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Master's Thesis

“Management Accounting Education at the University level in Sweden and in Estonia”

A comparative study of the Management Accounting education at The School of Business
Economics and Law of Gothenburg and The University of Tartu.

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Abstract

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Titel: "*Management Accounting Education at the University level in Sweden and in Estonia*"

Background

This paper is a study of Management Accounting education in Estonia today, fourteen years after the market system change. It examines what is being taught to Estonian students, who study business and have chosen management accounting (or similar) as their speciality during the last years of their education. A comparison is made to the business curriculum offered by a Swedish university, this one also with a specialisation in the subject of Management Accounting. Sweden was chosen because it is known as a country with excellent education system, study conditions, and also Management Accounting education. So it is a good country to look up to for Estonia.

Purpose

This study compares the Management Accounting education of Sweden and Estonia. The curriculum of business administration students, topics of the management accounting courses as well as the level of knowledge in different topics is compared. The literature used and the design of the studies of the current countries are exemplified as well.

This study identifies the differences and similarities in the Management Accounting education in a transitional country like Estonia is from the well developed country Sweden. Those countries are neighbour countries, and there are and will be a lot of labour movements and also student exchanges. It is hard to know for a Swedish university or the employer company, how similar is the education of these two countries and what an Estonian Management Accounting student can or cannot. This study will give some guidance in this matter.

Method

The theory, empirical data and logical reasoning are used in order to conduct this work. This survey is intended to be descriptive. After reviewing the literature of accounting education in Eastern Europe a list of questions were made to ask Estonian management accounting educators. The main focus during the interviews was on the character of the Management Accounting education in the particular country and university. The second part of the empirical data was the questionnaire with ISAR topics about Management Accounting education and curricula.

Conclusion

Estonia has come a long way since the time Estonia regained its independency. There are persons graduating from the university with an education more in tune with the market economy already since 1997. The lack of educators in the new areas is not that large anymore either. The Business programs at the studied universities are in some ways similar when it comes to the structure of the studies, but in some ways not. Management Accounting education in Estonia will improve as more high quality materials become available to the educators and students.

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1 What is this study about and why?

1.1 Background

Estonia regained independence in 1991, and has since then undergone fundamental political and structural changes. The centrally planned economy was replaced by market economy, and Estonia had to adopt a national accounting system that is more in tune with a market economy. Increased competition and raised production quality standards required adoption of a more sophisticated and market-sensitive internal management accounting system. The habitual management accounting practices of Estonian companies can be described by their origins by the traditions and knowledge in their centrally planned economic background, but also by the necessity to solve urgent problems. Within the Soviet accounting framework, management accounting existed in a very narrow sense. Hence, during the first stage of transition, management accounting was a conceptually new issue in the development of companies' accounting system. This new design and introduction necessitated a conceptual change in the thinking of the companies' personnel. The need to create and develop conceptually different management accounting system was growing rapidly. In 1992-94, the Estonian universities incorporated management accounting into their curricula as a separate discipline.

One of the major impediments to converting from the accounting system was that there were an insufficient number of qualified accountants in Estonia trained in the new system. There was also a lack of recent, high quality textbooks and other education material. Even if some western accounting textbooks have been translated into Estonian, many of them that are available are two or more editions behind what is available in Western universities. Another impediment to adopting and implementing the new system was/is the lack of professors who were/are familiar with the subject. Before the collapse of the Soviet Union, Estonia and other Soviet republics had a more or less uniform accounting educational program in the universities. Students were studying accounting as part of the economics degree and it formed a very minor part of the university curriculum.

Haldma and Lääts(2002) write that when analyzing the management research done in the Eastern and Central European transition countries on the basis of the publications in *Management Accounting Research* and *The European Accounting Review*, and presentations at the Annual Congresses of the European Accounting Association, it shows the transitional countries have prioritized the development of financial accounting and that in these countries management accounting is still in its initial stages of development and in the process of developing into research area in its own right. Anna Pistoni (2000) writes that as comparative management accounting research develops, specific comparative aspects of management accounting theory and practice have been subject to investigation, yet research in management accounting education is very limited. Galina Probragenskaya and Robert McGee (2004) agree with the by stating in their article that most studies have discussed the transformation process in transition economies or the adoption and implementation of market based financial reporting rules, but only a few authors have written specifically about accounting education in transition economies.

Accounting in the Baltic States and the other transition economies has as a whole, financial as well as management accounting, already undergone evolutionary changes in the first half of the 1990's. In the early nineties, when designing the system of accounting training and re-training, the Baltic countries had to consider some essential factors. Firstly, the main task of this system was to provide professors and practitioners with market economy related knowledge. Secondly,

companies, organisations, academic institutions, and others were continuing their activities for a long time in parallel with the retraining process. Finally, the national business legislation was being improved continuously. All these parameters had to be taken into consideration simultaneously in a co-ordinated way, while redesigning the accounting system.

Anna Pistoni (2000) from Bocconi University in Milan writes that the world in which management accounting operates is changing “dramatically” and this means the ways of teaching and subjects that are taught at educational institutions are being modified as well. She and her colleague, Laura Zoni, have made a survey of undergraduate management accounting education, to analyze the management accounting courses in Europe and to investigate whether the most innovative topics in management accounting are thought. Their data evidence similarities across countries in as much a very similar pool of topics is thought in different institutions in different countries. However differences outweigh similarities when comparing the relative importance attributed to various topics within a course.

The organisation of the academic year is often fundamentally rooted in national, social and cultural traditions. Examination periods and holidays also differ considerably between countries. Bachelor-type programs in Europe generally last between three and four years. In most countries there are significant differences between the actual time it takes students to finish a program and the official duration period. Many studies have shown that these differences may to some extent create an obstacle to smooth and easy student mobility. There is a tangible need to redesign and harmonize academic programs to better prepare students for emerging regional and international labour markets.

Toomas Haldma and Kertu Lääts (2002) write in their article that it is comparatively infrequently that Estonian manufacturing companies have made improvements in their cost accounting methods, although the majority appear to acknowledge the importance of these practices in finding and lowering real product costs and modernizing the cost accountant systems. Their research aims to identify factors that influence management accounting practice, such as also the shortage of properly qualified accountants.

This paper is a study of Management Accounting education in Estonia today, fourteen years after the market system change. It examines what is being taught to Estonian students, who study business and have chosen management accounting (or similar) as their speciality during the last years of their education. A comparison is made to the business curriculum offered by a Swedish university, this one also with a specialisation in the subject of Management Accounting. Sweden was chosen because it is known as a country with excellent education system, study conditions, and also Management Accounting education. So it is a good country to look up to for Estonia.

1.2 Purpose

This study compares the Management Accounting education of Sweden and Estonia. The curriculum of business administration students, topics of the management accounting courses as well as the level of knowledge in different topics is compared. The literature used and the design of the studies of the current countries are exemplified as well.

This study identifies the differences and similarities in the Management Accounting education in a transitional country like Estonia is from the well developed country Sweden. Those countries are neighbour countries, and there are and will be a lot of labour movements and also student exchanges. It is hard to know for a Swedish university or the employer company, how similar is

the education of these two countries and what an Estonian Management Accounting student can or cannot. This study will give some guidance in this matter.

1.3 Methodology

1.3.1 Design of the study

The theory, empirical data and logical reasoning are used in order to conduct this work. The objective is to structure and carry out the study according to the method that matches the purpose and problem area of the paper. A Method can be seen as a form and a frame when handling empirical material and it serves as a vital connection between the theoretical framework and the empirical part of the study (Alvesson, 2000). Developing this basic idea further, it incorporates what problem questions appear at the initial stage of the study, how the author of the report develops the ideas and finally what conclusions are drawn from the analysis of the gathered material.

The classical methodology classification makes a distinction between two approaches, the quantitative and the qualitative. The method of this study has a qualitative nature, as it is the study culture and the contents of the education that are being analysed. Merriam (1992) argues the purpose of the qualitative approach to be to discover and interpret a phenomenon or a process, of the perspectives and world views of the people involved. Moreover, the qualitative approach gives an opportunity and flexibility to ask more complex questions, which is necessary for answering the stated problem and to fulfil the purpose.

Taking into consideration the subject of the study and the problem formulation, the most appropriate methodological approach was to conduct a case study. As Yin (2003) argues, case study suits best in the research situations with such types of question as “how” and “why”. Another condition, according to the author is when investigators cannot control the *actual events*. Finally, the investigation should be concentrated on a present-day problem situation that takes place in *real-life context*. Further, Yin distinguishes between *explanatory*, *exploratory* and *descriptive* case studies. This survey is intended to be descriptive. The survey methodology is to evaluate the features of management accounting courses offered in Estonia and Sweden.

One Estonian and one Swedish university, which are considered as having a representative management accounting education in the country, were chosen for comparison purposes. The University of Tartu [UT] is representing the Estonian Management Accounting Education and The School of Business and Commercial Law [SBEL] the Swedish one. Also the other main university of Estonia, the Technical University of Tallinn [TUT], was asked to be apart of the study, but they have decided only participate in the interviews about the Estonian Management Accounting education development and not to be apart of the main part of this study (the questionnaires about the curricula). The curricula and the contents of the Management Accounting courses at SBEL and UT were analysed, compared and evaluated. The relevant educators at these universities were interviewed and asked to fill in a form about the contents of the management accounting courses. This information is used and discussed in this paper. The respondents represent the most suitable source of information of the given topic, as all of them are the persons responsible of the subject studied in the thesis. Their views are taken as the illustrative of the Management Accounting Education of the two countries.

Stuart, I. (2002) and his co-authors define five critical stages that research and dissemination process can be broken into: define the research question – instrument development – data gathering – analyze

data – disseminate. Conducting case research is no different. Following the main idea of this approach a special research strategy was developed (shown in the Figure 1) to conduct this study.

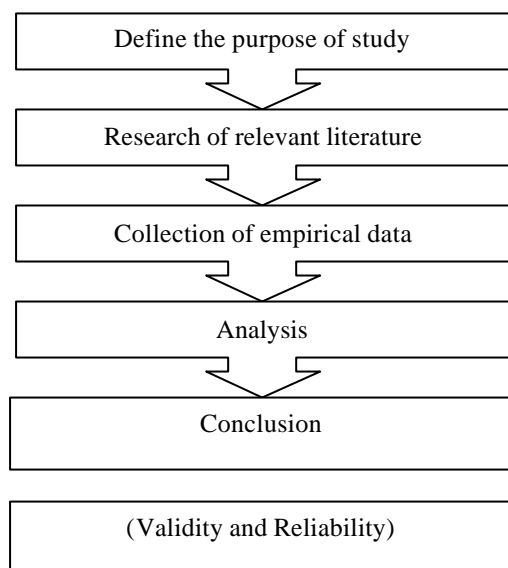


Figure 1: Study structure (Stuart I. 2002)

1.3.2 Literature research

The available relevant literature and earlier research papers was looked for before starting with the empirical data collection. This material supports also the theoretical framework and the ideas for the future study. The theoretical data collection started with analyzing the literature of accounting education in the Baltic States and in Easter Europe. The literature of accounting education in transition economies is used to make the reader aware of the situation in other transitional and former Soviet countries, and for analysis purposes. This last group of literature has unfortunately mostly become dated, since it was published before the recent changes. The first phase of the work was also about gathering the material of the universities concerned in the study on their websites.

1.3.3 Empirical Data

In this study there are two types of empirical data. After reviewing the literature of accounting education in Eastern Europe a list of questions were made to ask Estonian management accounting educators. The interview questions that would cover the areas that are considered as most important for the purpose of the study were prepared. The interviews were performed in the native language of the interviewed persons at the UT, SBEL and at TUT in November 2004 at, with the responsible management accounting educators. Lehte and Jaan Alver from the Technical University of Tallinn were sharing their thoughts and knowledge of the Estonian Management Accounting education. Toomas Haldma and Kertu Lääts were interviewed at the UT, and also they shared their knowledge and experiences of the Estonian Management Accounting at universities. The Swedish professor Olov Ohlson at SBEL was interviewed.

The main focus during the interviews was on the character of the Management Accounting education in the particular country and university. The character of the interviews can be

classified as semi-structured, where pre-defined questions were used in combination with the situation, where the interview takes its own path. In order to provide a more complete picture of the environment being studied the interview material was complemented with the information on the home-pages and other relevant internet sites of the “research subjects”.

There was a need for a suggested model of a management accounting education, a list of the subjects that should be covered in the management accounting education. At first some of the most frequently used management accounting textbooks were studied in order to make a list of topics in the management accounting subject. At the same time something similar was searched for on the internet.

At the website of United Nations [UN] important information about Management Accounting education was found. The developing countries had asked the UN for an explicit guidance on curricula so that the latter might be more easily implemented than a competency-based system. The 16th session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), that took place in Geneva in February 1999, adopted a guideline on national requirements for the qualification of professional education of accountants. Proposals on revising the model curriculum were presented on the nineteenth session of ISAR. In accordance with the feedback obtained at the nineteenth session and additional comments received after the session, and also at two workshops held in Geneva in April and June 2003, the model curriculum was revised. This document contains a module of management accounting for both the basic level and on the advanced level of management accounting studies (Appendix 1). It is mentioned in the document of the revised model accounting curriculum that the detailed curriculum is merely the starting point for a country desiring harmonize its educational system to meet global requirements. Each country must take the curriculum and develop the corresponding syllabuses, determine the time to be spent on each module, and adapt the content to national needs.

The management accounting contents according to the textbooks were compared with the ISAR model. The ISAR model turned out to be more complete and suitable for this study. It was chosen for comparison purposes for the Management Accounting education contents of the two countries and it is used as a "tool" in the comparison of the two countries in this study.

In the ISAR module the subject of management accounting is divided into 16 topics, all of them containing several subtopics (Appendix 1). The first ten of the topics are grouped as the Basic Level of Management Accounting Studies and the second part as the Advanced Level of Management Accounting Studies. Besides those 16 topics, this study includes the 17th topic, that holds other topics been taught in the studied universities, but that are not included in the ISAR model.

The second part of the empirical data was the questionnaire with ISAR topics about Management Accounting education and curricula. This was sent to the both universities, to the responsible educators of the Management Accounting courses, who have filled in this form, and this information is used in this study.

1.3.4 Analysis

The last part of the study was to organize and analyze the data, and also estimate its validity and reliability.

