka avaliku sektori jaoks. Samas ei ole autorile teadaolevalt avaliku sektori organisatsioonide kohta rahvusvaheliselt ilmunud publikatsioone, mis vaatleks avaliku sektori juhtimisarvestuse arengut mõnes dünaamilise majanduskeskkonnaga Ida-Euroopa riigis.

Kolmas uudne aspekt on seotud kasutatud uurimisraamistikuga. Juhtimisarvestuse keerukuse arengut mõjutavaid tegureid vaadeldakse kahe perspektiivi kombinatsioonina, mida on varem kasutatud eraldi. Ühelt poolt vaadeldakse majanduskeskkonna ja organisatsiooni tegurite mõju juhtimisarvestuse süsteemile (Gordon ja Miller, 1976; Otley, 1980; Chenhall, 2003; Hopwood, 2009) ning teiselt poolt muutuste protsessi soodustavaid või takistavaid tegureid (Innes ja Mitchell, 1990; Groot ja Lukka, 2000; Burns ja Vaivio, 2001).

Neljanda uudse aspektina võib välja tuua majandusarvestuse õiguslike regulatsioonide mõju jälgimist juhtimisarvestuse muutustele. Varasemad uuringud on käsitletud regulatsioone kui üldist arvestuspõhimõtete mõjutajat (Innes ja Mitchell, 1990; Libby ja Waterhouse, 1996). Antud töö vaatleb majandusarvestuse regulatsioonide mõju detailsemalt juhtimisarvestusele ja selle elementidele.

Viienda uudse aspektina võib märkida turumajandusele omaste juhtimisarvestuse praktikate ühtlustumise perspektiivi uurimist dünaamilise majanduskeskkonna tingimustes, mida varasemalt ei ole otseselt käsitletud. Lähtudes Granlundi ja Lukka (1998) väitest, et maailmas on ülekaalu saamas juhtimisarvestuse praktikate ühtlustumine, vaatleb antud töö arenenud turumajandusega riikide praktika ülekandumist Eesti organisatsioonidesse kui tõendust vastava ühtlustumise toimumisest.

Uurimismetoodika ja töö ülesehitus

Metoodika juhtimisarvestuse ja selle muutuste uurimiseks on mitmekesine ja sõltub peamiselt konkreetsest uurimiseesmärgist. Juhtimisarvestuse muutuste erinevaid aspekte käsitlevates uuringutes on kasutatud nii kvantitatiivset küsitlusel põhinevat (Libby ja Waterhouse, 1996; Anderson ja Lanen, 1999; Laitinen, 2001; Luther ja Longden, 2001; Baines ja Langfield-Smith, 2003; Malina ja Selto, 2004) kui kvalitatiivset juhtumipõhist (Vamosi, 2000; Bourne et al., 2000; Kennerly ja Neely, 2003; Scapens ja Jazayer, 2003; Ahrens ja Chapman, 2004; Tuomela, 2005) analüüsi. Käesolevas doktoritöös on kasutatud mõlemat lähenemist. Küsitluste andmed on aluseks uurimustele 1 ja 3 ning peamiselt kvalitatiivsed intervjuude andmed uurimustele 2 ja 4. Tabel 1 annab ülevaate dissertatsioonis kasutatud meetoditest ja empiirilistest andmetest. Äriettevõtete

juhtimisarvestuse praktikat ja seda mõjutavaid tegureid on käsitletud uurimustes 1 ja 3. Avaliku sektori juhtimisarvestuse arengut on vaadeldud lähemalt uurimustes 2 ja 4.

Töö koosneb kolmest osast: teoreetilisest, empiirilisest ja sünteesivast osast. Teoreetiline osa on üles ehitatud nelja peatükiliseks, millest esimeses antakse ülevaade juhtimisarvestuse olemusest, rollide arengust ja elementidest. Teises peatükis vaadeldakse sõltuvusteooria põhimõtteid ja sellest tulenevaid juhtimisarvestuse mõjutegureid.

Tabel 1. Ülevaade doktoritöö empiirilise peatüki uurimustest

Uurimus	Uurimuse eesmärk	Andmete kogumise meetod	Uuritud periood	Empiirilised andmed
Uurimus 1	Selgitada välja peamised juhtimisarvestuse praktikat mõjutavad tegurid Eesti tootmisettevõtetes	Küsitlus	1997–1999	62 tootmisorganisatsiooni (äri sektor)
Uurimus 2	Selgitada välja juhtimise reformide mõjud juhtimisarvestuse süsteemidele haiglates	Intervjuud	2000–2002	13 haiglat (avalik sektor)
Uurimus 3	Uurida äriettevõtete tulemuslikkuse hindamise meetodite ja näitajate dünaamikat ning neid mõjutavad tegureid	Küsitlus	2004–2007	61 teeninduse ja tootmise organisatsiooni (äri sektor)
Uurimus 4	Analüüsida tasakaalus tulemuskaardi kujundamise ja rakendamise mõju muuseumi tulemuslikkuse juhtimise arendamisele	Intervjuud ja vaatlused	2008–2010	Muuseum (avalik sektor)

