

# Choice of performance measurement indicators in Estonian SME-s

Ülle Päril

Toomas Haldma

Department of Accounting, School of Economics and Business Administration, University of Tartu,

Narva Road 4 – A317, 51009, Tartu, Estonia

Phone: +372 7376337

Fax: +372 73763121

E-mail: [ulle.parl@mk.ee](mailto:ulle.parl@mk.ee); Toomas.Haldma@ut.ee

## Abstract

In transition countries during the last decade the expansion of business has increased the level of uncertainty and competition. Number of authors (Gul and Chia, 1994; Mia and Chenhall, 1994; Ittner, Larcker, 2003; Hoque, James, 2000) have argued, that the combination of uncertainty and broad scope accounting information is positively associated with organisational or managerial performance. Management training and experience define the indicator types they use in decision making process. Besides of changes in business environment, there have been considerable changes in business education in Estonia. In transition countries, additionally, the level or a period of the study process can be considered as a driver of manager behaviour and their choice of performance indicators. We raise two research questions: RQ1: Are the attributes of measures important considerations for performance use? RQ2: Does the importance of attributes for design and use differ depending on managers' experience and education?

**Keywords** Transitional economy, Performance measures, Perceived environmental uncertainty, Non-financial performance, Managers' education and experience.

**JEL codes:** M10, M41, M53

## 1. Introduction

The globalisation of business environment, a considerable shortening of the lifetime of products and services, the rapid development of information technology and more intensive competition have been especially intensive over the past decade in transitional countries. The business environment has been expanding (notably in connection with the accession to the European Union), the uncertainty of the environment has been increasing and the competition has been stiffening.

The economies of developed countries are, to a large extent, built on the activities of micro, small and medium-sized enterprises (SMEs). Small firms make a significant contribution to the gross domestic product in the countries of the European Union. SMEs bring a broad range of benefits beyond growth of national income, providing important opportunities for employment. Further, SMEs are a key source of and outlet for entrepreneurial creativity and ideas.

Comparing with large organisations SMEs have following specific characteristics: (Wu, 2006; Hudson *et al.* 2001; McAdam, 2000; Stephens, 2000)

- They should be more flexible,
- Constrained resources and easily vulnerable,
- SMEs' survival depends more on environment,

- Entrepreneurs' ability, background and experience affect the SMEs performance significantly,
- SMEs always keep closer relationship with their customers
- The processes within SMEs are much more temporal and less defined
- Managers in small firms spend more time on day-to-day operation.

It has been argued that there is no one proper system of indicators for organizations, but the choice and usage of performance indicators varies according to a multitude of specific factors (Otley, 1980; Chenhall, 1997; Baines and Langfield-Smith, 2003; Anderson and Lanen, 1999 etc) and the survival and success of an organization are based on its adaptation to both external and internal contingencies (Otley, 1980; Chenhall, 1997; Baines and Langfield-Smith, 2003; Anderson and Lanen, 1999 etc). In investigations based on the theory of contingency, the effects of the external environment (Gordon and Narayanan, 1984; Chenall, Morris, 1986, Tillema, 2005 etc.) and of the chosen strategy (Simons, 1987; Ittner and Larcker, 1995, Chong and Chong, 1997; Gul, 1991etc.) on the choice of performance indicators have been examined thoroughly. At the same time, only a few papers (see Birnberg and Wilner, 1986; Libby and Frederick, 1990; Mendoza and Bescos, 2001) have addressed intra-enterprise and individual-level social factors, such as corporate culture, and the education and experience of the manager.

Several number of survey results show that management training and experience correlate positively with their use of more sophisticated measurement systems (see Birnberg and Wilner, 1986; Mendoza and Bescos, 2001). Consequently, it is important to examine how accounting information is used by managers in a small country with a transitional economy, for instance Estonia, disclosing the role of managers' experience and training in the process. The task is even more challenging if we bear in mind that, apart from the changes in the business environment, the major changes have occurred in business education in Estonia over the past decade (Kolbre *et al.*, 2006).