1.4 Disposition

The paper is organised as follows. Chapter two is a brief overview of the previous investigations in the field of management accounting in Estonia and in the transition countries. Chapter three is totally based to the performed interviews at the universities participating in the study. It discusses the research samples Sweden and Estonia, and gives a framework for the following empirical part in the chapter four. The fourth chapter contains the final analysis and presents some concluding remarks on the management accounting education in Estonia. The last chapter concludes also some recommendations for the topics for future studies.

2 Management Accounting in Transitional Countries & Estonia

2.1 Management Accounting in Transitional Economies

There have been big changes in the world that have special implications for transitional and newly industrialized or emerging economies. These changes, like the growth of privatisation, de-regulation, international businesses, global competition and new information and production technology have changed the world of management accounting. To ensure efficiency, a market system requires effective accounting, budgeting and taxation institutions and structures. Changes in accounting system structures take time to develop and complete, and should be agreed upon so that market participants can value assets and make investment/finance decisions. One of the keys to the success in this transition has been the ability of each economy to introduce budgeting and management accounting reforms. The provision of relevant, timely and accurate internal management accounting information for corporate planning and control decisions is equally important. Management accounting assists executives in their efforts to improve the economic performance of the firm. After all, there is a real need to further the development of management accounting in these countries.

Firms in transitional and emerging economies have realised that they need effective management accounting techniques to provide management with relevant, timely and accurate information to improve enterprise performance. The road to management accounting has been long and rocky. Most transitional countries are still witnessing the beginning of the end of their management accounting reform process. International investors from developed countries face unique cross-border management accounting problems when they operate in these transitional and emerging economies. Therefore there is also the need to change their thinking about the nature and the role of cost/management accounting. (Halmda,T. & Lääts, K. 2002)

During the first half of the 1990s the main issues and practical needs of daily operating accounting departments of companies changed and became more conceptual. The evolution of accounting in Eastern and Central European companies can be divided into the following four large stages: (Haldma, T. et al 2002)

- I Transition from the fund-based accounting (with some elements of cash-basis accounting) of a centrally planned economy to accrual-basis accounting, adoption of a new accounting legislation, implementation of generally accepted accounting principles, compiling obligatory financial statements (balance sheet, income statement, etc.) according to accrual-basis principles;
- II Implementation of Financial Statement Analysis methods;
- III Separation of taxation (tax returns treatment and presentation requirements) from accounting;
- IV Introduction of the internal accounting system in the area of cost and managerial accounting through the solution of practical tasks. Despite wider and more general use of accounting information in companies it did not lead to improved performance in case there was uncertainty in using that information or in selecting appropriate actions.

The main direction was moving from single to general, concerning both financial and managerial accounting. In many companies the above-mentioned stages are developing in parallel.

Within the Soviet accounting framework, management accounting existed in a very narrow sense. Hence, during the first stage of transition, the management accounting system was a conceptually new issue in the development of those companies' accounting systems whose design and introduction necessitated a conceptual change in the thinking of the companies' financial personnel. Under a centrally planned economy, several aspects of cost accounting were introduced by Estonian companies, but this served the objectives of financial accounting, statistics and centralised management. According to Enthoven et al. (1993), in the conditions of a centrally planned economy, cost and management accounting were not treated as independent branches, but as integral parts of unitary financial accounting. At that point, Haldma et al (2002) fully agree with Enthoven. However, it has to be admitted that in the highly centralized decision-making framework, flexible rearrangements in the companies' management systems on external environmental impacts were not needed. (Haldma, T. et al. 2002)

The transition from a command to a market economy de-centralised the decision-making process. The need for a conceptual development of management accounting systems grew rapidly. The survey carried out among the administrative staff (general directors, financial directors, chief accountants, etc.) of more than 80 Estonian companies in spring 1994 demonstrated that only in 3% of companies the accounting emphasis as "hot points" has remained on compiling financial statements, whereas in 75% of the companies it has been removed to the area of cost and managerial accounting. Financial statement analysis served as target in 22% of the total amount of firms. (Haldma, T. 1995)

2.2 Management accounting education in Baltic countries

During the last decade, the accounting education systems of Estonia, Latvia and Lithuania have been accommodated to the rapid changes in the accounting environment. Thanks to the continuous improvements in academic and professional training, a visible step has been taken towards incorporation of the Baltic accounting education into the international accounting education framework. (Haldma, T. et al. 2002)

In the second half of the 1990s, the development of the business environment in the Baltic's was affected by the following events:

- conceptual changes and improvements in the regulatory context;
- ownership changes (the most intensive period of privatisation was 1993-1995);
- development of the capital market (the stock exchanges opened in Vilnius in 1994, in Riga in 1995 and in Tallinn in 1996);
- recession on the Eastern markets (the Asian crises in 1997, the Russian crisis in 1998).

In the main, these systematic factors, increased competition and raised production quality standards, and required adoption of a more sophisticated and market-sensitive external (financial accounting), as well as internal management accounting systems. (Haldma, T. et al. 2002)

Proceeding from the previous statements, Haldma et al 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. Market economy countries have not experienced such a conceptual change in financial accounting in such a short time during the last decades. They support Virtanen, K. et al. (1996) and Scherrer (1996) who say that the evolution of financial accounting has influenced the development of cost accounting and management accounting.

Haldma et al (2002) suggest that the legal accounting environment serves as a factor influencing the development of accounting education and training. This is characteristic of countries in transition. They conclude that the conceptual change in financial accounting, characteristic of the Eastern and Central European transition countries, served as a precondition for the design and introduction of management accounting, and for the development of companies' management accounting systems. Market economy countries have not experienced such a radical change in financial accounting in such a short period of time. Educational institutions must take this aspect into consideration in the design of their curricula.

The people who called themselves accountants under the Soviet system were actually bookkeepers, since practically all they did was make journal entries. Accountants were held in low esteem before 1990 and accounting was not a prestigious profession. Changes started occurring in accounting education in 1989, but very few people were able to teach the new accounting. Today there is still a lack of good skilled accounting and management accounting educators. (Haldma 2002)

Under the Soviet era, the universities sometimes offered accounting courses, but when they did, it was as a part of the economics faculty. There were no departments specifically devoted just to accounting or management accounting. That has changed. Universities are now offering whole accounting programs. Universities are trying to meet the demand for accounting and management accounting by offering more courses. One constraint on offering courses to meet the demand is the difficulty of finding people to teach the courses. Another problem has been the inertia. Most of the top professors who teach accounting subjects have been experts in the old Soviet accounting system. Now they need to teach the new accounting and management accounting and many of them have not had any experience actually working as accountants in the new system.

As state owned firms began to be privatized, they started adopting market oriented management accounting models. The demand for market model management accounting educational materials increased rapidly as the government decided to switch to a market economic model. The main reason for such lack of materials is because there was no need. So the second problem with upgrading accounting education was the lack of high quality education materials. (Preobragenskaya, G., 2003)

2.3 Development of accounting and management accounting education in Estonia

Haldma T. (2002) writes that the basic stages of the accounting reform carried out in a transition economy include the strengthening of the accounting profession, accounting education and training, and implementation of the underlying principles of accounting used in market economies. The development of accounting education and training in Estonia bears the following imprints of a centrally planned economy:

- Long term isolation from market economy and the development of economic thought;
- Loss of fundamental knowledge of international economics science and education (a centrally governed economy was the only accepted line);
- Differences in the economic terminology used in the former USSR and market economy countries.

As accounting was not a management tool, responsibility, orientation in market circumstances and ability to prepare or to make financial decisions were not the main features of an accountant. In regaining independence in 1991, the economic situation in Estonia changed dramatically.

Besides other transformations, an entirely new role was attributed to accounting by the market forces. The need for a conscious shaping of business targets, performance and the system of their implementation expanded the scope of accounting in practice, laying particular emphasis on the role and responsibility of accounting executives (financial director, chief accountant) in the preparation of financial decisions.

In the course of transition from a centrally planned to a market economy, a company's accounting system is affected by two mutually connected changes related to the ways in which accounting information is utilized (Alver et al, 1996):

- a change from the state to the business community as the primary user;
- a change from the passive role to an active role in the stimulation of economic activity.

Therefore, the objectives of accounting education and training for the transition period are completely transformed and differ from those set up under a centrally planned economy. The accounting training, retraining and research involve students as well as practitioners and professors. In the transition economies the main objectives to be achieved in this process were as follows (Haldma, 1994):

- 1) Incorporation into the harmonised international accounting, and international education and research environments;
- 2) Systematic and comprehensive accounting education, both internally within the accounting area and externally in interaction with other related areas (marketing, financial management, etc.);
- 3) Transition from the stereotypes of a centrally planned economy to entirely new approaches characteristic of accounting in a market economy;
- 4) Linkages between the current accounting environment and the practical demand for building a bridge across the gap between the former accounting environment and the new one;
- 5) Development of an appropriate curriculum of accounting at the universities and other institutions of higher education.

3 Business Administration and Management Accounting education in Estonia and Sweden¹

3.1 Generally about the study system in Sweden and in Estonia

In Sweden and in Estonia the higher education is organised according to a modular credit basis allowing students to build up their degree or other qualifications by selecting self-contained modules. The appropriate degree is awarded after accumulation of the required number of credits in appropriate combinations and after the student has passed the required exam for each module. There is normally not one final exam for a specific degree. Study periods are not expressed in years but in credits. Especially in Sweden, but also in Estonia, higher education institutions offer more and more master programmes in English, both for national students and for international students. Some of these master courses are just translations of the regular university courses, other of these are specially designed programmes.

In Sweden there are three types of first final degrees: The *Högskoleexamen* which requires at least two years of full time study, The Bachelors' degree (*Kandidatexamen*) which requires at least three years of full-time study and at least one and a half year of study in the major subject including a thesis of at least ten Swedish credit points (one point = one week = 40 academic hours). The Bachelors' degree can be of a general academic nature or it can be a professionally oriented degree. The Masters' degree (*Magisterexamen*) requires four years of full time study including two years of study in the major subject or a thesis work of normally half a year's full time work (twenty credit points). A national credit and accumulation system is applied in Sweden.

In Estonia there are two types of first final degrees: the Bachelors' degree and the Masters' degree. First of them requires three years of university studies containing 120 credits. The university system in Estonia uses the same credit system as Sweden, where one point equals one week containing forty academic hours. Masters' degree contains additional 80 credits, usually obtained by two more years.

For admission to the higher education both the Estonian and Swedish students have to meet both the general access requirements (a recognised secondary school leaving certificate or equivalent) and the specific requirements for admission to the chosen programme. There is a numerous limitation in all fields. The limitations in the number of admitted students may be set by the individual institution.

The start of the academic year in Sweden is in the end of August and in Estonia in the beginning of September. The academic year is not nationally regulated; most institutions apply a two semester system. Courses and programmes may also start in January. In Sweden there are no tuition fees, neither for home and EU nor for foreign students. For the studies abroad, the educational assistance may be provided for recognised courses; both study period and full degree courses. In Estonia the tuition fees of the students that enter with the highest grades are financed by the government, the other students have to pay for their education. Usually the amount of government financed students is many times smaller than the students that are paying for their studies.

¹ This chapter is based on the performed interviews at the universities participating in the study. The interviewee from the School of Business Economics and Law was Professor Olov Olson. The interviewees from the University of Tartu were professor in Management Accounting Toomas Halmda and lecturer in Management Accounting Kertu Lääts. The persons interviewed at the Tallinn Technical University were professor in Financial Accounting Lehte Alver and professor in Management Accounting Jaan Alver.

3.2 *Estonia*

At the undergraduate level accounting is taught by four Estonian universities: the University of Tartu; Tallinn Technical University; Estonian Agricultural University and the Estonian Business School. The University of Tartu and Tallinn Technical University redesigned their accounting curricula in 1993, Estonian Agricultural University and the Estonian Business School followed suit in 1995. In the first half of the 1990s, the need to create and develop conceptually different management accounting systems was growing rapidly. In 1992-1994, the Estonian universities incorporated management accounting courses into their curricula as an independent discipline. Obviously, the accounting curriculum in all the universities is very similar. In all of them, such subjects as the Basics of Accounting and Management Accounting are among the core (compulsory for all students of the faculty) courses.

At present the academic system in Estonia is being substituted by the Bologna² 3 years (bachelor) plus 2 years (master) pattern. This autumn (2005) the first students graduate from the 3 years undergraduate (bachelor) studies, and start the 2 year graduate (master) studies.

At the first stage of curriculum design in accounting in Estonia it was necessary to lay more stress on international comparative studies. Generally, two different approaches to internationalising the business curriculum have been developed. One approach treats international business as a single discipline, whereas the other one broadens the existing academic areas so that the discussion of domestic topics is expanded to include international aspects. Therefore, first at Tartu University the course International Accounting was introduced. In 1998 it was replaced by Controlling (Management Control) course, as it was necessary to pay more attention to internal accounting. International accounting aspects were taught at the courses Intermediate Accounting, Financial Statement Analysis, Auditing, etc.

The students, who have graduated from Tartu University and Tallinn Technical University since 1997, have already been taught in accordance with the new curriculum. The students with contemporary professional knowledge will have an essential impact on the redesign of accounting retraining courses for practitioners. Also the curriculum for master students contains some accounting courses.

Another important aspect of a university management accounting education is textbooks. Over the last 15 years the content of accounting textbooks (before the education reform the field of management accounting was covered in the accounting textbooks) has changed dramatically. Management Accounting approaches have also gone through a transformation. It used to be that accounting textbook authors, along with providing knowledge of definitions, techniques and organizational matters paid attention to management accounting issues, but that term was not used. It was referred to as "calculation of the cost of production."

The students face a lack of ability to get their hands on actual textbooks. Estonian students generally do not buy new textbooks like is so often done in the USA and Western Europe. The reason is because textbooks are expensive and many Estonian students cannot afford them. Instead, they go to the library and use whatever textbooks they can find. In some cases, this problem is alleviated by subsidising the cost of printing the texts, but occasional subsidies are not

² More information about the Bologna Declaration can be found in the internet on many sites, for example at <http://europa.eu.int/comm/education/policies/educ/bologna/bologna.pdf>

sufficient to place books in the hands of every Estonian management accounting student. The professors give students a sufficient number of handouts during class to make up the lack of textbooks, and these handouts are the main source of materials for exams. So perhaps the lack of textbooks is not such a big problem, assuming that the materials the professors distribute in class are of the same or higher quality than the textbooks.