Allikas: autori koostatud

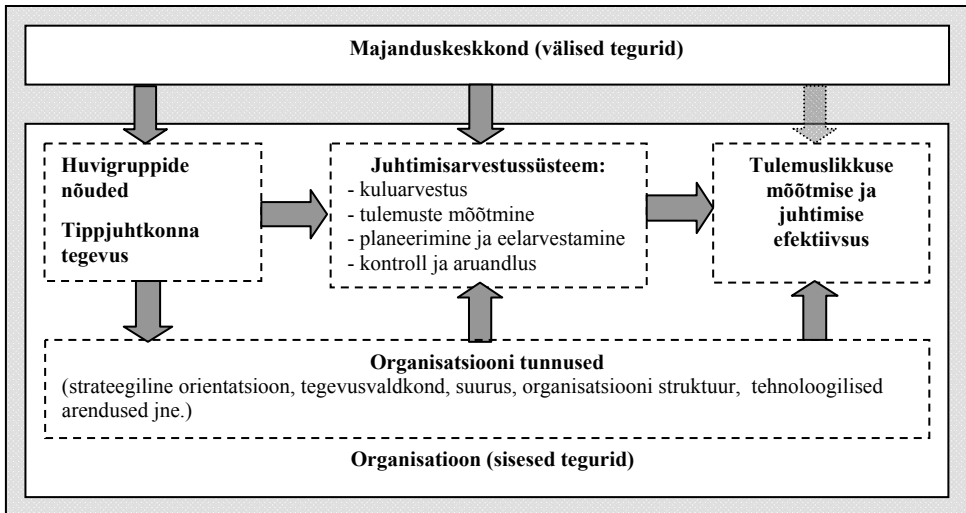
Töö empiiriline osa põhineb neljal uurimusel. Esimene uurimus keskendub juhtimisarvestuse praktikale ja seda mõjutavatele teguritele Eesti tootmisettevõtetes aastatel 1997–1999. Teine uurimus selgitab juhtimise reformide ja teiste tegurite mõju juhtimisarvestuse süsteemide arengutele avalikus sektoris haiglate näitel aastatel 2000–2002. Kolmas uurimus käsitleb juhtimisarvestuse arengut ja seda mõjutavaid tegureid tulemuslikkuse hindamise meetodite ja näitajate dünaamika analüüsi kaudu äri sektoris. Neljas uurimus analüüsib lähemalt tasakaalus tulemuskaarti, kui ühte juhtimisarvestuse arendamise võimalust, selle kujundamist ja rakendamist ning selle mõju tulemuslikkuse juhtimise arendamisele avaliku sektori organisatsiooni näitel.

Töö sünteesivas osas tuuakse lühidalt välja empiiriliste uurimuste põhitulemused ja ühildatakse neid teoreetiliste seisukohtadega. Kokkuvõttes on välja toodud peamised järeldused tööst, teoreetilised ja metodoloogilised piirangud ning edasiste uurimuste võimalikud suunad.

Teoreetiline taust ja uurimisküsimused

Juhtimisarvestusealased uurimused on oma fookuselt ja orientatsioonilt väga erinevad. Aja jooksul on muutunud juhtimisarvestuse sisu ja rollid organisatsioonis, arenedes lihtsast rahalise info töötlemisest organisatsiooni eesmärgede toetava ja laiapõhjalise info pakkujaks, mida võib vaadata kui muutust tavapärase kalkuleerimise rollist juhtimise konsultandi rolli suunas. Juhtimisarvestussüsteem toimib nelja elemendi: kuluarvestuse, eelarvestamise, aruandluse ja tulemuslikkuse hindamise kaudu. Igal elemendil on kogu juhtimisarvestuse süsteemis täita oma funktsioon.

Sõltuvusteooria lähenemise kohaselt sõltub juhtimisarvestuse süsteemi efektiivsus selle sobivusest organisatsioonile ja selle tegevuse kontekstiga (Otley, 1980). Joonis 1 kajastab sõltuvusteoorial põhinevaid peamisi seoseid.



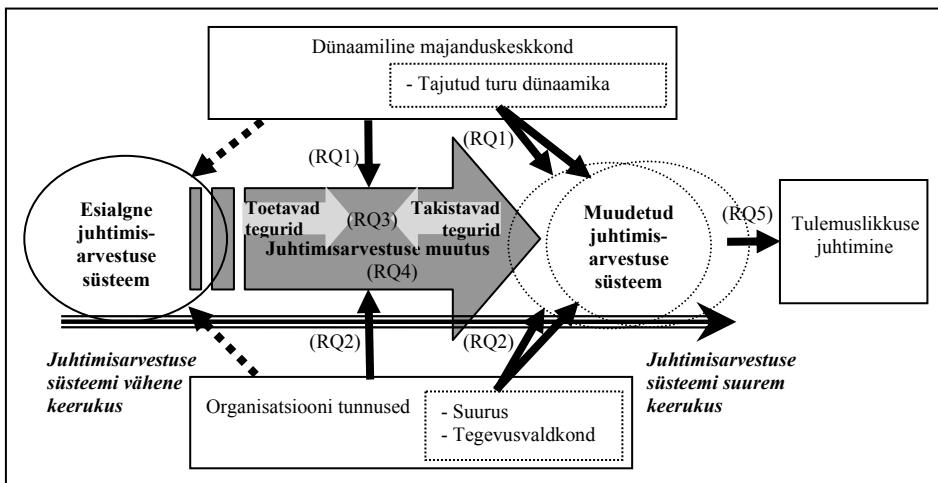
Joonis 1. Juhtimisarvestuse sõltuvusteoorial põhinev raamistik