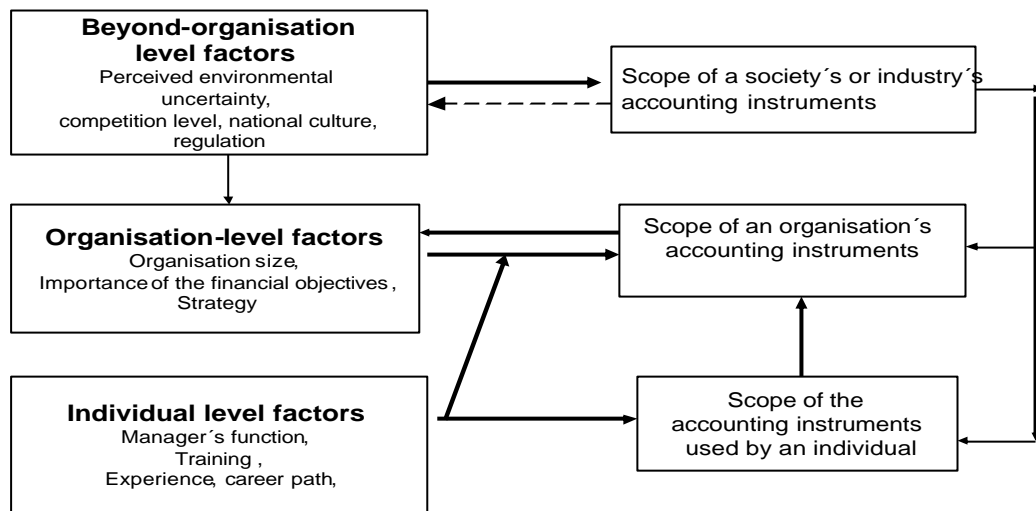
The objective of the current research is to investigate how managers of small and medium-sized Estonian companies choose the accounting information for decision making, and to examine the linkage between the educational background, experience of managers and the usage of this information.

This is a cross-sectional research which tests only selected factors of contingency. Its value is that the data were gathered directly from managers, the factors of an individual's level are examined, and the survey is performed at the indicators level. The paper is divided into the following sections. The next section introduces the theoretical framework, the third section explains the research method and design, and the fourth section presents the findings. Finally, some concluding thoughts are expressed and suggestions made for future research.

## **2. Theoretical framework**

According to contingency theory, organizations operate as open systems (by the classification of Burns and Stalker, 1966) which are concerned with goals and respond to external and internal pressures. The efficiency of any accounting system depends most of all on its ability to react and adapt to the changes both inside the company and in its environment (Chenhall, 1997; Baines and Langfield-Smith, 2003; Anderson and Lanen, 1999 etc).

The contingency approach literature distinguishes between four levels of analysis (Chenhall, 2003; Luft and Shields, 2003): the beyond-organisation (external) level (comprising contingency factors such as national culture and industry market structure), the organisation (e.g., organisational strategy and structure), subunit level (e.g., operating-company environment, business-unit strategy and departmental size), and the individual level (e.g., individual knowledge). In SME-s we can distinguish three levels of analysis: the beyond-organisation, organisation and individual level (see the figure 1).



**Figure 1.** Contingency theory perspective on the scope of accounting instruments in SME-s.

Sources: Tillema, 2005; Chenall 2003; Luft and Shields, 2003

The contingency factors can be related at different levels of analysis. For example, an increase in the level of uncertainty in markets (beyond-organisation level) may compel this organisation to introduce a more organic form of organisational structure (organisation level) (Tillema, 2005).

During the recent decades, the role of accounting within the management process has been discussed by large number of researchers. There are different groups of information users and the role of accounting is dependent upon the user personality, role and function within an organizational hierarchy. A number of investigations showed that almost 80% of the managers consider annual accounts to be very relevant information sources for decision making. (see Carsberg *et. al.*, 1985; Barker and Noonan, 1996; Ramos, 2000).

Merchant (1998) and Ramos (2000) argued that there are several reasons to, that information from financial statements being widely used in the management process:

- financial targets are important for a profit oriented company;
- financial indicators are all-round and summarized performance indicators;
- most of financial indicators are relatively precise and objective;
- relatively low costs to calculate;
- financial accounts are traditional and people have got used to them.

Some analysis (see Mezias and Starbuck, 2003; Haldma *et al*, 2003) show that manager decision making is based more on reports results that reflect internal processes. Groot (2000) pointed out that managers have become more aware of the changes based on new business models and environment and their opinions indicate customer satisfaction, loyalty of personnel, product quality, service reliability and sales price as the most essential criteria determining value. At the same time, the strongest dissatisfaction is related to the external business environment information – customers and competitors (Mendoza and Bescos, 2001).

Contingency research on choice of performance measures has yielded mixed results (Andreson and Young, 1999; Chenhall, 2003), but many studies have confirmed that high levels of perceived environmental or task uncertainty<sup>1</sup> are positively associated with the use or usefulness of broad-scope accounting information (see the figure 2). They rely heavily on qualitative controls and non-financial performance measures and to a much lesser degree (if at all) on quantitative, financial-performance measures (Chenhall and Morris, 1986; Mia and Goyal, 1991; Chong and Chong, 1997).