Management accounting education in Estonia is also being provided by several different private groups. The international firms give regular training to their controllers and financial managers. Estonian consultancy firms also give training to their employees, but the quality of the education provided by the smaller Estonian firms is not at the same quality level as that provided by the big international firms. One reason for the quality difference is because the large international firms have more resources to draw on than do the smaller Estonian firms. The international firms have also been training their staff for a much longer time and their various offices all over the world have developed and fine tuned their educational materials. Another advantage the large international firms have over the smaller Estonian firms is that the large firms are not limited to using Estonian language course materials. Most of the materials they use are in English, and they can use such materials because their employees know how to read English. This problem will be solved with time, as more English speaking Estonian professors write their own texts and course materials in Estonian.

Whereas university education used to be free or almost free, there is now a trend to charge tuition at least half of the students. Tuition is especially important for the many private universities that are popping up all over Estonia but it is also important for State universities, since the government cannot provide all the funding that universities need to continue operating. One reason for the increase in the number of students studying accounting is because they are willing and able to pay tuition. That has enabled Estonian universities to expand their accounting curriculum and it is one reason why some universities that formerly did not offer accounting courses are now offering them. One explanation for why the percentage of accounting students paying tuition is higher than the percentage of students in general that pay tuition is because accounting has become a more prestigious profession. Students are more willing to pay for such an education.

Another reason for the increase in the number of accounting students in Estonia is part-time and distance education. Many people that are already working acknowledge the need to obtain a university degree. Attending university part-time evenings or by distance is often the only way for some students to obtain a university diploma. Sometimes a university diploma is required to retain one's job. Some people are afraid of losing their present position if they do not pursue a diploma. This is especially true of government positions. Both the universities and their students realize the fact that students are spending their time, money and effort not because they want to obtain knowledge (part-time and distance students are often more experienced and competent than their professors) but because they need a diploma. This understanding adversely affects the quality of distance education.

Obtaining the knowledge of the new system and the "new accounting" or management accounting, which was not a significant part of the studies during Soviet era, is also without any argument a reason why more and more working persons with a degree go back to the university.

The wages paid in universities are much lower than the wages paid in business. As a result, most of the professors who can market themselves as financial specialists have left the universities for the private sector. Those who remain in the universities obtain most of their income from outside

sources rather than teaching. The majority work in consulting. Many have their own companies. The prestige of being a university professor is one of the reasons why not every educator has not left the university. Sometimes this prestige can be turned into cash in the private sector. There is a certain aura of credibility associated with being a university professor. Also, being at a university can be a source of clients, since some businesses apply directly to universities for help. Traditionally, universities have accumulated the best professionals in the field, so businesses tend to gravitate to the universities when they need assistance. Then there is the intangible aspect of the job, the fun and pleasure that are derived from giving lectures that has no substitute in the marketplace.

Universities welcome a teacher who is also a practitioner. It is believed, and rightly so in many cases, that someone who has current knowledge in the field is able to provide better, more practical and valuable lectures than someone who is a book-scientist. The downside of hiring practitioners is that they may not have much energy left to teach after they have spent all their time and energy during the day engaging in business activities. Also, as practitioners, they may not spend a sufficient amount of time in study, which is necessary to keep current in the field.

The increase in the demand for management accounting education has led to an equal increase in the demand for people who can teach management accounting. Meanwhile, professors have been leaving the university to go to the private, profit making sector, which has intensified the need for professors. Universities that formerly did not offer management accounting courses have an especially difficult time trying to find people to teach the courses they recently started offering. These factors all have an effect on the quality of the education that management accounting students receive.

3.2.1 Management Accounting education at UT

There are three management accounting courses at UT: Management Accounting, Controlling and Cost Management. All of them are worth two credits. Management Accounting course is held during the undergraduate period of the studies. The two other courses are part of the masters' period. (The curricula of the Business students can be found in the Appendixes.)

The course of Management Accounting gives an overview about specifics of management accounting dealing with companies' internal cost accounting, planning and reporting. It teaches the differences between financial and managerial accounting; the areas of management accounting; the basics of cost classification; accounting information for decision making; traditional and contemporary costing methods; the starting of companies and the planning later on; and about the responsibility centres and internal reporting.

The objective of the course named Controlling is to equip students with the basic understanding how to analyze the companies' management accounting and performance measurement system in a range of planning, control and decision-making situations and adapt it to accommodate change. On completion of this module the individual should be able to: understand the framework of the controlling system within the management by objectives concept; review the objectives of controlling (management control)system and its role as part of a business information system; explain the methodical elements of the controlling, including the methods of strategic and operative controlling; understand the role of balanced scorecard in dealing with the financial as well as non-financial performance indicators and the non-financial objectives of enterprises and use them in various decision-making situations; identify and discuss the organizational aspects of the implementation of controlling system; discuss the management accounting elements serving

as the premises for a controlling system; methods in planning, control and decision-making situations.

Moreover the course of Controlling treats the essence, aims and functions of controlling within the financial management system of an enterprise. The roles of controlling are also viewed in the systems of the coordination of the planning and reporting. The course involves also the instruments and methods of operative and strategic controlling. The course also observes the organizational structure and functions of controlling systems in the enterprises of developed industrial countries, as well as the preconditions and options of applying controlling system in Estonian enterprises.

The last course called Cost Management deals with cost management methods and with companies' cost accounting systems. It teaches the students the aim of the cost accounting, the accounting for cost classification, cost centres and cost objects. It also handles analyzing and planning costs; the methods of costing; cost management methods and companies' internal reporting.

3.3 Sweden

Compared to the other universities in Sweden, SBEL (The School of Business Economics and Commercial Law) has most courses in management accounting subject, and according to Professor Olov Olson, it offers the best management accounting education in Sweden. The closest runner up would be the Stockholm School of Economics.

The Bologna system has been partly been tested in Gothenburg, where the Business education program was three years. This gave the students 140 credit; 120 officially and 20 additional, because the courses included more material, and there were more studies than for 120 credit. This was called the ICU (Integrated civil economics education) and the students were expected to choose a GBS (graduate business school) master after, 1,5 years. There was also a chance for students to choose separate courses to receive their master degree, and that was possible with 20 credits, with half of a year studies. Many students wanted to start working as soon as possible after the bachelor's degree, so they chose the shorter way.

The Swedish suggestion for the Bologna system is, that the student can choose after the 3 years undergraduate studies, either to finish after 1 year, or to study 2 years. There will be a possibility to obtain two different degrees. A similar system is used at Yale, where the graduate studies are divided in two: Master of Arts means one year of studies, and Master of Science two years of studies. The universities will not receive any additional resources for to implement the Bologna system, and for this extra year they have to take in, so probably this will be compensated with accepting fewer students. In Norway the state has given more resources for this extra year, but in Sweden there has been no talk about that.

The changes will be implemented slowly, because the first years will probably be the same, the later years will contain some additional courses. The additional subjects will most probably be in the subject of organisation theory, economic history, information technology, national economy. There will not be too many other courses in the subject of "business administration", the amount of these will not exceed the 100 credit line. There will neither be more courses in the subject of management accounting as today. The range of management accounting courses is considered as very good today. In the research courses there are additional four management accounting courses at 5 credits each, and there is co-operation with Norway.

The education in Sweden has its speciality that the programs are very wide and many subjects are integrated in the program. This is special for the Nordic countries and also Germany. The program is called Business, and it contains different business subjects, and do not only concentrate on one subject. Professor Olov Olson argues that this makes the students wider in their thought. The other countries very often have a big financial accounting block when studying the management accounting, and also in the beginning and in the undergraduate period. The other countries often have a program or education called for example “financial accounting” and it mainly contains courses in this degree. This way the students will have a very narrow sight of business.

About twenty years ago there were more financial accounting courses in Sweden universities, especially in the introduction level. In Gothenburg it has changed quite a bit and there are less financial accounting courses in the undergraduate studies, and more management accounting courses. If a student may wish to study more financial accounting, he or she can choose this speciality during the last semester of the undergraduate studies. This course is half financial accounting and the other half is management accounting. (“Financial accounting and financing”) This course is one of the most popular by the students, and it is given twice a year, both in the winter and spring semester. After this the student can choose either a financial accounting as the master’s course or management accounting. Both of them contain 10 credits of courses and a 10 credit thesis. These courses run only once a year, on the autumn semester.

There has been a change in the management accounting master course year 2000. Before the year 2000 the students could pick some courses from a range of financial and management accounting courses. The student could pick and combine the courses he wanted. There was still a possibility to choose all management accounting courses, just that the master’s course was common for the students that had the financial accounting as a degree or the management accounting.

The course contents are decided in the subject group of management accounting. It is required to have minimum 30 students on a course in order to get the resources from the state. So the range of courses is very much steered of the wishes of the students, of what do they choose to study.

3.3.1 Management Accounting courses at SBEL

The Management Accounting credits generate 18 credits from the whole 160 credits of Business studies. The first two courses are held during the undergraduate studies and they are named Management Accounting I and Management Accounting II. Strategic Management Accounting and Operational Management Accounting are courses in the masters’ studies. (The curricula of the Business studies at SBEL can be found in the Appendixes.)

Management Accounting I is worth 3 credits. This course has the company with its resources in the center. It tells about the processes in the company when producing goods or services. The model of input-and-output will have an important role in the course. The course handles the accounting and calculation matters, together with how to make the resource-handling as effective as possible.

The second Management Accounting course during the undergraduate studies contains studies about financial measures and goals based on capital and risk-taking. It gives the students knowledge about management accounting process, including moments like planning, organizing

and following up the business. MA C teaches the students also about responsibility disposition and delegation, accounting models. The students will also read about the role of the Controller.

The Strategic Management Accounting is about aims and directions of the strategic management accounting in a company and how these influence the form and usage of the management accounting. SMA also shows how to create strategic management accounting models. The students will also read about the connection between the capital market and management accounting.

The course in Operational Management Accounting gives the students knowledge and understanding in connection between company's strategic direction and its operational management. The students learn how the operative direction influences the development and usage of the management accounting systems. The operational management accounting models are also a part of this course.

4 Findings / “How it really is”

4.1 General information

Neither UT nor SBEL offer a program that is totally dedicated to the accounting major. All the students interested in economy or business start together at the same program. In SBEL the program is called Business, in UT either Business or Economics. The duration of these programs differ by one and a half years. In SBEL the ordinary period for Civil Economics program is three and a half years, giving the student 160 credits, where 140 credits are obtained during the three years of undergraduate studies and the remaining 20 credits in the master period. While the normal studying tempo is 20 credits in one semester, in SBEL the three years' 120 credits are completed with additional 20 hidden credits. This means that the courses are more demanding and a bit more than regular amount of studies are expected of the students. In Estonia, at UT, the ordinary period of Business studies is five years, containing 200 credits. 120 of them are acquired in the undergraduate studies and the last 80 during the graduate studies.

The economy students at both universities will decide after the common courses if they want to continue their studies in the field of the private sector (business) or the public sector (economy). The business students have over more the opportunity to choose between different business' fields during their specialisation period. Those are in general Marketing, Organization, Finance and Accounting. The Accounting specialisation includes courses of Management Accounting. In the master studies, there appear slight differences between UT and SBEL. In SBEL it is possible to choose master studies that are dedicated to management accounting. UT has a master program named Accounting, and it is containing a block of Management Accounting studies. The student, who desires the Management Accounting specialisation in Estonia, will specialize mainly during the Management Accounting courses and the master thesis project in the subject of management accounting.

The figure 2 below presents the amount of credits at SBEL and at UT in several categories. In the following figure 2, the number of these and some more categories are presented, as a percentage of the studies of this particular university. It is important to remember while reading this data that the size of the program differs in SBEL and UT, so the numbers of the percentages do not refer to the same amount of studies.

The Estonian master studies' graduates possess 40 credits more, than their Swedish counterparts. So one may think that all the summarised credits in the different categories are higher in Estonia; this is still not the case. The groups where the UT's credits are remarkably exceeding SBEL's credits are the Business and Other Business credits during the whole education. In Estonia the percent of the business courses that do not concern accounting, Other Business courses, are just a bit over half of the studies and that leave the second half for the accounting courses and non-business courses. In Sweden the Other Business courses assemble 40 percent of the whole studies. The rest of the 60% allocates almost equally between the non-business courses and accounting courses (including the management accounting courses).

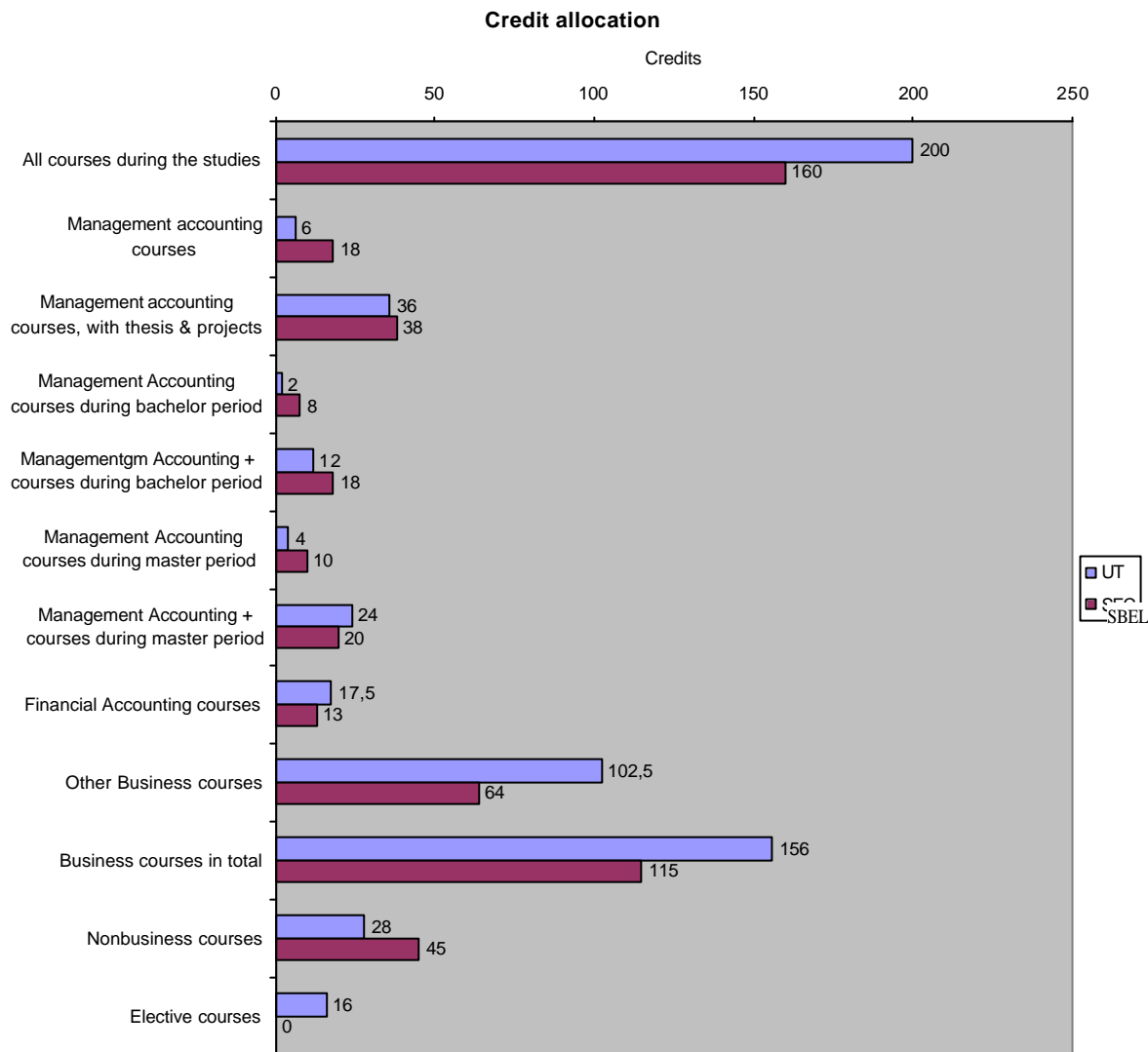


Figure 2: Credit Allocation of Business program at SBEL & UT

We can see from the figures that SBEL lacks elective courses inside the program that can be selected from different programs or areas. These Elective courses at UT have very often a non-business character, so when adding those to the already existing Non-business courses, we can say, that the credits of Non-business courses in the two universities are almost the same, being 44 in UT case and 45 in SBEL. The non-business studies in Sweden consist of either language & culture studies, or analytical statistics studies. In Estonia the non-business studies contain a big deal of psychological and sociological courses. These kinds of courses are totally absent in the economics studies, with accounting or management accounting major, in Sweden.