Allikas: autori koostatud

Eelnevad stabiilses majanduskeskkonnas arenenud turumajanduse praktikat käsitlevad sõltuvusteooriapõhised uurimused on näidanud, et erineva kontekstiga organisatsioonide juhtimisarvestuse süsteemide ülesehitus sõltub mitmetest majanduskeskkonna ja organisatsiooni teguritest. Muuhulgas on majanduskeskkonnast tulenevat ebamäärasust peetud juhtimisarvestusele enam mõju avalda-

vateks teguriteks (Otley (1978), Chenhall ja Morris (1986), Chapmann (1997), Anderson ja Lanen (1999), Hartmann (2000), Luther ja Longden (2001), Baines ja Langfield-Smith (2003), Tillema (2005)). Organisaatsiooni korralduslikest mõjudest juhtimisarvestusele stabiilsetes tingimustes on ühe olulise tunnusena nähtud organisatsiooni suurus (Merchant (1981), Libby ja Waterhouse (1996), Luther ja Longden (2001), Laitinen (2001), Waweru et al., (2004)). Tegevusvaldkonnast tulenev mõju juhtimisarvestuse süsteemide ülesehitusele on varasemates uurimustes suhteliselt tagasihoidlikku käsitlust leidnud.

Lähtudes juhtimisarvestuse süsteemi keerukuse mõõtmest ja majanduskeskkonna ja organisatsiooni tegurite mõjudest juhtimisarvestuse arengule, töötas autor välja töö raamistiku, mis oli ühtlasi aluseks empiiriliste andmete analüüsiks ja tõlgendamiseks. Doktoritöö juhtimisarvestuse arengu üldine raamistik on esitatud joonisel 2. Toodud raamistiku kohaselt on efektiivse juhtimisarvestuse süsteemi toimimise tagamiseks vajalik selle kohandamine vastavalt majanduskeskkonna tingimustele ja muutustele. Efektiivne juhtimisarvestussüsteem omakorda võimaldab arendada ratsionaalsemat lähenemist organisatsiooni juhtimises. Sõltuvusteooriast tulenevate seoste ja tegurite põhjal liigitas autor muutusi mõjutavad tegurid kahte gruppi: esiteks, juhtimisarvestuse kontekstiga sobivust mõjutavad tegurid ning teiseks, tegurid, mis on otseselt seotud juhtimisarvestuse arengu protsessiga. Esimese grupi tegurid hõlmavad endas majanduskeskkonna ja organisatsiooni erinevaid tegureid. Teise mõjutegurite grupi moodustavad juhtimisarvestuse arengut suurema keerukuse suunas toetavad või takistavad tegurid. Dünaamilise majanduskonteksti puhul võivad juhtimisarvestust mõjutavad tegurid võrreldes stabiilsema kontekstiga olla sarnased kui ka mõnevõrra erinevad.



Joonis 2. Juhtimisarvestuse arengu raamistik ja sellega seotud uurimisküsimused doktoritöös.

Märkus: Pideva joonega nooled tähistavad empiirilisel analüüsitud seoseid ja katkendliku joonega nooled teoreetilisi seoseid
Allikas: autori koostatud

Senise dünaamilise majanduskeskkonna napi uurimisandmestiku tõttu püstitati järgmised uurimisküsimused: millised on dünaamilise majanduse tingimustes peamised juhtimisarvestuse süsteemi ülesehitust ja muutuseid mõjutavad majanduskeskkonna ja millised on peamised organisatsioonilised tegurid (vastavalt RQ1 ja RQ2 joonisel 2)? Täiendavalt on tegurite seast eristatud juhtimisarvestuse arengu raamistikus kolm tegurit: tajutud turudünaamika (kui turu ebamäärasuse indikaator), organisatsiooni suurus ja tegevusvaldkond, mis selgitavad juhtimisarvestussüsteemi ülesehituse keerukuse erinevusi organisatsioonides.

Majanduskeskkonna ja organisatsiooni tegurid võivad lisaks üldisele juhtimisarvestuse süsteemi ülesehituse sobivust selgitavale toimele mõjutada ka juhtimisarvestuse süsteemi muutuste kiirust, neid toetades või takistades. Stabiilse majanduskeskkonna puhul on eeldatud, et muutusi motiveerivad organisatsioonides ette võtma tihenev konkurents ja finantsraskused. Muutustele kaasaaitavate tegurite hulka loetakse tippjuhtkonna toetust, majandustarkvara arendust, kohustusliku finantsarvestuse kohandusi ja arvestusala töötajate piisavust. Seevastu juhtimisarvestuse muutusi takistavad piisava kompetentsi puudumine nii arvestusala töötajate kui ka juhtide seas, sobimatu infosüsteem, olemasoleva arvestussüsteemi jäikus ja vastuseis muutustele. Nimetatud mõjutegurid juhtimisarvestuse muutustele võivad dünaamilises ja stabiilses kontekstis kujuneda sarnaseks. Samas on nende tegurite olemust dünaamilises keskkonnas väga vähe käsitletud. Seetõttu püstitatakse vastavate sarnasuste ja võimalike erisuste välja toomiseks töös järgmine küsimus (RQ3 joonisel 2): millised on dünaamilises majanduskontekstis juhtimisarvestuse süsteemi muutuseid soodustavad ja takistavad tegurid?