Many studies (Gul and Chia, 1994; Mia and Chenhall, 1994; Ittner, Larcker, 2003; Hoque, James, 2000) confirm that the high level of perceived environmental or task uncertainty are positively associated with the use or usefulness of broad-scope accounting information, and that the combination of uncertainty and broad-scope accounting information is positively associated with organizational success.<sup>2</sup>

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<sup>1</sup> The managerial accounting literature defines environmental uncertainty as (1) lack of information regarding the environmental factors affecting a given decision-making situation, (2) not knowing how much the organisation will lose if a specific decision is incorrect, and (3) the difficulty in assigning probabilities with any degree of certainty as to how environmental factors are going to affect the success or failure of a decision (Fisher, 1995).

<sup>2</sup> However, organizational success can have a broad meaning that includes efficiency, profitability, employee satisfaction, and innovation rate. Success can be defined as competitiveness. Competitiveness means the breakthrough of a company, its ability to adapt to an environment, to foresee the wishes of its customers and to adjust itself to satisfy them, while knowing well both existing (established) and potential (new) customers (Siimon, 2006). Therefore the survival and success of the organization are based on adaptation to both external and internal contingencies (e.g., Gordon and Miller, 1976; Hayes, 1977; Waterhouse and Tiessen, 1978; Otley, 1980).

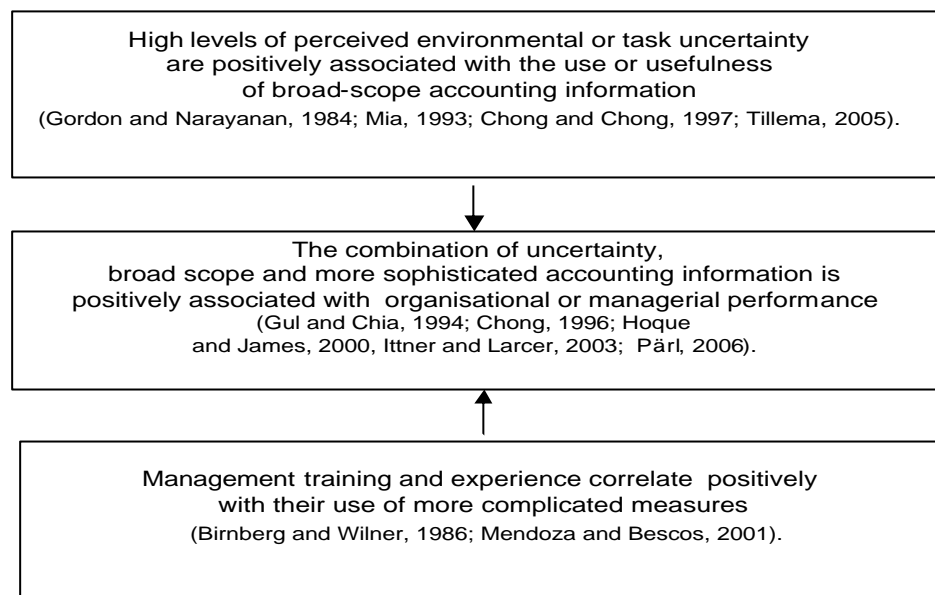


Figure 2. Drivers of usage of accounting information

The list of contingencies and relations in our theoretical framework cannot be considered exhaustive, since we were unable to identify and include all factors and impacts. Contingency-based studies assume the existing link between nature, the use of the MAS and subsequently enhanced performance. At the same time, other behavioural and organisational aspects also influence better goal achievement (e.g. job satisfaction, working place environment, formal and informal control, participation in the budgeting process).

In countries with a transitional economy, including Estonia, the business environment has been expanding considerably over the past decade, which has led to a higher level of uncertainty and more fierce competition. On the basis of research conducted during the last decade (Reiljan, 2002; Leimann *et al.* 2003), we can suggest that the managers of Estonian enterprises see as a prerequisite for success in the first place a high quality product and service, but also the high qualification of employees, and the flexibility of the organisation. All these criteria are crucial in order to react quickly to a rapidly changing environment in the situation of a small, open economy with high competition. Thus, Estonian companies ought to make use of a broader accounting system in order to ensure their competitiveness.