The Accounting courses show more differences in the credits. There are 4,5 more credits in the Financial Accounting in UT. This is quite expected, because the specialization the students have to choose in order to obtain the Management Accounting education is the Financial Accounting. This is the reason, why there are more Financial Accounting courses in UT. In Estonia the Management Accounting education is obtained as a part of the Accounting education. If we would compare the Accounting block (Management Accounting & Financial Accounting) in total,

would it be 53,5 credits in UT and 51 credits in SBEL. So the specialisation block would be in that case would be worth the same.

The credits acquired from the Management Accounting courses, projects, practises and theses during the whole education are 36 in UT and 38 in SBEL. This can give though a misleading image that the Management Accounting education in the two universities is almost equal. By taking a look at the type of courses inside these two numbers, we see big differences. When it comes to the Management Accounting courses, in UT the credits obtained are 6, and in SBEL 18. The Swedish students take three times as much Management Accounting courses as their Estonian colleagues. When giving those figures a closer look, we can see that these numbers during the bachelors' period are 2 in UT and 8 in SBEL. In the masters' period, the same figures are 4 for UT and 10 for SBEL. During the bachelors' studies, Estonian students perform an Internship (4 credits) and a Project (2 credits) in a self-selected subject and a thesis (4 credits), it is assumed, that a student who wishes the Management Accounting education, carries out all of them in that field. These 10 credits create the additional Management Accounting credits during the undergraduate studies in UT. The corresponding figure for SBEL is the bachelors' thesis on 10 credits. During the graduate studies, the credits obtained in addition to the Management Accounting courses come from the masters' thesis, being 10 credits in the case of SBEL and 20 for UT.

The figures in the text above show that the independent Management Accounting work a student does is 30 credits in UT and 20 in SBEL. The Management Accounting courses in the educations of the two universities generate studies worth 6 credits in UT and 18 in SBEL. These contents of these courses will be analyzed in depth in the second part of the Findings.

When looking at the percents of the total education in the two universities, we can see a quite equal allocation when it comes to the Financial Accounting courses. There appears a small difference when comparing the percentage of the Management Accounting + group (includes Management Accounting courses and all the projects written in this major), where SBEL exceeds UT with more than five percentages. This difference grows even bigger when we put side by side the Management Accounting courses.

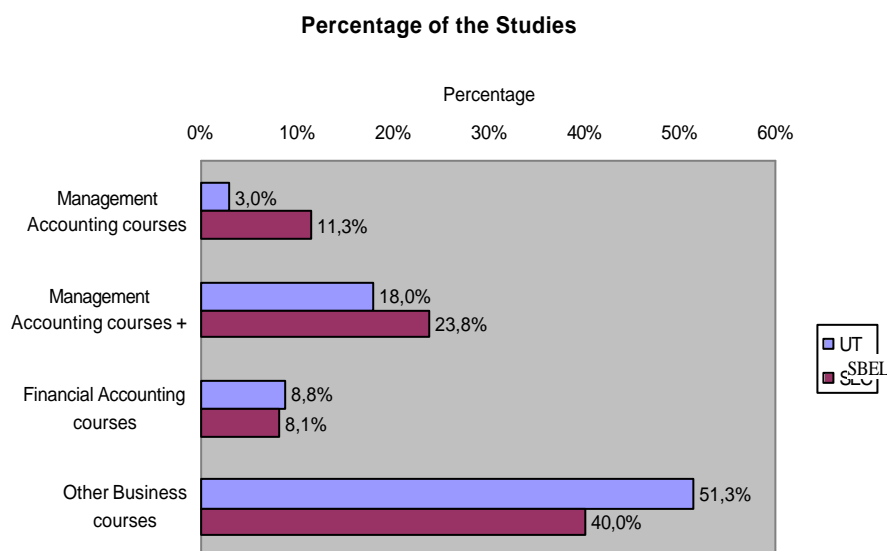


Figure 3: Percentage of different types of courses during Business studies at SBEL & UT

We would not be too far from the truth when uttering that those create almost 4 times as higher percentage of the program at SBEL than at UT. This is quite expectable due to the fact that Masters' studies at the SBEL are about management accounting.

If we turn back to the courses with the business & economy character, and take a look of the type of studies or teaching method, then we can see that the universities are similar in their way of offering the education to the students. The figure above shows the allocation on the teaching method in both universities. (These numbers can be found in the Appendix 4 & 5.) The percentage of lectures is 13 in UT and 12 in SBEL during the program. Education performed in Class form makes 11% of the Business courses in UT and 8% in SBEL. The last teaching method is the independent studies, called Self Studies in the study, is 76% in UT and 80% in SBEL.

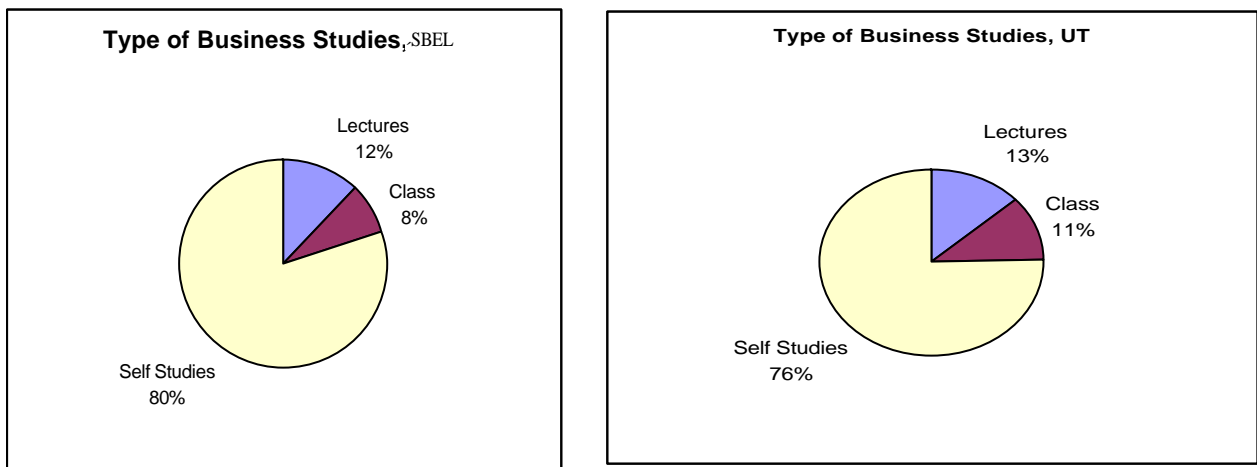


Figure 4: Type of Business Studies, Teaching Method, at SBEL & UT

4.2 Management Accounting Contents

We start with comparing the amount of attention the ISAR management accounting topics get in the two universities (Figure 5). There are differences almost in every topic. The only topics that generate more or less the same attention percentage of the studies are the ‘Budget as a tool for decision-making’, ‘Performance measurement for planning and control’ and ‘Background information’. Rest of the management accounting contents differ to a great extent. Next we examine each of the topics separately.

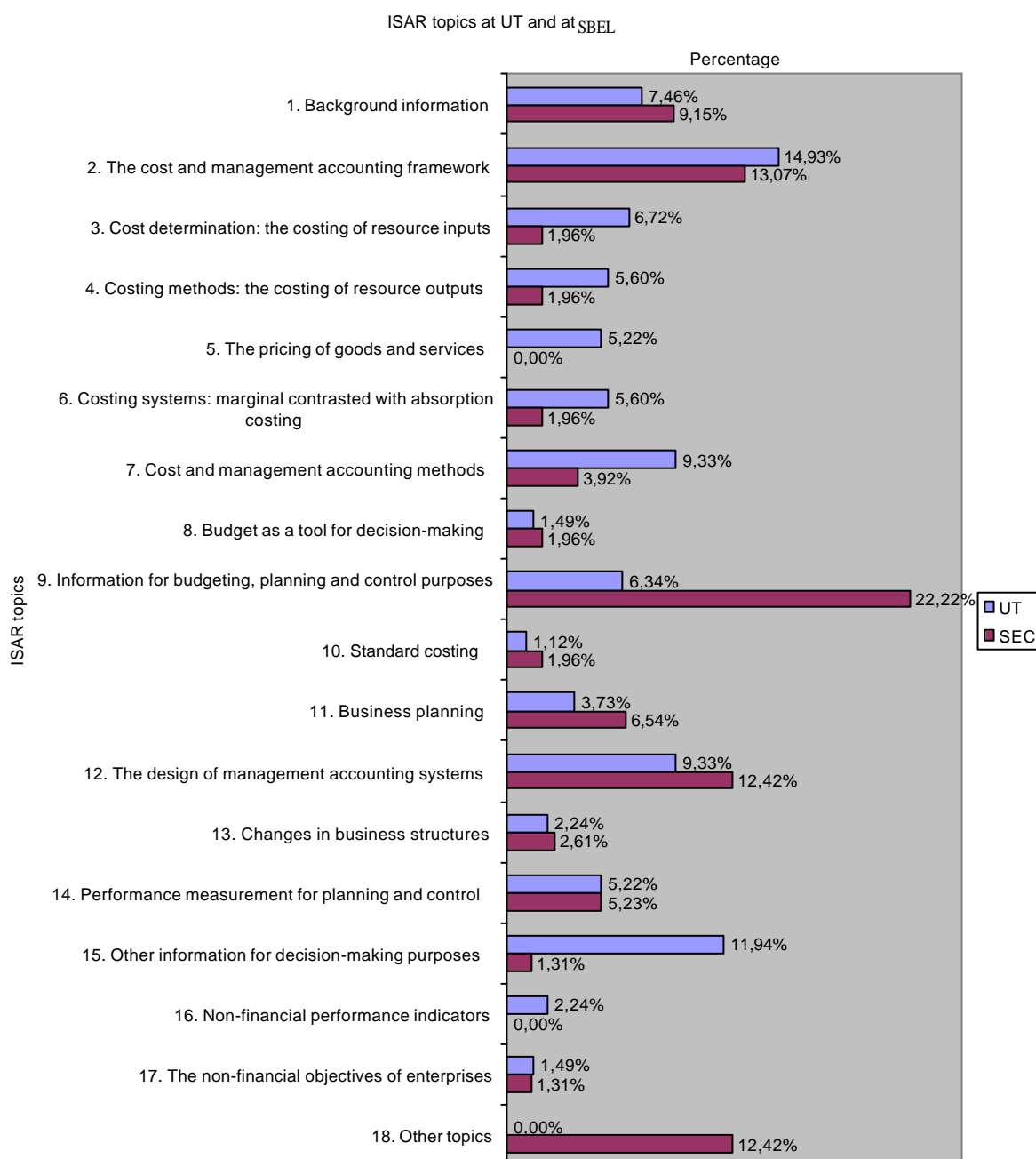


Figure 5: Percentage of ISAR topics at SBEL & UT

A comparison of all the different ISAR topics and how are they represented in the management accounting education in both universities as seen above. These are all illustrated in Appendix 8. The second row shows the courses at the UT and SBEL. The management accounting courses at the UT are Managerial Accounting [MA], Controlling [C] and Cost Management [CM]. The management accounting courses at the SBEL are Management Accounting I [MA I], Management Accounting C [MA C], Strategic Management Accounting [SMA] and Operational Management Accounting [OMA]. The left column is for the ISAR topics and subtopics of the management accounting.

The educators filling in those topics forms were asked to appreciate the depth of the topics in their courses. As the Appendix 6, 7 & 8 show, 1 stands for a topic that is discussed superficially, 2 a topic that is discussed intermediately and a 3 stands for a topic that is discussed thoroughly in the specific management accounting course (either MA, C or CM when it comes to UT, or MA I, MA C, SMA and OMA when we talk about SBEL) that is part of the education. In the following tables there are two more vertical columns besides the courses, “Tot.” and “%”. The one named “Tot.” summarizes the points a topic has get from the different courses. The “%” column represents the percentage the particular topic is of the management accounting education in total. There are also two additional horizontal columns named “sum” and “%”. The first one summarizes the points one topic has got on one course. The “%” represents the percentage one ISAR topic is of one particular course.