Juhtimisarvestuse muutuste suuna analüüsimisel on eelnevates uurimustes käsitletud keerukuse mõõdet, mis lubab eristada vähese ja suure keerukusega süsteeme (Chenhall, 2003; Tillema, 2005). Vähesel keerukusega süsteemid baseeruvad enamasti sisemisel vaatel, staatilisel tulemuste mõõtmisel, kuludel põhineval ja minevikku kajastaval rahalisel infol. Suurema keerukusega süsteemide puhul on seevastu arvestuse info laiapõhjalisem sisaldades lisaks rahalisele ka mitterahalist infot, integreerides organisatsioonisisest ja –välist infot, põhinedes dünaamilisel tulemuste hindamisel ning strateegilisel vaatel. Varasemad arenenud turumajanduse kogemust vaadelnud uurimused on rõhutanud, et dünaamilises ja kõrge ebamäärasusega majanduskeskkonnas on sobiv rakendada laiapõhjalist ja mitterahalist infot, ning et juhtimisarvestusel on dünaamilises keskkonnas peamiselt planeerimist toetav roll, mis omakorda eeldab keerukate süsteemide laiemat rakendamist.

Varasemalt on süsteemide keerukuse mõõdet seostatud nende tehnilise ja kontseptuaalse arenguga (Bjørnenak ja Olson, 1999). Samas leiab autor, et just nende kahe arengu eristamine võimaldab selgemalt välja tuua juhtimisarvestuse muutuste sisu dünaamilises majanduskeskkonnas. Juhtimisarvestuse elementide eelkõige kontseptuaalsed muudatused märgivad põhimõtete arengut turumajandusele omaste juhtimisarvestuse tavapärase praktika ja selle keerukamate vormide ehk kaasaegsemate süsteemide suunas. Seega on oluline küsida (RQ4

joonisel 2), millised on dünaamilises majanduskontekstis juhtimisarvestuse tehnilised ja kontseptuaalsed muutused elementide lõikes?

Juhtimisarvestuse kaasaegsed arengud avaliku sektori organisatsioonides hõlmavad endas integreeritud ja dünaamilise tulemuslikkuse mõõtmise ja hindamise aspekte, võimaldades erinevate huvigruppide huvide ühendamist ning nende saavutamist läbi laiapõhjaliste tulemuslikkuse mõõdikute rakendamise. Seejuures on peetud tasakaalus tulemuskaarti sobivaks juhtimisarvestuse arengu võimaluseks avalikus sektoris (Kaplan, 1999; Elefalk, 2001; Lawrence ja Sharma, 2002; Wilson et al., 2003; Chen et al., 2006; Qudrat-Ullah, 2007; Gstraunthaler ja Piber, 2007). Samas on jäänud nende arengute rakendused ja mõjud tulemuslikkuse juhtimisele dünaamilises keskkonnas tähelepanuta. Sellega seoses on püstitatud töös küsimus (RQ5 joonisel 2), kuidas rakendatakse keerukaid juhtimisarvestuse instrumente avaliku sektori organisatsioonides ja kuidas need mõjutavad tulemuslikkuse juhtimise praktikat? Välja toodud uurimisküsimused on aluseks juhtimisarvestuse arengu analüüsiks dünaamilises majanduskeskkonna kontekstis.

Põhitulemused ja järeldused

Käesoleva doktoritöö tulemusena tõi autor välja mitmed aspektid, mida senises juhtimisarvestuse teaduskirjanduses on käsitletud vaid pealiskaudselt. Töö fookus oli suunatud juhtimisarvestuse arengutele dünaamilises majanduskeskkonnas. Kuigi töö empiirilised uurimused vaatlesid neid arenguid peamiselt Eesti äri- ja avaliku sektori organisatsioonides, võib töö tulemusi seostada teataval määral ka teiste siirdemajanduse ja kõrge varieeruvusega Kesk- ja Ida-Euroopa riikide juhtimisarvestuse muutustega üldiselt. Majanduskeskkonna oluliste muutuste mõjul on organisatsioonides toimunud mitmed arengud ka juhtimisarvestuse praktikas. Töö vastavaid tulemusi on võrreldud enam majanduse stabiilsust omavate arenenud turumajanduse riikide juhtimisarvestuse arengutega.

Varasemates uurimustes on juhtimisarvestuse muutuste sisu ja kontseptsiooni vaadeldud erinevalt. Varieeruvus autorite filosoofilistes ja meetoodilistes lähenemistes põhjustab sageli ebamäärasust juhtimisarvestuse muutuste sisu avamisel. Juhtimisarvestuse arengu ja keskkonnast tulenevate seoste mitmemõõtmelisus näitab vaadeldava teema kompleksust ja keerukust. Varasemates uurimustes juhtimisarvestuse muutuste sisu avamist puudutavate aspektide põhjal leidis autor, et juhtimisarvestuse arengut on mõttekas vaadelda läbi keerukuse mõõtmise. Organisatsioonide juhtimisarvestuse praktikat puudutavate andmete analüüsil ja tõlgendamisel lähtuti autori poolt välja töötatud juhtimisarvestuse arengu üldisest raamistikust.