Contingency research on choice of performance measures has often focused on broad dichotomies of measures, such as financial versus non-financial measures (Malina, Selto 2004). Some surveys distinguish between the levels of the scope of the indicators used. For example, Tillema (2005) characterises three levels of scope. The first level encompasses the narrow-scope accounting instruments; basically, these instruments comprise retrospective financial information. The second level is a link between financial and non-financial information, and the information relating to future events. Nevertheless, its focus is still on events inside the organisation. The final level includes a combination of prospective financial and non-financial information, using plans for the internal operation activities which are based on expectations about the (changing) external circumstances.

As a modern accounting system may contain a large variety of indicators owing to rapidly developing information technology, it is important to understand how and on the basis of which criteria the selection is made.

Recent management control research addresses specific factors that might explain firms' choices of performance measures. Management control and strategy theories identify some desirable attributes of performance measures. The information must be: (1) timely, (2) circumstantial enough, (3) reliable, and (4) exhaustive (Mendoza and Bescos, 2001). In addition, the information must be also cost-effective and comprehensible to users (Hofstetter, 1993). Also, the selection of measures and their usage can be justified by habits and routines (Ramos, 2000), accounting innovations (ABC, BSC) and trends (Tillema, 2005). The results of a research by Malina and Selto (2004) assert that the perceived attributes of measures are important considerations for performance measure choice, and the most important properties are objectivity, accuracy and benefits versus costs (cost-effectiveness).

The current research examines the relationship between five perceived attributes of measures: (1) benefits versus costs (or cost-effective), (2) accustomed, (3) comprehensible, (4) objectivity and (5) timeliness. The first research question is: RQ1:

Are the attributes of measures important considerations for performance use?

The structure of a management accounting system and the use of indicators and their acceptance in a company are influenced by both contextual variables (uncertainty of the environment, the strategy chosen, etc.) and factors of an individual's (manager's) level, such as his/her function in the enterprise, training, comprehension, experience, etc. (Lawrence and Lorch, 1967; Shields, 1999; Walker and Johnson, 1999; Waller *et al.*, 1995; Libby and Luft, 1993; Mendoza and Bescos, 2001). At the same time, only a few papers (Birnberg and Wilner, 1986; Libby and Frederick, 1990; Mendoza and Bescos, 2001) have addressed intra-enterprise and individual-level social factors, such as corporate culture, and the education and experience of the manager.

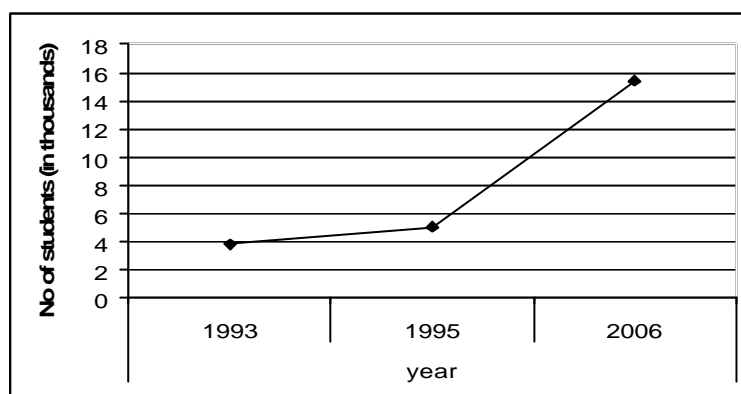
Silvola (2005) succeeded in an interesting conclusion that the education of the manager (CEO) of a company is an important factor in driving the adaptation of new management accounting practices. Mendoza and Bescos (2001) conclude in their research that better trained and financially experienced managers have a better grasp of the modern management accounting methods, therefore having better access to information, and being on the whole more content with the accounting information in their possession.

A similar conclusion was reached by Birnberg and Wilner (1986), who claimed that managers with a financial background are better equipped to notice and understand changes in accounting data. Furthermore, experience allows them to develop more sophisticated financial models that allow them to confront information overflow by identifying priorities and understanding their problems more quickly. The reason is that inexperienced managers have difficulties in recognising pertinent causal relationships in a given situation. Their mental models are not as precise, and they are less able to act on the primary causes (Slovic, 1969; Einhorn, 1974; Bonner, 1990; Libby and Frederick, 1990; Lord and Maher, 1990).

Comparing the educational level of Estonian managers to the general international level, we can say that the former is rather high. A survey conducted in Estonia revealed that slightly more than 50% of the managers of small and medium-sized companies had a higher education, whereas 57% of entrepreneurs in highly developed countries had an education level above secondary education (Minitti, 2005). Some

surveys, however, show that the managers of Estonian enterprises lack economic, managerial and marketing knowledge. Managers of small enterprises, a mere 14% had special business or management education (Kolbre *et al.*, 2006).