4.2.1 The Background Information

The first recommended topic in the ISAR-model is The Background Information. At the SBEL all the contents of the first topic are covered under the undergraduate studies. At UT all the sub-topics besides ‘The Benefit of the Computer Software’ are taught during the undergraduate studies. At SBEL the ‘Background Information’ topics are handled in the MA I, and the two last sub-topics are repeated during the MA C in the last semester of the undergraduate studies. From all the management accounting education, this topic generates 7,46% of attention at UT and 9,03% in SBEL. Looking at the table, we can see that at UT, four of the subtopics are studied again, during the graduate studies, which means studies at a higher lever and in more depth. The Interpretation of operating results is taught in all the three management accounting courses at UT, indicating to high knowledge of the students in this subject.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>1. Background information</i>											
(a) Importance of knowledge of the business processes and their technological implications	2	2		4	1,49	2				2,00	1,29
(b) The role of quantitative techniques in problem- solving situations	2	2		4	1,49	2				2,00	1,29
(c) The value of qualitative and quantitative information in decision-making		2		2	0,75	2				2,00	1,29
(d) The interpretation of operating results and evaluation of the impact of optimum decisions	2	2	2	6	2,24	2				2,00	1,29
(e) The benefit of computer software (e.g. spreadsheets and statistics packages)						2	1			3,00	1,94
(f) The importance of effective communications to users of information	1	3		4	1,49	1	2			3,00	1,94
sum:	7	11	2	20	7,46	11	3			14,00	9,15
%	6,80	11,46	2,90	7,46		15,71	5,88			9,15	

Table 1: Background Information

4.2.2 The cost and management accounting framework

All the ISAR recommended contents regarding the second area of Management Accounting are covered in both of the universities. The numbers illustrate that the second field of Management Accounting gets almost 15% of the attention in UT and nearly 13% in SBEL. In UT this topic is

discussed in all three management accounting courses, mostly in the Management Accounting course during the undergraduate studies. In SBEL this subject is handled only during the first Management Accounting course in the second semester. Of the 12 subtopics, 7 of them reoccur in UT in all the three Management Accounting courses. In SBEL there is only topic (a) reoccur once more, and is only touched on in the last semester of the undergraduate studies. The Cost and Management Accounting Framework is not a subject that comes up in the Masters' studies in SBEL, this is not the case in UT. IT can be said, that the subject is nearly discussed at the same amount during the undergraduate and graduate studies.

	UT					SBEL					
	MA	C	CM	Tot	%	MA I	MAC	SMA	OMA	Tot	%
2. The cost and management accounting framework											
(a) Cost and management accounting in comparison with financial accounting: their purposes, the role of cost accounting as part of a management information system, and the need for both financial as well as non-financial information	3			3	1,12	3	1			4	2,58
(b) Cost classification concepts and terminology, such as											
(i) Direct and indirect costs.	2		3	5	1,87	3				3	1,94
(ii) Fixed and variable costs.	2		3	5	1,87	3				3	1,94
(iii) Period and product costs.	2		1	3	1,12	2				2	1,29
(iv) Controllable and uncontrollable costs.	2			2	0,75	1				1	0,65
(v) Avoidable and unavoidable costs.	2		2	4	1,49						
(vi) "Sunk" costs.	2			2	0,75	1				1	0,65
(vii) Budgeted, standard and actual costs and their comparisons and analyses	2		2	4	1,49	1				1	0,65
(c) The use of linear, curvilinear and step functions and how their calculations are used to analyze cost behavior		2	2	4	1,49	2				2	1,29
(d) The concepts of cost units, cost centers and profit centers	2	3		5	1,87	1				1	0,65
(e) describe, illustrate and comment on the planning and control uses of standard costing, budgeting and variance analysis	1			1	0,37	1				1	0,65
(f) The difference between absorption and marginal costing systems	2			2	0,75	1				1	0,65
sum:	22	5	13	40	14,93	19	1			20	13,07
%	21,36	5,21	18,84	14,93		27,14	1,96			13,07	

Table 2: Cost and management accounting framework

4.2.3 Cost Determination

There are big differences in the subject of the Cost Determination in the two universities. This subject gets approximately 7 % of the attention in UT, but only 2 % in SBEL. Of the 12 subtopics, a bit more than half of them are a part of the Management Accounting education in UT. In SBEL this fraction is not higher than 25. The table shows that the attention to this topic is given in the undergraduate period in SBEL and it is very small. In UT the biggest part of this subject is taught during the CM course as part of the masters'.

	UT					SBEL					
	MA	C	CM	Tot	%	MA I	MAC	SMA	OMA	Tot	%
3. Cost determination: the costing of resource inputs											
(a) Materials											
(i) Accounting for stock (inventory) movements	1			1	0,37	1				1	0,65
(ii) Determination of optimum purchase quantities			2	2	0,75						
(iii) Material pricing issues			2	2	0,75						
(iv) Identification of accounting for stock losses											
(b) Labor											
(i) The difference between direct and indirect labor	1		2	3	1,12						
(ii) Types of labor remuneration methods											
(iii) Labor efficiency calculations and interpretations						1				1	0,65
(iv) Recording labor costs											
(v) Calculation and interpretation of labor turnover rates											
(c) Overheads											
(i) Overhead cost analyses	2	2	2	6	2,24						
(ii) The apportionment and absorption of overhead costs, including reciprocal service situations			2	2	0,75						
(iii) Accounting for the over- and under-absorption of costs		1	1	2	0,75	1				1	0,65
sum:	4	3	11	18	6,72	3				3	1,96
%	3,88	3,13	15,94	6,72		4,29				1,96	

Table 3: Cost Determination

4.2.4 Costing methods

The forth recommended topic of ISAR gets also different quantity of interest in the studied universities. The table demonstrates a three times difference in the amount of attention the subject of Costing Methods get in UT and in SBEL. The UT gives this subject 5,6 % of the management accounting studies, and all of this occurs during their single Management Accounting course in the undergraduate studies. The same number for the SBEL is roughly 2 %.

	UT					SBEL					
	MA	C	CM	Tot	%	MA I	MAC	SMA	OMA	Tot	%
4. Costing methods: the costing of resource outputs											
(a) Job order, batch and contract costing methods											
(i) Characteristics of each method	2			2	0,75	1				1	0,65
(ii) Accounting for direct and indirect costs, including the treatment of waste, scrap and rectification costs.	2			2	0,75						
(iii) Calculation of the profit on partially completed contracts											
(b) The process costing method:											
(i) Characteristics of the process costing method.	2			2	0,75	1				1	0,65
(ii) Identification and use of appropriate cost units.	2			2	0,75						
(iii) Valuation of process transfers and work-in-process using equivalent units of production and based on FIFO and average costing methods.	2			2	0,75						
(iv) Accounting for normal and abnormal losses and gains, joint and by-products	2			2	0,75						
(c) Operation or service costing	2			2	0,75						
(i) Scope of operation or service costing.											
(ii) Identification of appropriate cost units.											
(iii) Considerations relating to the collection, classification and ascertainment of costs											
(d) Standard costing	1			1	0,37	1				1	0,65
sum:	15			15	5,60	3				3	1,96
%	14,56			5,60		4,29				1,96	

Table 4: Costing Methods

4.2.5 The Pricing of Goods and Services

The next topic is pricing. This topic is not a part of the Management Accounting education at SBEL. In UT though, all the contents except 'Pricing in Service Industries' are discussed more than in just one course. C is the course that concentrates three times more than the other two courses in UT on Pricing.

	UT					SBEL					
	MA	C	CM	Tot	%	MA I	MAC	SMA	OMA	Tot	%
5. The pricing of goods and services											
(a) Target and minimum pricing.	1	1		2	0,75						
(b) Price /demand relationships.		2		2	0,75						
(c) The pricing of special orders and short- life products.	1	2	2	5	1,87						
(d) Transfer pricing between divisions in a group.	1	2		3	1,12						
(e) Pricing in service industries.											
(f) Pricing internal services		2		2	0,75						
sum:	3	9	2	14	5,22						
%	2,91	9,38	2,90	5,22							

Table 5: Pricing of Goods and Services

4.2.6 Costing Systems

It can be said that the same pattern continues even in this subject. UT gives this topic a higher fraction of their study attention than SBEL. UT covers all the contents of the field of 'Costing Systems' recommended by ISAR, while SBEL covers 2 of them. Also here the contents are taught in UT, both in undergraduate and graduate level of studies. The numbers illustrate that as much as 10% of the attention of the CM course (UT) is devoted to Costing Systems.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
6. Costing systems: marginal contrasted with absorption costing											
(a) The concept of profit contribution	1	2	2	5	1.87						
(b) The difference between marginal and absorption costing	1			1	0.37	1				1	0.65
(c) Marginal cost accounting: process cost accounting transactions in a marginal costing system	2		2	4	1.49						
(d) Cost-volume-profit (CVP) analysis: understanding the concepts of break-even and margin of safety	2		3	5	1.87	2				2	1.29
sum:	6	2	7	15	5.60	3				3	1.96
%	5,83	2,08	10,14	5,60		4,29				1,96	

Table 5: Costing Systems

4.2.7 Cost and Management Accounting Methods

The seventh subject of ISAR creates 9,3% of the management accounting studies in UT, being taught around 7,5% in the courses of MA and C, and double the amount in the course of CM. The comparing figure for the total management accounting studies is approximately 4% in SBEL and all the knowledge of the Methods of Cost and Management Accounting are all obtained in the first management accounting course.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
7. Cost and management accounting methods											
(a) Cost control (as distinguished from cost determination): control over waste, scrap, spoilage and defective items			2	2	0.75						
(b) Determining and allocating or apportioning the costs of activities and outputs through the use of appropriate concepts, methods and techniques for:											
(i) Absorption costing	1			1	0.37	1				1	0.65
(ii) Marginal costing	1			1	0.37	1				1	0.65
(iii) Opportunity costing	1			1	0.37						
(c) Activity-based costing: use of cost drivers and activities	1		2	3	1.12	1				1	0.65
(d) Alternative stock (inventory) management systems and models including total quality management (TQM), "just in time" (JIT), economic order quantities (EOQ), etc.	1	1	2	4	1.49						
(e) Consideration and application of information required in relation to											
(i) The costing of products and services	1		2	3	1.12	1				1	0.65
(ii) Preparing plans											
(iii) Monitoring and controlling performance and		2		2	0.75						
(iv) Decision-making needs	1	2		3	1.12						
(f) Relevance, costs and the decision process	1	2		3	1.12	1				1	0.65
(g) Cost reduction: techniques such as work-study, time and motion studies and value analysis			2	2	0.75	1				1	0.65
sum:	8	7	10	25	9.33	6				6	3.92
%	7,77	7,29	14,49	9,33		8,57				3,92	

Table 6: Cost and Management Accounting Methods

4.2.8 Budget as a Tool for Decision-making

This subject is a small area of the ISAR model, and it also generates small fractions of the management accounting education if the two universities reaching 1,5% at the UT and almost 2% at SBEL. What has to be mentioned though, is that all the sub-topics under this subject are taught in both schools.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
8. Budget as a tool for decision-making											
(a) Master budgets	2			2	0.75	2				2	1.29
(b) Flexible budgets and variances analysis	1	1		2	0.75	1				1	0.65
sum:	3	1		4	1.49	3				3	1.96
%	2,91	1,04		1,49		4,29				1,96	

Table 7: Budget as a Tool for Decision making

4.2.9 Information for Budgeting, Planning and Control Purposes

The next topic creates the biggest fraction of the management accounting studies at the SBEL at nearly 22 %. This field is getting remarkably less attention at UT, almost by four times less. Both of the universities have other topics under this area besides the ones that ISAR recommends. At the SBEL these ones are Beyond Budgeting, Financial Targets and Analyzing Financial Performance. The first of them, 'Beyond Budgeting' is also a topic at the UT. The results show also, that at UT this area is mostly taught under the graduate studies. This is not the case at the SBEL. The subject of 'Information for Budgeting', 'Planning and Control Purposes' is part of the education during the undergraduate studies of the students. What we can see is that at the SBEL all the topics besides the 'Quantitative Aids in Budgeting' are covered in the management accounting education. At the UT there are seven topics uncovered. At both of the two universities, many of the subjects covered come back during the next course of management accounting. In same way as the ISAR's subjects, 'Cost and Management Accounting Methods' and 'The Pricing of Goods and Services', does the ninth subject generate almost 10 % of the Controlling course's studies. What is even more remarkable is the fact that this subject is nearly 30 % of both of the management accounting studies at undergraduate courses of the SBEL.

	UT					SBEL					
	MA	C	CM	Tot	%	MA I	MAC	SMA	UwA	Tot	%
<i>9. Information for budgeting, planning and control purposes</i>											
(a) Objectives and concepts of budgetary systems											
(i) Budgeting as a multi-purpose activity			2	2	0,75	2	2			4	2,58
(ii) Budgeting and behavioural influences						1	1			2	1,29
(iii) Quantitative aids in budgeting: learning curve theory and application: limiting factors and linear programming						3				3	1,94
(iv) Activity-based budgeting	1	2	2	5	1,87	1	1			2	1,29
(v) Control theory and budgeting			2	2	1,49		1			1	0,65
(vi) Uncertainty and budgeting						1				1	0,65
(vii) Identification of relevance, strengths and weaknesses of budgeting and budgetary control						2	2			4	2,58
(b) Types of budgetary systems: fixed and flexible budgets, zero-based budget and incremental, periodic and continuous budgeting	1			1	0,37	1	1			2	1,29
(c) Developing and implementing budgeting systems: functional and subsidiary budgets and master budgets, including cash budgeting						3	2			5	3,23
(d) Monitoring and controlling performance: the calculation of variances: the determination of the causes of variances						1				1	0,65
(e) Short-term vs. long-term budgets	1	1	1	3	1,12		1			1	0,65
(f) Quantitative aids in budgeting: least squares regression: scatter diagram with correlation: forecasting with regression: time series and seasonality concepts for the analysis of time-related data											
(+1) Beyond budgeting			2	2	0,75		2			2	1,29
(+2) Financial targets (du Pont etc)						2				2	1,29
(+3) Analyzing Financial Performance						2	2			4	2,58
sum:	3	9	5	17	6,34	19	15			34	22,22
%	2,91	9,38	7,25	6,34		27,14	29,41			22,22	

Table 8: Information for Budgeting, Planning and Control Purposes

4.2.10 Standard Costing

Standard costing is a relative small area at the SBEL and at the UT. It exceeds barely the 1% line at the UT and is not more than 1,94 % at the SBEL. The both universities have this subject at their lectures during the first course about management accounting. Of the three topics covered at both schools, these ones are the first two sub-topics under the Standard Costing of the ISAR module. At the UT the third sub-area taught is; 'The Uses of Planning and Operational Values'. At the SBEL this one is the last sub-topic from the table below.