Autor piiritles juhtimisarvestuse arengut kui nihkeid turumajanduse praktika traditsiooniliste ja keerukamate vormide laienevat rakendamist organisatsiooni juhtimisarvestuse elementides. Sõltuvusteooriast tulenevate seoste ja tegurite põhjal vaadeldi esiteks, juhtimisarvestuse sobivust mõjutavaid majanduskesk-

konna ja organisatsiooni tegurid ning teiseks tegureid, mis kiirendavad või aeglustavad juhtimisarvestuse arengut. Tulemustest selgus, et nii äri- kui ka avaliku sektori organisatsioonide juhtimisarvestusele avaldasid domineerivat mõju konkurentsi tugevnemine või loomine ja muudatused arvestuse seadusandlikkus keskkonnas. Mõlemas sektoris olid sarnasteks muutusi mõjutavateks organisatsioonilisteks teguriteks tippjuhtkonna toetus, suurenev vajadus juhtimisinfo järgi ja organisatsiooni tehnoloogilised arendused. Seega on nii majanduskeskkonna muutustel kui ka juhtkonna initsiatiivil ja arvestustöötajate kompetentsil oluline mõju juhtimisarvestuse arengu toimimisele.

Uuritud organisatsioonides olid juhtimisarvestuse arendamist toetava mõjuga, sarnaselt varasemate uurimustega, tippjuhtkonna toetus, suurenenud infovajadused juhtimises ja arvestusalase kompetentsiga töötajate olemasolu. Juhtimisarvestuse arengu peamiste takistustena nähti, nagu ka varasemates uurimustes, eelkõige arvestusalase kompetentsiga inimeste puudumist ja juhtimisarvestuse tarkvara vähest arendatust. Huvipakkuva dünaamilisest majanduskeskkonnast tuleneva mõjuna nähti pidevaid organisatsioonilisi ümberkorraldusi (nt struktuuris), mis oluliselt pidurdasid juhtimisarvestuse arendamist uuritud organisatsioonides. Lisaks võib antud töö empiiriliste uurimuste tulemustest järeldada, et vaadeldud organisatsioonides ei ole eelarvestamisele ja selle arendamisele olulist tähelepanu pööratud, kuigi varasemad arenenud turumajanduse keskkonnas tehtud uurimused leidsid, et kõrge ebamäärasusega majanduskeskkonnas on juhtimisarvestusel peamiselt just planeerimist toetav roll.

Empiiriliste andmete põhjal selgus, et juhtimisarvestuse arendused hõlmasid nii tehnilisi kui ka kontseptuaalseid muudatusi. Tehniliste uuendustena nähti peamiselt kuluarvestusega seotud arendusi (detailsem püsivate ja muutuvate kulude ning kulukohtade määratlemine) nii äri- kui ka avaliku sektori organisatsioonides. Kontseptuaalsed uuendused hõlmasid enam traditsiooniliste ja vähem kaasaegsemate lähenemiste rakendamist eelkõige äriorganisatsioonides. Seega on uuritud ettevõtetes aja jooksul toimunud nihked nii turumajandusele omaste traditsiooniliste ja lihtsamate praktikate suurema rakendamise kui ka kaasaegsete ja keerukamate süsteemide rakendamise suunas. Töö empiirilistest uurimustest selgus, et traditsiooniliste meetodite arendused olid seotud osakuluarvestuse ja jääktulupõhise lähenemise rakendamisega. Kaasaegsete meetodite arendused olid seotud tegevuspõhise kuluarvestuse, tasakaalus tulemuskaardi, tulemuslikkuse võtmenäitajate ja mitterahaliste (klientidega, töötajatega, organisatsiooni kasvu ja innovatsiooniga seotud) näitajate suureneva rakendamisega. Doktoritöö tulemuste alusel püstitas autor järgmised uurimisväited:

Uurimisväide 1: Dünaamilise majanduskeskkonna tingimustes arvestuse õigusliku regulatsiooni reformid on ajendiks juhtimisarvestuse esialgsetele muutustele tekkele ja edasistele arengute toimumisele.

Uurimisväide 2: Turumajanduse struktuursed arendused majanduskeskkonnas toetavad juhtimisarvestuse praktikate ühilduvust.

Empiiriliste uurimuste põhjal toodi töös välja juhtimisarvestuse arengu olulisemad aspektid äri-sektori organisatsioonides:

- Uurimuse 1 põhjal selgus, et perioodil 1997–1999 peegeldasid juhtimisarvestuse arengud peamiselt tehnilist, turumajandusele iseloomulike traditsioonilisi juhtimisarvestuse praktikaid ja kulude täpsema määratlemisega seonduvaid aspekte. Uuritud ettevõtteid aluseks võttes võib sellel perioodil kasutatud juhtimisarvestuse süsteeme iseloomustada kui mittekeerukaid süsteeme, mis pakuvad peamiselt kitsa ulatusega, peamiselt rahalist ja tootmisele orienteeritud kuluinfot.
- Uurimuse 3 põhjal selgus, et perioodil 2004–2007 hõlmasid juhtimisarvestuse arendused paralleelselt nii traditsioonilisi kui ka kaasaegsemaid lähenemisi. Kuigi sellel perioodil domineeris rahalistel näitajatel põhinev tulemuslikkuse mõõtmine, leidsid üha rohkem kasutust suurema ulatusega infot pakkuvad ja keerukamad süsteemid, mida iseloomustavad turu ja kliendipõhise orientatsiooni suurenev kasutus ning integreeritud ja tasakaalustatud tulemuste mõõtmine.
- Lisaks selgus uurimusest 3, et keerukamaid süsteeme kasutasid enam suured (müügitulu alusel) ja suurema turudünaamikaga ettevõtted. Tegevusvaldkonna puhul olid teenindusettevõtted orienteeritud enam klientide ja töötajatega seotud aspektidele ning tootmisettevõtted peamiselt tootmise kvaliteedi ja tarnete õigeaegsuse näitajatele.

Täiendava vaatenurgana käsitleti töös lähemalt juhtimisarvestuse arendamist ja selle mõju tulemuslikkuse juhtimisele avaliku sektori organisatsiooni näitel. Empiirilisel uurimusest (uurimus 4) selgus, et tasakaalus tulemuskaardi arendamine ja rakendamine parandas erinevate funktsioonidega osakondade vahelist ja samuti juhtimistasandite vahelist dialoogi ja kommunikatsiooni. Tasakaalus tulemuskaart võimaldas süsteemsemalt jälgida osakondade eesmärkide täitmist ja tegevustulemuste kujunemist, erinevate huvigruppide huvide seostamist organisatsiooni eesmärkidega, luues seeläbi raamistiku, mis võimaldab arendada efektiivsemat tegevustulemuste juhtimist.

Doktoritöö tulemusena saab välja tuua dünaamilisele majanduskeskkonnale omased juhtimisarvestuse arengu erinevused võrreldes stabiilsemas keskkonnas aset leidvatest muutustest, mis on järgmised:

- juhtimisarvestuse süsteemi areng toimub tasakaalustamata viisil, kus tehnilised ja kontseptuaalsed juhtimisarvestuse muutused seostuvad peamiselt kuluarvestuse ja tegevustulemuste mõõtmisega ja vähesel määral eelarvestamise ja sisemise aruandluse arendamisega,
- vähene tähelepanu eelarvestamise ja aruandluse arendamisele peegeldab juhtimisarvestuse funktsiooni tagasihoidlikku tuge organisatsiooni efektiivsele juhtimisele ja seda eelkõige tegevustulemuste planeerimisel ning hindamisel (kontrollimisel),
- sagedased organisatsioonilised ümberkorraldused (nt struktuuris) takistavad juhtimisarvestuse arengut ja ratsionaalse juhtimise põhimõtete rakendamist.

Töö tulemustest järeldub, et dünaamilises majanduskeskkonnas leiavad aset juhtimisarvestuse põhimõttelised muutused, mis ei hõlma kogu juhtimisarvestuse süsteemi tervikuna, vaid selle üksikuid elemente. Töös välja toodud

juhtimisarvestuse arengu aspektid dünaamilise majanduskeskkonnaga organisatsioonide praktikast aitavad detailsemalt avada selle arengu olemust. Töö tulemustes käsitletud probleemid ei ole ainult juhtimisarvestusesisesed kitsaskohad, vaid seostuvad otseselt organisatsiooni efektiivse juhtimise tagamise raskustega üldisemalt. Töös käsitletud empiiriliste andmete põhjal võib järeldada, et enamikes organisatsioonides on olemas oluline arenguruum juhtimisarvestuse funktsiooni parema toimimise suurendamisel. Töös on tehtud ka vastavad juhtimisarvestuse arendamise ettepanekud.

Kokkuvõttes leiab autor, et dünaamilisest majanduskeskkonnast tuleneva ebamäärasuse tasandamiseks ei piisa üksnes kulupõhiste rahalistele näitajatele toetumisest, vaid tuleks kasutada pigem mitmekülgsemat infot. Juhtimisarvestuse arendamine mitmekülgse informatsiooni pakkujaks eeldab aga keerukamate süsteemide rakendamist hõlmates tulemuslikkuse erinevaid vaateid (organisatsiooni klientide, sisemiste protsesside, kasvu ja innovatsiooni ning finantsaspektide vaadet) nii pika kui lühiajalises perspektiivis. Juhtimisarvestuse arendamine organisatsiooni juhtimiseks sobiliku informatsiooni pakkujaks loob võimaluse suurendada organisatsioonide ratsionaalsemat juhtimist.