Contemporary training in business administration was started in Estonia at the beginning of the 1990s, when the existing curriculum was substituted by a market-economy oriented one in state universities. Simultaneously, several private universities aimed at setting business management to work. As a result of the said changes, the number of students of business administration has gone up dramatically over the past decade. If in 1993 it was 3.8 thousand (the population of Estonia is ca. 1.3 mill.), then in 1995 it had risen to 5.1 thousand (Figure 3) and in 2006, to 15.4 thousand (Kolbre *et al.* 2006)



**Figure 3.** No of Students of business administration in Estonia in 1993-2006.

The investigations show the development of management accounting in Estonian companies during the second half of the 1990s. As it was revealed by Haldma and Lääts (2002) the majority of Estonian companies improved their management accounting systems substantially in 1996-1999, after the substantial changes in financial accounting regulations were introduced since 1995. The compulsory reconstruction of companies' financial accounting systems did not let the companies pay enough attention to the improvement of their internal accounting systems (including cost accounting, management accounting, management control, etc). Therefore Haldma and Lääts (2002) argue that the conceptual changes in financial accounting characteristic of the Eastern and Central European transition countries served as a precondition for the design, introduction and improvement of cost accounting and management accounting, and the development of companies' management accounting systems. This statement supports the findings of Virtanen *et al.* (1996) and Scherrer (1996) who say that the evolution of financial accounting has influenced the development of cost accounting and management accounting.

There are some investigations carried out in Estonia, which support the position that financial accounting data are highly valued by managers. Basing on the analysis arranged by Haldma and Lääts (2002) and Hammer and Karilaid (2002) we can list the following reasons for this:

- in the central planned economy, companies had little need to develop managerial accounting systems while accounting information was oriented for preference to fulfill the requirements of unified financial accounting;
- the initial stage of the market economy era brought about dramatic changes into financial accounting regulation and therefore the main stress was laid on that area;

- lack of knowledge and experience on managerial accounting information formation among managers and financial staff.

Thus, the second research question will be: RQ2: Does the importance of attributes for design and use differ depending on managers' experience and education?

### **3. Research method and design**

Current research builds on exploratory statistical analysis of the usage of accounting indicators in Estonian companies. Herein we will review the principles used to construct the data set for our work.

A survey was applied in the autumn of 2005. The questionnaire was pretested by three managers. In the process of drawing up, certain questions were clarified, and some options were added as recommended by the managers. The persons to carry out the questioning were students of the accounting course at the Mairor Business School. Their task was to find the managers and apply the questionnaires. The students were given instructions both prior to the questioning and during the process. Since the students came from various areas of Estonia, companies from all over Estonia were involved in the survey.

As a result 102 completed questionnaires were returned. The respondents involved 78 managers and 23 financial specialists. Nine firms were represented by two respondents, thus in total 93 firms were represented. The number of firms with up to 50 employees was 61, of firms with 51-100 employees 12 and of firms with more than 100 employees 20. The responding companies represented five different business sectors: the service sector (51); 26 manufacturing firms and 16 sales firms, 2 of which were retailers (Table 1). 53 of the respondents had a higher education, including 33 who educated in business administration, 46 had no higher education and 3 respondents did not indicate their level of education.

According to the time of acquiring higher education, the respondents were distributed as follows: 29 respondents had acquired their education prior to 1995 and 19 respondents had been educated after 1995. 21 managers had financial experience.



**Table: 1.** Companies by business sectors used in the sample of the study

<b>Business sector</b>	<b>Number of companies</b>	<b>Companies %</b>
<b>Wholesale</b>	2	2.1 %
<b>Retail sale</b>	14	15.1 %
<b>Manufacturing</b>	26	28.0 %
<b>Service</b>	51	54.8 %

The indicators were from four groups: (a) indicators from financial reporting, such as (1) sales turnover, (2) profit, (3) enterprise expenditures, (4) cash flows, and (b) the monetary indicators of management accounting system, such as (5) customers' profitability, (6) products/services' profitability, (7) the financial indicators of competitors, and (8) a price comparison of the competitors; (c) non-financial indicators reflecting internal processes, such as (9) the number and percentage of new products/services, (10) the duration of a manufacturing/service period, (11) the number of client complaints/defective products, (12) the satisfaction of employees, and (13) the productivity of the employees; (d) non-financial indicators related to external parties, such as (14) market share and its fluctuation, (15) customer satisfaction, (16) the number and percentage of new customers, (17) the quality of the delivery of a product/service from suppliers.