SBEL

10. Standard costing	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(a) The uses and limitations of standard costing methods	1			1	0.37	1				1	0.65
(b) The determination of standards	1			1	0.37	1				1	0.65
(c) Identification and calculation of variances: sales variances (including quantity and mix); cost variances (including mix and yield); absorption and marginal approaches											
(d) Identification of significant variances and their interrelationship											
(e) The uses of planning and operational variances	1			1	0.37						
(f) Trends, materiality and controllability of variances											
(g) Uncertainty and variance analysis											
(h) Identification of relevance, strengths and weaknesses of standard costing and variance analysis for performance and control						1				1	0.65
sum:	3			3	1.12	3				3	1.96
%	2,91			1,12		4,29				1,96	

Table 9: Standard Costing

4.2.11 Business Planning

The first subject of ISAR ‘Advanced Studies of Management Accounting’ is the Business Planning. As the table beneath illustrates, this contains a great amount of sub-topics. At both of the universities six same sub-areas are covered of the thirteen recommended during one of the management accounting courses. At the UT this course is C and ‘Business Planning’ is 10,4 % of the contents of this. The course covering those six is MA C, and this is almost 19 % of its contents. The difference is the period of the studies when the Business Planning is studied, being the masters’ period in Tartu and bachelors’ in Gothenburg.

11. Business planning	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(a) Proposing, evaluating and implementing ways to meet short and medium-term financial objectives, such as budgeting, monitoring and controlling cash flow, pricing, raising finance and repaying debt		2		2	0.75		2			2	1.29
(b) The purpose and benefits of setting short-term objectives consistent with long-term strategies		2		2	0.75		2			2	1.29
(c) Seeking, clarifying and confirming information relevant to the determination of business objectives, such as information on current business position and past performance by using ratios and other analyses, and information on planned changes to systems and procedures		1		1	0.37		2			2	1.29
(d) Developing and analyzing business plans to meet agreed objectives, including risk assessment of plans and all aspects of the business that they will influence, and analyses to include measures of value, profit optimization and utility		1		1	0.37		1			1	0.65
(e) Long-term financial planning, including:											
(i) The issues to be considered when deciding whether to expand through internal growth or through an acquisition.		2		2	0.75		2			2	1.29
(ii) Strategies a company might use in order to expand or maintain its current market position.		2		2	0.75		1			1	0.65
(iii) The techniques for valuing individual shares and other securities and for valuing a business, and the application of these techniques in merger and acquisition situations.											
(iv) The arguments for and against mergers and acquisitions.											
(v) Methods of financing an acquisition.											
(vi) Appropriate merger and acquisition strategies and tactics.											
(vii) Tactics to follow when defending against a takeover bid.											
(viii) Planning for post-merger success and post-merger audits.											
(ix) Identifying schemes for financial restructuring and the issues involved in the decision process; methods of restructuring; buy-outs; going private; share repurchases; rescheduling debts; and joint ventures											
sum:		10		10	3.73		10			10	6.54
%		10,42		3,73			19,61			6,54	

Table 10: Business Planning

4.2.12 The Design of Management Accounting Systems

The next area reaching almost 9,3 % of the management accounting studies at UT and 12,3 % at SBEL is about the Design of ‘Management Accounting Systems’. This subject generates the

biggest one at the management accounting studies at MA C at SBEL. At the UT this subject is studied at all the management accounting courses, but mostly at the first course during the masters' period. At the SBEL nearly 75% of this subject is studied during the MAC. What should be mentioned is that the two graduate courses at the SBEL that have more or less different subjects as in the ISAR's module has the first sub-topic in the course of SMA. Of the 17 recommended topics under the 12th subject UT covers 11 and SBEL 12.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
12. The design of management accounting systems											
(a) Developing and implementing appropriate systems								2		2	1,29
(i) Identification of cost units.											
(ii) Establishing cost, profit and responsibility centers	1	3		4	1,49		3			3	1,94
(iii) Determining methods for recording relevant information.							2			2	1,29
(iv) The sources of information for recording and processing.		1		1	0,37		2			2	1,29
(v) Computer-based information storage and processing							1			1	0,65
(vi) Analysis of output information and its dissemination to relevant individuals and departments		2		2	0,75		1			1	0,65
(b) Consideration and application of information requirements in relation to:											
(i) The costing and processing of products and services.	1	2	2	5	1,87						
(ii) Preparing operating plans.			2	2	0,75						
(iii) Monitoring and controlling performance.		2		2	0,75		2			2	1,29
(iv) Decision-making considerations	1	2		3	1,12		1			1	0,65
(c) Considerations in negotiating and agreeing information requirements											
(i) The influence of size and the type of enterprise entity.	1	1		2	0,75		1			1	0,65
(ii) The nature of activities and output of each entity.			1	1	0,37		2			2	1,29
(iii) The long-term or short-term nature of decisions.	1	1		2	0,75					0	0,00
(iv) Management structures and styles.	1			1	0,37		1			1	0,65
(v) Conditions of uncertainty and risk.											
(vi) Qualitative and quantitative nature of the information requirements.											
(vii) Frequency, timing, format and degree of accuracy required							1			1	0,65
sum:	6	17	2	25	9,33		17	2		19	12,42
%	5,83	17,71	2,90	9,33		33,33	9,09			12,42	

Table 11: Design of Management Accounting Systems

4.2.13 The Impact of Changes in Business Structures etc

Both SBEL and UT are handling the Management Accounting change and the Contingency theory at their Management Accounting studies. UT students learn about that during all the management accounting courses, but at SBEL this topic is studied during the graduate studies.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
13. Evaluating the impact of changes in business structures, functions and performance measures on the applicability and appropriateness of management accounting techniques and methods											
(+1) Management accounting change and contingency theory	2	2	2	6	2,24					3	1,94
sum:	2	2	2	6	2,24		1			3	2,61
%	1,94	2,08	2,90	2,24			1,96			30,00	2,61

Table 12: Impact of Changes in Business Structures

4.2.14 Performance Measurement for Planning and Control

The education of Performance Measurement creates the same percentage of the management accounting studies at the two universities. 5,2 % of the management accounting studies concentrate on the Performance Measurement. At UT the biggest part is taught during the course C and at the SBEL during the SMA course in the masters' period. ISAR has recommended 6 subtopics under the Performance Measurement. UT covers 5 of them and SBEL half of them. Besides those, UT and SBEL have two additional sub-topics, which they both also cover. These are as the Table below shows the Balanced Scorecard and Performance Measurement and Management Systems.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
14. Performance measurement for planning and control											
(a) Measurement of activity, productivity, profitability, quality and service	1	1		2	0.75			2		2	1.29
(b) The relationship of measurements to the type of entity (e.g. manufacturing or service, profit or non-profit, centralized or decentralized entity)	1	1		2	0.75		1			1	0.65
(c) Ranges of measures: monetary and non-monetary; the use of percentages, ratios and indices		2		2	0.75						
(d) The use of indices to allow for price and performance changes through time											
(e) Identification of areas of concern from the information produced							1			1	0.65
(f) Relationship between business performance and managerial performance		2		2	0.75						
(g) Assessing management performance by reference to comparable internal and external information	1	1		2	0.75						
(+1) Balanced Scorecard		2		2	0.75			2		2	1.29
(+2) Performance measurement and management systems		2		2	0.75			2		2	1.29
sum:	3	11		14	5.22		2	6		8	5.23
%	2,91	11,46		5,22			3,92	27,27		5,23	

Table 13: Performance Measurement for Planning and Control

4.2.15 Other Information for Decision-making Purposes

Next we have a topic from ISAR that is almost fully covered at UT, but do not have a place in the studies of SBEL. SBEL has an additional subtopic in this field of management accounting though called Target Costing, that is taught at the first course of the masters' period. So when at the UT the 15th ISAR subject generate nearly 12% of the management accounting education, at SBEL this number is barely 1,3.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
15. Other information for decision-making purposes											
(a) Identification and application of relevant costs and appropriate techniques											
(i) Relevant costs, such as fixed or variable, direct or indirect, avoidable or unavoidable, and opportunity or sunk costs.	2	2	2	6	2.24						
(ii) Appropriate techniques, such as cost/volume/profit analysis, the use of limiting factors, and the recognition of risks and uncertainties	2	1		3	1.12						
(b) Use of relevant information for:											
(i) Application and interpretation of quantitative techniques for decisionmaking purposes.	2			2	0.75						
(ii) Adoption of new products.	2		2	4	1.49						
(iii) Product mix choices.	2		2	4	1.49						
(iv) Discontinuance of products.			1	1	0.37						
(v) Make or buy decisions.	2		1	3	1.12						
(vi) Decisions to sell or to further process products.	2		1	3	1.12						
(vii) Decisions to shutdown or temporarily close selected operations.	2		2	4	1.49						
(viii) The use of indexing of costs and revenues data, (ix) the use of discounted cash flow techniques in longer-term decision-making situations											
(+1) Target costing			2	2	0.75			2		2	1.29
sum:	16	3	13	32	11.94			2		2	1.31
%	15,53	3,13	18,84	11,94				9,09		1,31	

Table 14: Other Information for Decision Making

4.2.16 Non-financial Performance Indicators

Also this subject of management accounting does not get any attention at the SBEL. UT has three additional sub-topics in this field, that are taught at the course called C. This generate 6,25% of the total studies in this course, and 2,24 % of all the management accounting studies.

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
16. Non-financial performance indicators such as productivity per employee or per service unit											
(+1) Customer aspects indicators		2		2	0.75						
(+2) Internal process indicators		2		2	0.75						
(+3) Innovation and personal indicators		2		2	0.75						
sum:		6		6	2.24						
%		6,25		2,24							

Table 15: Non-financial Performance Indicators

4.2.17 The non-financial Objectives of Enterprises

This last subject of ISAR creates a very small part of the management accounting studies at both universities reaching less than 1,5%. The only topic taught in this field at the schools is not ISAR ones, but as additional one. At the UT this is ‘The Management Accounting Practice in Estonian Companies’ and at the SBEL ‘The Role of Controllers’.

17. The non-financial objectives of enterprises such as environmental and social objectives	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(+1) Management accounting practice in Estonian companies	2		2	4	1,49						
(+2) The Role of Controllers							2			2	1,29
sum:	2		2	4	1,49		2			2	1,31
%	1,94		2,90	1,49			3,92			1,31	

Table 16: Non-financial Objectives of Enterprises

4.2.18 Other Topics

As the 18th subject in the study is an additional one, that is not as a part of ISAR module. It contains the additional topics taught at the universities, which are not presented at the ISAR module. As the Table beneath illustrates, there is only SBEL having such topics, and not less than eight. The first four of them are taught at the SMA and the second half at the course of OMA. These first four topics generate more than half of the management accounting contents during this course. For the course of OMA is this number 70%! The topics not covered by ISAR generate 12,3 % of the management accounting contents at the SBEL.

18. Other Topics	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
Review of major Strategy Schools								3		3	1,94
Implementing Strategy								3		3	1,94
Diagnostic and Interactive Control Systems								3		3	1,94
Value Based Management								3		3	1,94
Process management									3	3	1,94
IT for Process Management									2	2	1,29
Diffusion of Management Accounting Innovations									1	1	0,65
Incentive Systems									1	1	0,65
sum:								12	7	19	12,42
%								54,55	70,00	12,42	

Table 17: Other Topics

4.3 Literature

At the both universities there are usually three types of literature, the obligatory literature, the recommended literature and the handouts from the professors.

4.3.1 The course literature at UT

The lists of the obligatory literature, and even the recommended literature, are quite long. The educators at the UT explain it by the fact that the library does not have the sufficient amount of books to all the students. The habit of buying the course literature among the students is still not so common in Estonia, so borrowing the books at the library is the usual way to deal with the literature. To copy a whole book can also be seen as too expensive. This is the reason why there are so many books in the lists for the course, so that if the student does not get to hold of one book, he has an opportunity to take another one. The main literature at UT is considered as the handouts from the educators. This is what is common to all the students, and this is the material that is used in the exams. The three tables beneath will give an illustration of the obligatory literature at the courses.

Managerial Accounting

Book	Year	Author	Language	Country
Juhtimisarvestus	2002	Alver, J., Reinberg, L.	est	estonia
Vastutuspõhine arvestus	1999	Lääts, K., Peets	est	estonia
Kuluarvestuse süsteemi loomine ettevõttes	1999	Haldma, T., Karu, S.	est	estonia
Aastaaruande analüüs ja ettevõttesisene aruandlussüsteem	2003	Haldma et al	est	estonia
Managerial Accoutning	1991	Hilton, R. W.	eng	US
Managerial Accoutning (6th ed.)	1991	Garrison, R.	eng	US
Eelarvestamine	2004	Karu et al	est	estonia

Table 18: Literature at Manager Accounting course at UT

Controlling

Book	Year	Author	Language	Country
Finantsarvestus	2004	Alver et al	est	estonia
Eelarvestamine	2004	Karu et al	est	estonia
Tasakaalus tulemuskaart strateegialt tegudele	2003	Kaplan, R.S., Norton, D.P.	est - trans	US
Kulu ja tulemus	2002	Kaplan, R.S., Cooper, R.	est - trans	US
Management and Cost Accounting (4th ed)	1996	Drury, C.	eng	UK
Kuluarvestuse süsteemi loomine ettevõttes	1999	Haldma, T., Karu, S.	est	estonia
Vastutuspõhine arvestus	1999	Lääts, K., Peets, P.	est	estonia
Controlling algajatele	1995	Mann, R., Maver, E.	est - trans	germany

Table 19: Literature at Controlling course at UT

Cost Accounting

Book	Year	Author	Language	Country
Kuluarvestuse süsteemi loomine ettevõttes	1999	Haldma, T., Karu, S.	est	estonia
Aastaaruande analüüs ja ettevõttesisene aruandlussüsteem	2003	Haldma et al	est	estonia
Kulu ja tulemus.	2002	Kaplan, R. S. ja Cooper, R.	est - trans	US

Table 20: Literature at Cost Accounting course at UT

It can be seen that there is three types of obligatory literature besides the handouts. The biggest fraction is the books in Estonian written by management accounting professors and educators. As the professor at the second big university in Estonia, in Tallinn, Jaan Alver says, they use American literature when writing the books, and they compliment it with knowledge from the Estonian circumstances. Then there are books translated from English and from German. The last category is the original books in English, usually from U.S. The publishing year shows, that the books with the latest date are in Estonian. This illustrates the fact that after more than 10 years of the new education the first books in Estonian are being published. Some of the books are used during more than one course.

4.3.2 The course literature at SBEL

The students in Sweden have different views of the course literature. They mostly buy copy or borrow the main-book of the course. All the students are using the same sources for their knowledge. Besides that, handouts are usually provided at the homepage of the course. The providence of the literature by them has probably to do also a better economy of the students in Sweden than in Estonia. The following four tables show what literature is used at the management accounting courses at SBEL.