Piirangud ja soovitused edasisteks uurimusteks

Käesoleva töö piirangud on nii teoreetilist kui meetodilist laadi. Peamise teoreetilise piiranguna näeb autor valitud sõltuvusteooria põhists lähenemist, mis ei pruugi anda piisavat selgitust juhtimisarvestuse arengu olemuse kohta. Seetõttu on töös jäänud käsitlusest välja mitmed institutsionaalsed, käitumuslikud või võrgustikega seotud aspektid, mis kahtlemata võimaldaksid vaadelda juhtimisarvestuse arengu mõistmist laiemalt. Kuna käesolev töö keskendus erinevatele teguritele, mis mõjutavad juhtimisarvestuse eelkõige tehnilist arengut dünaamilises kontekstis, siis võiks edasistes uurimustes enam avada juhtimisarvestuse arengut läbi sotsiaalse ja käitumusliku perspektiivi. Töö empiiriliste uurimuste andmetest tulenevalt, kus inimeste käitumisel ja arvestusalasel kompetentsil oli oluline mõju juhtimisarvestuse arendamisele, näeb autor eelkõige sotsiaalsetel ja käitumuslikel aspektidel tähtsat rolli juhtimisarvestussüsteemide muudatuste sisse viimisel ja tulemuslikkuse juhtimise tõhustamisel. Edasised uurimused võiksid käsitleda juhtimisarvestuse infokasutust juhtimises ja sellega seonduvaid arenguid nii avalikus kui ärisektoris.

Metodoloogilised piirangud seonduvad valitud uurimismeetodite puudustega. Avaliku sektori organisatsioonide praktika analüüs põhines juhtumipõhisel uurimisel, mis võib kaasa tuua nii intervjueeritavate kui uurijate poolset subjektiivsust kallutatust. Ärisektori organisatsioonide uurimused baseerusid küsitlustel, mis ei võimalda paraku detailseid nüansse esile tuua. Samuti suhteliselt piiratud vastajate arv küsitlustes võib raskendada tulemuste üldistamist. Autor, olles teadlik võimalikest uurimistulemuste andmete kogumise ja interpreteerimise ohtudest, on omapoolselt püüdnud minimeerida vastavaid mõjusid. Samas soovib autor edasistes juhtimisarvestusealastes uurimustes enam kasutada

pikemaajalisi juhtumuringuid, mis võimaldaksid jälgida vastavaid arenguid pikemas perspektiivis.

Lisaks näeb autor töö tulemuste põhjal alljärgnevat perspektiivset arengusuundi. Esiteks, analüüsida lähemalt juhtimisarvestuse info mittedünaamilise kasutamise põhjuseid. Teiseks, vaadelda suureneva digitaliseerimise ja infotehnoloogia mõjusid nii äri- kui avalikus sektoris. Kolmandaks, uurida üha suureneva keerukusega kaasnevat pinget juhtimisarvestussüsteemi ja selle kasutajate vahel. Neljandaks, käsitleda juhtimisarvestuse muutustele vastuseisu eelkõige indiviidi tasandil. Viiendaks, analüüsida juhtimisarvestuse arengut mõjutavate tegurite koosmõjusid ning kuuendaks, vaadelda lähemalt, mis põhimõtetest lähtuvalt toimub avalikus sektoris juhtimisarvestuse praktika arendamine.

CURRICULUM VITAE

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Education:

2011–... Doctoral student, School of Economics and Business
Administration, University of Tartu, Estonia
1999–2005 Doctoral student, School of Economics and Business
Administration, University of Tartu, Estonia
1997–1998 Master of Science in Business Administration and Economics,
Stockholm University, Sweden
1996–1997 Master student, School of Economics and Business
Administration, University of Tartu, Estonia
1992–1996 Bachelor Degree Tartu University, Accounting and Marketing
1979–1990 Tartu 3. Secondary School (Tartu Raatuse Gymnasium)

Foreign languages: English, German, Russian

Employment:

2010–... University of Tartu, Faculty of Economics and Business
Administration, Institute of Business Administration, Chair of
Accounting, Lecturer
2007–2010 University of Tartu, School of Economics and Business
Administration, Lecturer extraordinarius of accounting
1999–2007 Tartu University, School of Economics and Business
Administration, Institute of Finance and Accounting, Lecturer
of accounting
1998–1999 Tartu University, School of Economics and Business
Administration, Institute of Finance and Accounting, Assistant
of Accounting

Main research interests:

Management accounting role in the organisations, management accounting systems influencing factors, performance measurement and management, information technology influence on management accounting

Academic work:

1) Projects

- 1995–1996 Member of the research project “Management Accounting and Management Control Systems in Estonian Companies”, Estonian Science Foundation, grant No. 1384.
- 1997–1999 Member of the research project “Cost Accounting and Internal Reporting in Estonian Manufacturing Companies”, Estonian Science Foundation, grant No. 2985.
- 2001–2003 Member of the research project “Institutional aspects of accounting change in transition economy”, Estonian Science Foundation, grant No. 4530.
- 2004–2006 Member of the research project “Cost Management and Controlling in the Public Sector Institutions”, Estonian Science Foundation, grant No. 5850.
- 1995–1996 Member of the research project “Improvement of internal reporting system in Estiko Group”, Estiko Group, project No. MJ-02–95.
- 1998–2000 Member of the research project “Improvement and Redesign of Product Costing and Performance Measurement in the companies of United Dairies Group”, United Dairies Group, project No. LMJRA01198.
- 1999–2000 Member of the research project “Improvement and Redesign of Management Control System in Estonian Telephone Company”, Estonian Telephone Company, project No. LMJRA06499.
- 2002–2003 Member of the research project “Improvement and redesign of costing methods and internal reporting system in Krenholm Weaving entity”, Krenholm Group, project No. LMJRA02078.
- 2009–2011 Member of the research project “The Analysis of General Education Schools’ Performance and its Influencing Factors“, Estonian Ministry of Education and Research, project No. SMJM08236.