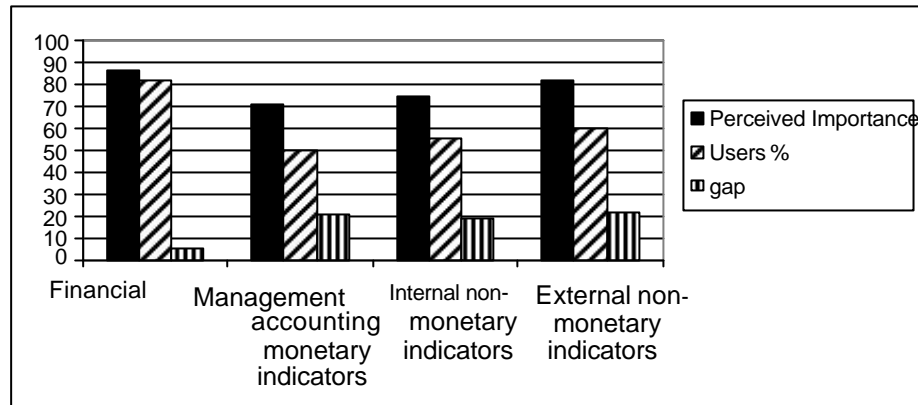
The research analysis used typological, analytical and combined grouping, while the statistical analysis used one- and two-way analyses and frequency analysis.

#### **4. Findings**

RQ1: Are the attributes of measures important considerations for performance use?

First we will analyse the difference between the presumed importance and actual usage of indicators, that is, we will determine the size of the measurement gap in case of different indicators. Ittner ja Larcner (2001) defined "measurement gap" as the difference between the perceived importance of each performance category and the extent to which (1) the performance category is used for internal purposes, and (2) formal strategic goals are established for the category. They found that substantial gaps exist for all of the higher-ranked performance categories. Ittner and Larcner (2001) concluded that large differences exist for some of the most important value driver categories, suggesting that studies investigating the internal use and benefits of these performance measures are incomplete without considering how well this information is measured.

As the present study used a 7-point scale to evaluate the importance of indicators, but the users constitute a percentage share of the respondents, then to make the data comparable, the medium importance of usage has also been converted into a share of the maximum, that is, of seven. As different from the previously introduced study by Ittner and Larcner, the present study does not analyse the purpose of using the information.



**Figure 4.** Mean “Gap” between the perceived importance and use of the selected performance measurement categories.

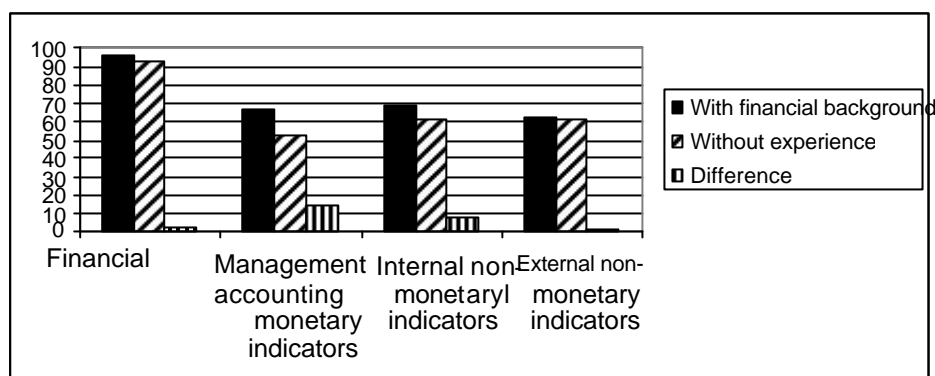
The smallest gap is between the importance of financial indicators and their usage, that is, these indicators are considered to be extremely important and are in fact used by 82% of the respondents. The gap is greater for the rest, management accounting indicators, but does not differ significantly between the indicator groups (Figure 4).

The use/non-use of indicators is mostly substantiated by the habit. On the average, 21% of the respondents stated that they are accustomed to use indicators and 9% of the respondents claimed to be non-users because they were not used to using them. If previous studies hypothesised that the habit (see Ramos, 2000) and “fashion” (trends) (Tillema, 2005) could have an influence on the choice of indicators, then the present study confirms it. Hereinafter we need to explore what this “accustomed” means and contains. It could also mean, for example, going along with “fashion” without delving into the meaning of indicators and not using them purposefully.

Of the presumed characteristics of indicators the most frequent one for usage is comprehensible (especially concerning financial indicators), followed by cost effectiveness, objectivity and timeliness. As we analyse the reasoning for using indicators as groups, we see that the most frequent cause for using non-monetary indicators is accustomed. The presumed characteristics of indicators have a lesser role in not using non-monetary indicators; on the average only 2-4% of the respondents explain non-use with costliness, incomprehensibility, unobjectivity, or not being timely.