Management Accountning I

Book	Year	Author	Language	Country
Övningar i ekonomistyrning	1998	Bergkvist H. & Åkesson J	swe	sweden
Den Nya Ekonomistyrningen	2002	Ax C. et al	swe	sweden

Table 21: Literature at Management Accounting course at SBEL

Management accounting II

Book	Year	Author	Language	Country
Företagets lönsamhet finansiering och tillväxt	1995	Johansson S-E	swe	sweden
Controllerhandboken	2001	Samuelson, L. A.	swe	sweden

Table 22: Literature at Management Accounting II course at SBEL

Strategic Management Accounting

Book	Year	Author	Language	Country
Företagsstrategiska perspektiv	2001	Bengtsson, L., Skärvad, P-H	swe	sweden
När kartan förändrar affärslandskapet.	2001	Norman, R.	swe	US
Performance Measurement and Control Systems for Implementing Strategy	2002	Simons, R.	eng	US

Table 23: Literature at Strategic Management Accounting course at SBEL

Operative Management Accounting

Book	Year	Author	Language	Country
Processbaserad verksamhetsutveckling	2001	Ljungberg A & Larsson E	swe	sweden
Performance Measurement and Control Systems for Implementing Strategy	2002	Simons, R.	eng	US

Table 24: Literature at Operational Management Accounting course at SBEL

The tables show that the books used during the undergraduate studies are in Swedish. When it comes to the literature during the graduate studies, then at the course of the Strategic Management Accounting one of the books is from a Swedish author, the other two from American authors. One of them is translated to Swedish, the other one is in the original language, English. The literature at the Operational Management Accounting course is part wise the same. The book of Simons is being continued during the second course of the masters' studies. The second book is a Swedish one.

5 Conclusions/ “What have we learned”

The university education at UT and also in Estonia has come a long way since the time Estonia regained its independency. There are persons graduating from the university with an education more in tune with the market economy already since 1997. There are now some accounting materials available in the Estonian language that practitioners, students and professors can refer to but the quantity and quality of these publications leave something to be desired. Some accounting practitioners have learned the new rules while others have not.

The major of Management Accounting is not anymore something unknown to the business students. A course or two of Management Accounting is a part of any economic program at the universities. It is though not as many credits as in Sweden and the teachers are very few compared to Sweden. Estonia has still a long way to come for its Management Accounting education to be equal to the Swedish one. The problem with the insufficient number of both accountants and controllers (management accountants) is though not as large as it was in the first years of freedom from the Soviet Union anymore. There is now some literature in Estonian, both translated material and as an origin from Estonian professors. The lack of educators in the new areas is not that large anymore either, due to the new graduated Ph D's and due to the opportunities to study abroad has grown.

The Business programs at the studied universities are quite similar when it comes to the structure of the studies. Both universities start their business education program with general economy courses like for example Microeconomics, Commercial Law, and Macroeconomics. Later two specialisations are made, and students of SBEL and UT can choose between the same areas of business, like Marketing, Organisation, Finance, and Accounting. The contents of these majors can though be different in some extent. Students who choose the Accounting specialisation can study the Management Accounting courses, and thereby get the final Management Accounting specialisation. The difference between the two universities in management accounting studies is that in Estonia the specialisation is made more by the thesis and individual work than the direct management accounting courses. In Sweden there are more credits obtained by courses and lectures.

The findings show one major difference in the non-business courses. In Sweden the non-business courses consist besides mathematical and statistical courses either of foreign language or foreign culture. In Estonia there is a large amount of sociology and psychology courses besides the areas just mentioned in Swedish education. When coming back to the Figure 2 the additional 40 credits in UT, consist of in one half of elective courses, often being the character of sociology or psychology, and the other half of different business courses, in a other major as financial accounting or management accounting. The master thesis in UT is double amount of credits than the one in SBEL. So when we compare the management accounting education, then we can say that even though the business studies in Estonian university have 40 credits more, the courses that are about management accounting are more comprehensive in SBEL.

The Management Accounting department at both of the interviewed Estonian universities is relatively small, and more as a part of the financial accounting department. One of the reasons is most certainly the resources regained from the government. In Sweden the resources from the government to the management accounting field are higher, this is also one of the reasons why the number of management accounting professors and educators at the universities is larger. In Estonia there are other topics that are considered as more important, so that management accounting does not get so much attention and many resources from the state. As mentioned

before the resources going to management accounting are low, and that has its consequence in the fact that professors with good and high quality management accounting education are very few.

Haldma & Lääts (2002) say, Management Accounting is still for many students in Estonia something “blurry” or unidentified, when compared to the other business fields and courses in the university programs. That makes the management accounting studies not a very popular topic in the business studies.

Although progress has been made in the last 14 years, much work remains to be done. It is reasonable to expect that the quality of management accounting education will continue improving by market driven phenomenon as it has so far. Management accounting education in Estonia will improve as more high quality materials become available to the educators and students; and as more management accounting graduates gain experience and/or continue their graduate studies and return to the universities to share their knowledge and experience with the younger generation.

5.1 Recommendations for future studies

The current study gives an overview of the management accounting education contents in Estonia compared to the Swedish one following the ISAR model. It would be highly interesting to develop the area further in the following directions:

- The carry out the same kind study with a larger sample of Universities, both in Estonia and in Sweden.
- To analyze the similarities and differences in the management accounting topics in the ISAR recommendation model and in the textbooks.
- To analyze the actual course content i.e. textbooks, problems, exercises, case studies.
- To carry out the study of the management accounting education from the culture point of view.
- To broaden the approach with a pedagogical one.

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Appendix 1: ISAR model of Management Accounting Topics

ISAR model of Management Accounting Topics
Basic Level of Management Accounting Studies:
<i>Background information</i>
(a) Importance of knowledge of the business processes and their technological Implications
(b) The role of quantitative techniques in problem- solving situations
(c) The value of qualitative and quantitative information in decision-making
(d) The interpretation of operating results and evaluation of the impact of optimum Decisions
(e) The benefit of computer software (e.g. spreadsheets and statistics packages) in
(f) The importance of effective communications to users of information
<i>The cost and management accounting framework</i>
(a) Cost and management accounting in comparison with financial accounting: their purposes, the role of cost accounting as part of a management information system, and the need for both financial as well as non-financial information
(b) Cost classification concepts and terminology, such as
(i) Direct and indirect costs,
(ii) Fixed and variable costs,
(iii) Period and product costs,
(iv) Controllable and uncontrollable costs,
(v) Avoidable and unavoidable costs,
(vi) "Sunk" costs,
(vii) Budgeted, standard and actual costs and their comparisons and analyses
(c) The use of linear, curvilinear and step functions and how their calculations are used to analyze cost behavior
(d) The concepts of cost units, cost centers and profit centers
(e) describe, illustrate and comment on the planning and control uses of standard costing, budgeting and variance analysis
(f) The difference between absorption and marginal costing systems
<i>Cost determination: the costing of resource inputs</i>
(a) Materials
(i) Accounting for stock (inventory) movements
(ii) Determination of optimum purchase quantities
(iii) Material pricing issues
(iv) Identification of accounting for stock losses
(b) Labor
(i) The difference between direct and indirect labor
(ii) Types of labor remuneration methods
(iii) Labor efficiency calculations and interpretations
(iv) Recording labor costs
(v) Calculation and interpretation of labor turnover rates
(c) Overheads
(i) Overhead cost analyses

(ii) The apportionment and absorption of overhead costs, including reciprocal service situations
(iii) Accounting for the over- and under-absorption of costs
Costing methods: the costing of resource outputs
(a) Job order, batch and contract costing methods
(i) Characteristics of each method
(ii) Accounting for direct and indirect costs, including the treatment of waste, scrap and rectification costs,
(iii) Calculation of the profit on partially completed contracts
(b) The process costing method:
(i) Characteristics of the process costing method,
(ii) Identification and use of appropriate cost units,
(iii) Valuation of process transfers and work-in-process using equivalent units of production and based on FIFO and average costing methods,
(iv) Accounting for normal and abnormal losses and gains, joint and by-products
(c) Operation or service costing
(i) Scope of operation or service costing,
(ii) Identification of appropriate cost units,
(iii) Considerations relating to the collection, classification and ascertainment of Costs
(d) Standard costing
The pricing of goods and services
(a) Target and minimum pricing.
(b) Price /demand relationships,
(c) The pricing of special orders and short- life products,
(d) Transfer pricing between divisions in a group,
(e) Pricing in service industries,
(f) Pricing internal services
Costing systems: marginal contrasted with absorption costing
(a) The concept of profit contribution
(b) The difference between marginal and absorption costing
(c) Marginal cost accounting: process cost accounting transactions in a marginal costing system
(d) Cost-volume-profit (CVP) analysis: understanding the concepts of break -even and margin of safety
Cost and management accounting methods
(a) Cost control (as distinguished from cost determination); control over waste, scrap, spoilage and defective items
(b) Determining and allocating or apportioning the costs of activities and outputs through the use of appropriate concepts, methods and techniques for:
(i) Absorption costing,
(ii) Marginal costing,
(iii) Opportunity costing
(c) Activity-based costing; use of cost drivers and activities
(d) Alternative stock (inventory) management systems and models including total quality management (TQM), "just in time" (JIT), economic order quantities (EOQ), etc.
(e) Consideration and application of information required in relation to

(i) The costing of products and services
(ii) Preparing plans
(iii) Monitoring and controlling performance and
(iv) Decision-making needs
(f) Relevance, costs and the decision process
(g) Cost reduction: techniques such as work-study, time and motion studies and value Analysis
Budget as a tool for decision-making
(a) Master budgets
(b) Flexible budgets and variances analysis
Information for budgeting, planning and control purposes
(a) Objectives and concepts of budgetary systems
(i) Budgeting as a multi-purpose activity
(ii) Budgeting and behavioural influences
(iii) Quantitative aids in budgeting: learning curve theory and application; limiting factors and linear programming
(iv) Activity-based budgeting
(v) Control theory and budgeting
(vi) Uncertainty and budgeting
(vii) Identification of relevance, strengths and weaknesses of budgeting and budgetary control
(b) Types of budgetary systems: fixed and flexible budgets, zero -based budgets, and incremental, periodic and continuous budgeting
(c) Developing and implementing budgeting systems: functional and subsidiary budgets and master budgets, including cash budgeting
(d) Monitoring and controlling performance; the calculation of variances; the determination of the causes of variances
(e) Short-term vs. long-term budgets
(f) Quantitative aids in budgeting: least squares regression; scatter diagram with correlation; forecasting with regression; time series and seasonality concepts for the analysis of time -related data
Standard costing
(a) The uses and limitations of standard costing methods
(b) The determination of standards
(c) Identification and calculation of variances: sales variances (including quantity and mix); cost variances (including mix and yield); absorption and marginal Approaches
(d) Identification of significant variances and their interrelationship
(e) The uses of planning and operational variances
(f) Trends, materiality and controllability of variances
(g) Uncertainty and variance analysis
(h) Identification of relevance, strengths and weaknesses of standard costing and variance analysis for performance and control
Advanced Level of Management Accounting Studies
Business planning
(a) Proposing, evaluating and implementing ways to meet short and medium-term financial objectives, such as budgeting, monitoring and controlling cash flow,

pricing, raising finance and repaying debt
(b) The purpose and benefits of setting short-term objectives consistent with long-term Strategies
(c) Seeking, clarifying and confirming information relevant to the determination of business objectives, such as information on current business position and past performance by using ratios and other analyses, and information on planned changes to systems and procedures
(d) Developing and analyzing business plans to meet agreed objectives, including risk assessment of plans and all aspects of the business that they will influence, and analyses to include measures of value, profit optimization and utility
(e) Long-term financial planning, including:
(i) The issues to be considered when deciding whether to expand through internal growth or through an acquisition,
(ii) Strategies a company might use in order to expand or maintain its current market position,
(iii) The techniques for valuing individual shares and other securities and for valuing a business, and the application of these techniques in merger and acquisition situations,
(iv) The arguments for and against mergers and acquisitions,
(v) Methods of financing an acquisition,
(vi) Appropriate merger and acquisition strategies and tactics,
(vii) Tactics to follow when defending against a takeover bid,
(viii) Planning for post-merger success and post-merger audits,
(ix) Identifying schemes for financial restructuring and the issues involved in the decision process; methods of restructuring; buy-outs; going private; share repurchases; rescheduling debts; and joint ventures
<i>The design of management accounting systems</i>
(a) Developing and implementing appropriate systems
(i) Identification of cost units,
(ii) Establishing cost, profit and responsibility centers,
(iii) Determining methods for recording relevant information,
(iv) The sources of information for recording and processing,
(v) Computer-based information storage and processing,
(vi) Analysis of output information and its dissemination to relevant individuals and departments
(b) Consideration and application of information requirements in relation to:
(i) The costing and processing of products and services,
(ii) Preparing operating plans,
(iii) Monitoring and controlling performance,
(iv) Decision-making considerations
(c) Considerations in negotiating and agreeing information requirements
(i) The influence of size and the type of enterprise entity,
(ii) The nature of activities and output of each entity,
(iii) The long-term or short-term nature of decisions,
(iv) Management structures and styles,
(v) Conditions of uncertainty and risk,
(vi) Qualitative and quantitative nature of the information requirements,
(vii) Frequency, timing, format and degree of accuracy required
<i>Evaluating the impact of changes in business structures, functions and performance measures on the applicability and appropriateness of management</i>

accounting techniques and methods
Performance measurement for planning and control
(a) Measurement of activity, productivity, profitability, quality and service
(b) The relationship of measurements to the type of entity (e.g. manufacturing or service, profit or non-profit, centralized or decentralized entity)
(c) Ranges of measures: monetary and non- monetary; the use of percentages, ratios and Indices
(d) The use of indices to allow for price and performance changes through time
(e) Identification of areas of concern from the information produced
(f) Relationship between business performance and managerial performance
(g) Assessing management performance by reference to comparable internal and external information
Other information for decision-making purposes
(a) Identification and application of relevant costs and appropriate techniques
(i) Relevant costs, such as fixed or variable, direct or indirect, avoidable or unavoidable, and opportunity or sunk costs,
(ii) Appropriate techniques, such as cost/volume/profit analysis, the use of limiting factors, and the recognition of risks and uncertainties
(b) Use of relevant information for:
(i) Application and interpretation of quantitative techniques for decisionmaking purposes,
(ii) Adoption of new products,
(iii) Product mix choices,
(iv) Discontinuance of products,
(v) Make or buy decisions,
(vi) Decisions to sell or to further process products,
(vii) Decisions to shutdown or temporarily close selected operations,
(viii) The use of indexing of costs and revenues data, (ix) the use of discounted cash flow techniques in longer-term decision-making situations
Non-financial performance indicators such as productivity per employee or per service unit
The non-financial objectives of enterprises such as environmental and social Objectives