2) Editing and reviewing

- 2010–2011 Reviewer of the Archimedes Foundation Science contest for university level students
- 1998–... Supervision of student thesis (successfully defended)
- MA level (1 student)
 - MM level (5 student)
 - MBA level (6 student)
 - BA level (101 student)

Reviewing

- MA level (1)
- MM level (7)
- MBA level (17)
- BA level (18)

3) Teaching

1998–2011

Composing and conducting courses, lectures and seminars on the topics:

Accounting basics (BA level)

Financial accounting (BA level)

Financial statement analysis (BA and MBA level)

Management accounting (BA and MBA level)

Cost accounting (BA level)

Cost management (MBA level)

CURRICULUM VITAE IN ESTONIAN

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Haridus:

2011–... doktorant, TÜ majandusteaduskond
1999–2005 doktorant, TÜ majandusteaduskond
1997–1998 MSc, majandusteadus, Stockholmi Ülikool
1996–1997 magistrant, TÜ majandusteaduskond
1992–1996 BA, majandusteadus (majandusarvestuse ja turunduse eriala), Tartu Ülikool
1979–1990 Tartu 3. Keskkool (Tartu Raatuse Gümnaasium)

Võõrkeeled: inglise keel, saksa keel, vene keel

Teenistuskäik:

2010–... Majandusarvestuse lektor, ettevõtetmajanduse instituut, majandusteaduskond, Tartu Ülikool
2007–2010 Majandusarvestuse erakorraline lektor, ettevõtetmajanduse instituut, majandusteaduskond, Tartu Ülikool
1999–2007 Majandusarvestuse lektor, ettevõtetmajanduse instituut, majandusteaduskond, Tartu Ülikool
1998–1999 Majandusarvestuse assistent, rahanduse ja arvestuse instituut, majandusteaduskond, Tartu Ülikool

Peamised uurimisvaldkonnad:

Juhtimisarvestuse roll organisatsioonides, juhtimisarvestuse süsteemi kujundamist mõjutavad tegurid, tegevustulemuste hindamine ja juhtimine, infotehnoloogia mõju juhtimisarvestusele

Akadeemiline tegevus:

1) Projektid

1995–1996 ETF grandid nr 1384 “Juhtimisarvestuse ja *controllingu* süsteem Eesti ettevõtetes” täitja.
1997–1999 ETF grandid nr 2985 “Kuluarvestus ja firmasisene aruandlus Eesti tootmisettevõtetes” täitja.
2001–2003 ETF grandid nr 4530 “Majandusarvestuse institutsiooniliste mehhanismide areng siirdemajanduses” täitja.
2004–2006 ETF grandid nr 5850 „Kulude juhtimine ja *controlling* avaliku sektori institutsioonides” täitja.

- 1995–1996 Uurimislepingu “Ettevõttesisese aruandlussüsteemi täiustamine Estiko Grupis” täitja. AS Estiko, leping nr MJ-02–95.
- 1998–2000 Uurimislepingu “Toodangu omahinna kujundamise meetoodika ja ettevõttesisese aruandlussüsteemi täiustamine ASis Ühinenud Meiereid” täitja. AS Ühinenud Meiereid, leping nr LMJRA01198.
- 1999–2001 Uurimislepingu “AS Eesti Telefoni Televõrkude *controllingu*-süsteemi täiustamine” täitja. AS Eesti Telefon Televõrgud, leping nr LMJRA06499.
- 2002–2003 Uurimislepingu “Toodangu omahinna kujundamise meetoodika ja ettevõttesisese aruandlussüsteemi täiustamine Kreenholmi kudumise allüksuses” täitja. Kreenholmi Valduse AS, leping nr LMJRA02078.
- 2009–2011 Uurimisprojekti “Üldhariduskoolide tulemuslikkuse ja seda mõjutavate tegurite analüüs“ täitja. Eesti Haridus- ja Teadusministeerium, projekt nr SMJM08236.

2) Toimetamine ja retsenseerimine

- 2010–2011 Sihtasutuse Archimedes üliõpilaste teadustööde konkursi retsensent
- 1998–... Kaitsmiseni jõudnud üliõpilaste juhendamine
- MA tase (1 üliõpilane)
 - MM tase (5 üliõpilast)
 - MBA tase (6 üliõpilast)
 - BA tase (101 üliõpilast)
- Retsenseerimine
- MA tase (1 töö)
 - MM tase (7 tööd)
 - MBA tase (17 tööd)
 - BA tase (18 tööd)

3) Õppetöö

- 1998–2011 Kursuste, loengute ja seminaride ettevalmistamine ja läbi viimine teemadel:
- Arvestuse alused (bakalaureuse tasemel)
- Finantsarvestus (bakalaureuse tasemel)
- Finantsaruannete analüüs (bakalaureuse ja magistri tasemel)
- Juhtimisarvestus (bakalaureuse ja magistri tasemel)
- Kuluarvestus (bakalaureuse tasemel)
- Kulude juhtimine (magistri tasemel)

DISSERTATIONES RERUM OECONOMICARUM UNIVERSITATIS TARTUENSIS

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36. **Janno Järve.** Downward Nominal Wage Rigidity in the Estonian Private Sector. Tartu, 2011. Kaitstud 21.06.2011.
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