RQ2: Does the importance of attributes for use differ depending on the managers’ experience and education?

Next we will see how previous financial experience influences the use of indicators. Generally, the managers with a financial background use the indicators more than those who have no financial experience. There are no significant differences concerning the non-monetary indicators originating from financial accounting and mirroring the environment (Figure 5) except for observing the market share, where approximately 64% of the responding managers with a financial background and 37% of managers without a financial background monitor the size of the market share.



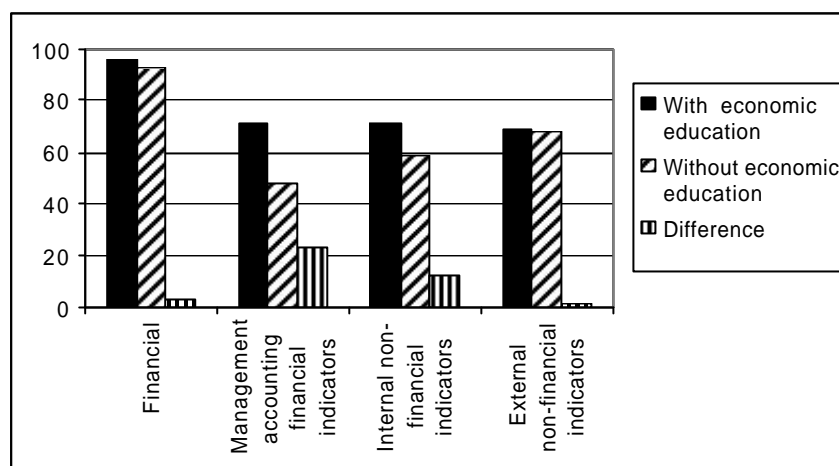
**Figure 5.** The use of indicators and the managers' experience.

The difference is a bit greater in the average usage of monetary indicators of management accounting, whereas the greatest difference concerns the usage of the costs and profitability of a product/service – 85%, of the managers with a financial background and 65% of those without a financial background observe this indicator. A notable difference is also in the non-monetary indicators reflecting the inner processes, where the greatest, nearly 20% difference, is in the use of the length of the production/service period indicator. This indicator is used by 71% of the respondents with a financial background and by 52% of the respondents lacking such a background.

To reveal the reasons for the differences, we will take a look at the reasons the managers presented for their use or non-use of indicators. The managers with a financial background explained the use of indicators with their timeliness and cost effectiveness. The non-use of indicators was explained with them not being timely and the managers found that there was no need in their enterprise for using the non-monetary indicators connected with external parties.

Managers with no financial background explain the use of financial indicators with accustomed, they also justify the use of non-monetary indicators reflecting the monetary indicators of management accounting and inner processes with the comprehensible of these indicators. The use of monetary indicators of management accounting is considered to be too expensive. Many managers without a financial background state about non-monetary indicators that there is no reason for using them.

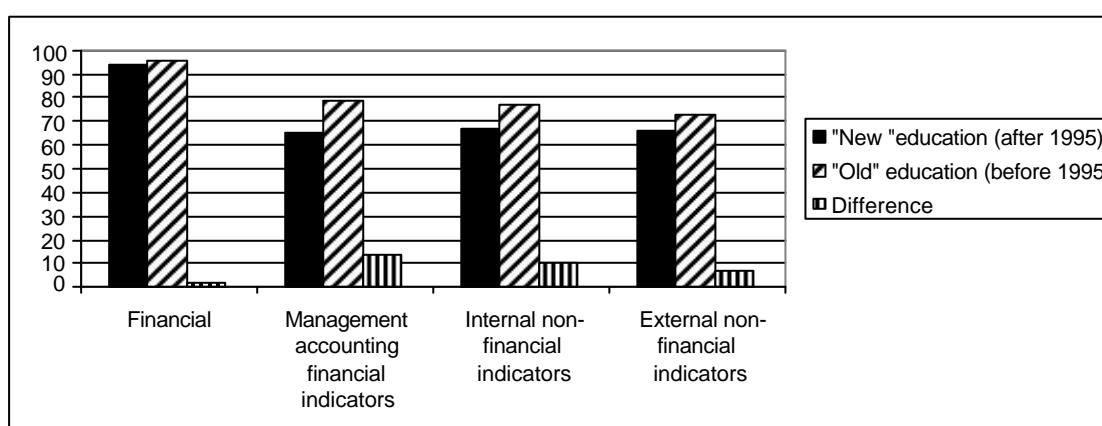
Comparing the use of indicators by managers with and without business administration education, we can note that the managers with business administration education use the indicators more than those managers who have no business administration education (Figure 6). The greatest difference is again observable about the non-monetary indicators reflecting the monetary indicators of management accounting and inner processes. Thus we can notice that the use of indicators by managers with a financial background and with economic education is somewhat similar.



**Figure 6.** The use of indicators and the managers' education.

To determine the reasons for differences in use we will once more analyse the justifications of managers for either use or non-use. Accustomed is most frequently given as the reason in both groups. Analysing the differences in reasoning, we can see that in the case of monetary indicators the managers with business administration education value their cost effectiveness, and the reasons for using non-monetary indicators are mostly considered to be timeliness and clearness. The reasoning of managers with economic education is mostly based on the presumed characteristics of indicators. Managers without economic education more frequently mention habit as a reason.

Analysing what effect the time of acquiring education has on the use of indicators, we can see that the managers who acquired their economic education more than ten years ago (before 1995) use indicators more often than their colleagues who acquired their economic education in the past ten years (Figure 7).



**Figure 7.** The use of indicators and the time when the managers were educated.

The company managers who acquired their economic education during the last ten years give the objectivity of indicators as the reason for using them and clearness as the reason for not using them. The managers who acquired their economic education more than ten years ago use indicators more often and substantiate the use with presumed characteristics, mostly with cost effectiveness and timeliness. When we compare the differences between the answers of the managers who have the so-called

“new” education and the answers of those who have the “old” education, then we see that the latter more often mention timeliness and cost effectiveness as the reasons for using indicators and the lack of need as the reason for not using them.

Thus, it seems that the so-called “old” education from the socialist period does not hinder the use of contemporary accounting systems, but on the contrary, these managers use more complicated accounting systems than the managers with “modern” education. One of the reasons may well be that higher education was previously available to relatively few people, and the competition for university places was more intense. Nowadays the baccalaureate-level education is available to practically all who wish to study, but the master’s level study is still being developed in Estonia, and the results will be seen after some time.

## **5. Conclusion**

The aim of the paper was to study how managers with different levels of preparation and experience choose the accounting information. The study was based on the contingency theory. The previous studies have proved that enterprises with high perceived environmental uncertainty in intense competition use more sophisticated accounting systems. On the basis of previous studies we know that a certain gap exists between the importance attached to and the actual use of indicators. The present study proved that the gap is greater in the case of management accounting indicators.

We can conclude as a result of the present study that managers use several indicators, the use of which they explain by the habit. The use or non-use of more complicated indicators is often explained by habit, and this reasoning is used more frequently by managers without a financial background and not educated in business administration. Thus, additional research is needed to determine what exactly is meant by “habit”, and whether this could be connected with the fact that some indicators are indeed gathered to the accounting system of a company, but their use is ineffective because the users have not delved into the importance of the indicator, and do not use it purposefully.

In examining the presumed attributes of indicators (cost effectiveness, comprehensibility, objectivity, timeliness), the use of indicators is most often substantiated with comprehensibility and cost effectiveness.

The managers with a financial background and/or economic education tend to use indicators more often, including more sophisticated accounting indicators. They explain the choice of indicators with their presumed attributes (timeliness, cost effectiveness), whereas managers with no financial background or not educated in business administration explain the use with comprehensibility and habit. We can surmise that the managers who lack a financial background and/or business administration education sometimes have problems with interpreting and choosing indicators.

The managers who got business administration education more than ten years ago use indicators more often and explain their use with their presumed attributes, mostly with cost effectiveness and timeliness. Thus it seems that the so-called “old” education from the socialist period does not hinder the application of contemporary accounting systems, but on the contrary, these managers use more sophisticated accounting systems than the managers having “modern” education. One of the reasons may well be that higher education was previously available to relatively few, and the competition for university places was intense, nowadays, the bachelor’s level education is available to practically all wishing to study, but the master’s level

education is still being developed in Estonia, and the results will be seen in a few years' time .

As a conclusion we can say that the managers of Estonian SME-s, who have a financial background and who educated in business administration before 1995 choose the indicators they apply by their cost effectiveness and timeliness, and they also use more sophisticated accounting indicators, on account of which they should also be more successful.

Therefore we are completely agree with the problem raised by Mendoza and Bescos (2001) who argue that in order to update the accounting systems in a company and make companies use more actively the possibilities of contemporary information technology for successful leadership of the enterprise, good preparation of the accountant is not enough – the managers of companies also need better training either through education of business administration or a financial background.

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