Appendix 2: The curricula of SBEL

**School of Business Economics and
Commercial Law**
Gothenburg university

"(Civil) Economics" (Bachelor)	JAP	CHI	SPA	FRA	GER	ANAL
1 Semester, federal component:	20	25				
Practical Japanese	15					
Practical Chinese		20				
Introduction to East&Southeast Asian Studies	5	5				
2 Semester, federal component:	20	15				
Practical Japanese 2	15					
Practical Chinese 2		10				
Politics & Community in Japan & China	5	5				
1 (3) Semester, federal component:	30	30	25	25	25	25
Resources and Natural Environment	2	2	2	2	2	2
The Economic and Political Environment	3	3	3	3	3	3
Production and Trade	3	3	3	3	3	3
Swedish Industry in a Historical and International Perspective	2	2	2	2	2	2
Statistics	5	5	5	5	5	5
English for Economics I & II	10	10	10	10	10	10
Japanese	5					
Chinese		5				
2 (4) Semester, federal component:	20	20	20	20	20	20
Introduction to Accounting	1	1	1	1	1	1
Commercial Law I	3	3	3	3	3	3
National Economics (microeconomics)	3	3	3	3	3	3
Business (management accounting)	3	3	3	3	3	3
Japanese	5					
Chinese		5				
Spanish			10			
French				10		
German					10	
Statistical Analysis						10
Community&Business World in Japan & China	5	5				
3 (5) Semester, federal component:	20	20	25	25	25	25
Externredovisning med associations- och skatterätt	7	7	7	7	7	7
Commercial Law II	3	3	3	3	3	3
Nationalekonomi med inriktning mot makroekonomi	5	5	5	5	5	5
Information Technologies for Business Studies						5
Applied Regression and Time Series Analysis						5
Japanese	5					
Chinese		5				
Spanish			10			

French				10		
German					10	
4 (6) Semester, federal component:	25	25	25	25	25	25
International Economics	10	10	10	10	10	10
Marketing and Organization	10	10	10	10	10	10
Spanish			5			
French				5		
German					5	
East & Southeast Asian Economical Development	5	5				
Internet as a marketplace (anl.)						5
5 (7) Semester, federal component:	20	20	20	20	20	20
Financial Management	5	5	5	5	5	5
Operations management	5	5	5	5	5	5
Strategic Market Planning	5	5	5	5	5	5
Management	5	5	5	5	5	5
6 (8) Semester, federal component:	25	25	25	25	25	20
Financial Accounting	5	5	5	5	5	5
Management Accounting	5	5	5	5	5	5
Bachelor Thesis	10	10	10	10	10	10
English (thesis)	5	5	5	5	5	
7 (9) Semester (Master), federal component:	20	20	20	20	20	20
Strategic Management Accounting	5	5	5	5	5	5
Operational Management Accounting	5	5	5	5	5	5
Master Thesis	10	10	10	10	10	10
Sum, all courses:	200	200	160	160	160	155

Management accounting courses	18	18	18	18	18	18
% of program	9%	9%	11%	11%	11%	12%
Management accounting courses, with thesis	38	38	38	38	38	38
% of program	19%	19%	24%	24%	24%	25%
Business courses	115	115	115	115	115	115
Mgmt acc courses as a % of business courses	33%	33%	33%	33%	33%	33%
Nonbusiness courses	85	85	45	45	45	40
Business courses as a % of program	58%	58%	72%	72%	72%	74%
Mgmt acc courses during bachelor period	8	8	8	8	8	8
Mgmt acc bachelor as a % of total bachelor	4%	4%	6%	6%	6%	6%
Mgmt acc bachelor as a % of bachelor business courses	8%	8%	8%	8%	8%	8%
Mgmt acc courses during master period	10	10	10	10	10	10

Appendix 3: Curricula of UT

University of Tartu

Subject	Credits
"Economics and Business Administration"(Bachelor)	120
The compulsory foundation:	32
Introduction to Business Administration	2
Introduction to Economics	2
Introduction to Law	4
Introduction to Socio-Cultural Psychology	4
The Basics of Sociology	4
Basics of Accounting	2
Macroeconomics	2
Basics of Economic Policy	2
Mathematics	4
Probability and Mathematical Statistics	2
Principles of Mathematical Economics	2
Basic Management	2
Directional level of Studies ()	32
Oblig.	16
Research Methods	2
Statistics	2
Econometrics I	2
Quantitative methods in economics	2
Business Information Systems	2
Economic History	2
Basics of Strategic Management	2
Individual Project (Methodology of Economics)	2
Business	16
Microeconomics	3
Management	3
Accounting	2
Financial Management	3
Marketing	3
Business Environment	2
Specialism studies (Accounting)	32
Oblig.	16
International Economics	3
Public Economy	2
Industrial Organisation	2
Labour Economics	2
Theory of Economic Policy	3
Operation Research	2
Research and Data Analysis Methods in Economics	2
Accounting	16

Corporate Finance I	2
Investments and Securities Analysis I	2
Financial Accounting I	3,5
Business Analysis	2,5
Managerial Accounting	2
Money and Banking	2
Banking Services and Management	2
Universities choice??	12
Corporate Communication	4
Business Informatics	4
Special Training (praktik)	4
Free choice	8
Bachelor thesis	4
"Economics and Business Administration" (Master)	80
General studies	16
Specialized Course in Economic Theory	2
Time Series Analysis	2
Econometrics II	2
Decision Theory	2
Financial Markets and Institutions	2
Controlling (Management Control)	2
Business Simulation	2
Public Choice	2
Speciality	12
Financial Accounting II	2
Accounting in Non-profit Institutions	2
Auditing	2,5
Accounting Information Systems	2
Cost Management	2
Accounting for Taxes	1,5
	12
Corporate Finance II	2
Investments and Securities Analysis II	2
Insurance Finance	1
Real Estate Finance	2
Corporate Risk Management and Value-based Management	3
Central Bank Policy	2
	12
Concepts of Management	2
Strategic Thinking	3
Organizational Behaviour and Culture	3
Corporate Governance	2
Logistics	2

Free choice	8
Master Thesis	20
Sum, all courses:	200
Management accounting courses	6
% of program	3,0%
Management accounting courses, with thesis	36
% of program	18,0%
Business courses	156
Mgmt acc courses as a % of business courses	3,8%
Nonbusiness courses	44
Business courses as a % of program	78,0%
Mgmt acc courses during bachelor period	2
Mgmt acc bachelor as a % of total bachelor	1,7%
mga acc bachelor as a % of bachelor business courses	2,1%
Mgmt acc courses during master period	4

Appendix 4: Study types of SBEL

School of Business Economics and Commercial Law						
	Credits	Lectures	Class	Self Studie	Total	% of Total
Management Accounting Courses:						
Business (management accounting)	3			120	120	1,9%
Management Accounting	5	41	2	157	200	3,1%
Strategic Management Accounting	5			200	200	3,1%
Operational Management Accounting	5	31	9	160	200	3,1%
Total Management Accounting	18	72	11	637	720	11,3%
Bachelor Thesis	10			400	400	6,3%
Master Thesis	10			400	400	6,3%
Total Management Accounting	38	72	11	1437	1520	23,8%
IT (Management Accounting)	10				400	5,9%
Accounting Courses:						
Introduction to Accounting	1		30	10	40	0,6%
Externredovisning med associations- och skatterätt	7	19	70	191	280	4,4%
Financial Accounting	5	45	5	150	200	3,1%
Total Accounting	13	64	105	351	520	8,1%
Other Business Courses:						
Resources and Natural Environment	2	22	1	57	80	1,3%
The Economic and Political Environment	3	37	2	81	120	1,9%
Production and Trade	3	28	13	79	120	1,9%
Swedish Industry in a Historical and International Perspective	2	20		60	80	1,3%
Statistics	5		34	166	200	3,1%
Commercial Law I	3	21	22	77	120	1,9%
National Economics (microeconomics)	3	25	27	68	120	1,9%
Commercial Law II	3	16	9	95	120	1,9%
Nationalekonomi med inriktning mot makroekonomi	5	31	18	151	200	3,1%
International Economics	5	66	23	111	200	3,1%
Marketing and Organization	10	64	16	320	400	6,3%
Financial Management	5	29	23	148	200	3,1%
Strategic Market Planning	5	26	11	163	200	3,1%
Operations management	5	26	34	140	200	3,1%
Management	5	18	15	167	200	3,1%
Total Other Business	64	429	248	1883	2560	40,0%
Free Choice						
Nonbusiness Courses:						
Foreign Language English	10				400	6,3%
Lang&Cult. or Stat.Analysis	10				400	6,3%
Lang&Cult. or Stat.Analysis	10				400	6,3%
Internet, marketplace or Language	5				200	3,1%
?	10				400	6,3%

Total Nonbusiness	45	0	0	0	1800	28,1%
2+3 years	160	565	364	3671	6400	100%
sum, business courses	115					

Appendix 5: Study types at UT

University of Tartu

	Credits	Lectures	Class	Self Studie	Total	%of Total
Management Accounting Courses:						
Managerial Accounting	2	16	16	48	80	1,0%
Controlling (Management Control)	2	10	10	60	80	1,0%
Cost Management	2	15		65	80	1,0%
Total Management Accounting Courses	6	41	26	173	240	3,0%
Special Training (praktik)	4			160	160	2,0%
Individual Project (Methodology of Economics)	2			80	80	1,0%
Bachelor thesis	4			160	160	2,0%
Master Thesis	20			800	800	10,0%
Total Management Accounting	36	41	26	1373	1440	18,0%
Accounting Courses:						
Basics of Accounting	2	10	10	60	80	1,0%
Accounting	2	16	16	48	80	1,0%
Financial Accounting I	3,5	26	30	84	140	1,8%
Financial Accounting II	2	15		65	80	1,0%
Accounting in Non-profit Institutions	2	15		65	80	1,0%
Auditing	2,5	21	19	60	100	1,3%
Accounting Information Systems	2	12	20	48	80	1,0%
Accounting for Taxes	1,5	15		45	60	0,8%
Total Accounting	17,5	130	95	475	700	8,8%
Other Business Courses:						
Introduction to Business Administration	2	16	18	46	80	1,0%
Introduction to Economics	2	24	14	42	80	1,0%
Macroeconomics	2	18	22	40	80	1,0%
Basics of Economic Policy	2	12	8	60	80	1,0%
Statistics	2	18	22	40	80	1,0%
Quantitative methods in economics	2	8	12	60	80	1,0%
Business Information Systems	2	20	20	40	80	1,0%
Economic History	2	18	22	40	80	1,0%
Microeconomics	3	14	16	90	120	1,5%
Management	3			120	120	1,5%
Financial Management	3	30		90	120	1,5%
Marketing	3	18	21	81	120	1,5%
Business Environment	2	12	12	56	80	1,0%
International Economics	3	26	22	72	120	1,5%
Public Economy	2	22	10	48	80	1,0%
Industrial Organisation	2	14	18	48	80	1,0%
Labour Economics	2	20	12	48	80	1,0%
Theory of Economic Policy	3	24	16	80	120	1,5%
Operation Research	2	18	14	48	80	1,0%
Research and Data Analysis Methods in Economics	2	18	22	40	80	1,0%
Corporate Finance I	2	20	20	40	80	1,0%
Investments and securities Analysis I	2	20	20	40	80	1,0%
Business Analysis	2,5	24	24	52	100	1,3%

Money and Banking	2	20	20	40	80	1,0%
Banking Services and Management	2	20	20	40	80	1,0%
Corporate Communication	4		15	145	160	2,0%
Business Informatics	4	3	29	128	160	2,0%
Specialized Course in Economic Theory	2	12	10	58	80	1,0%
Decision Theory	2	6	14	60	80	1,0%
Financial Markets and Institutions	2	13		67	80	1,0%
Business Simulation	2	4	16	60	80	1,0%
Public Choice	2	8	10	62	80	1,0%
Corporate Finance II	2	13		67	80	1,0%
Investments and Securities Analysis II	2	11	2	67	80	1,0%
Insurance Finance	1	10	2	28	40	0,5%
Real Estate Finance	2	13		67	80	1,0%
Corporate Risk Management and Value-based Management	3	18		102	120	1,5%
Central Bank Policy	2	13		67	80	1,0%
Concepts of Management	2	6	14	60	80	1,0%
Strategic Thinking	3			120	120	1,5%
Organizational Behaviour and Culture	3	20	10	90	120	1,5%
Corporate Governance	2	15	5	60	80	1,0%
Logistics	2	28	12	40	80	1,0%
Basic Management	2	14	6	60	80	1,0%
Basics of Strategic Management	2	10	23	47	80	1,0%
Total Other Business	102,5	671	573	2856	4100	51,3%
Free choice (bachelor)	8			320	320	4,0%
Free choice (master)	8			320	320	4,0%
Total Free Choice	16	0	0	640	640	8,0%
Nonbusiness Courses:						
Introduction to Law	4	52	1	107	160	2,0%
Introduction to Socio-Cultural Psychology	4	58	8	94	160	2,0%
The Basics of Sociology	4	64		96	160	2,0%
Research Methods	2	8	20	52	80	1,0%
Mathematics	4	64	34	62	160	2,0%
Probability and Mathematical Statistics	2	10	10	60	80	1,0%
Principles of Mathematical Economics	2			80	80	1,0%
Econometrics I	2	8	12	60	80	1,0%
Time Series Analysis	2	8	8	64	80	1,0%
Econometrics II	2	6	10	64	80	1,0%
Total Nonbusiness	28	278	103	739	1120	14,0%

2+3 years

200

1120

797

6083

8000

100%

Appendix 6: Management Accounting contents at SBEL

School of Business Economics and Commercial Law (Gothenburg)

Course:	Level:
Management Accounting (introd.) = MA I	Discussed superficially = 1
Management Accounting (C-nivå) = MA C	Discussed intermediately = 2
Strategic Management Accounting = SMA	Discussed thoroughly = 3
Operational Management Accounting = OMA	
Other,	

Basic Level of Management Accounting Studies:	+ / -	MA I	MA C	SMA	OMA
Background information					
(a) Importance of knowledge of the business processes and their technological Implications	+	2			
(b) The role of quantitative techniques in problem- solving situations	+	2			
(c) The value of qualitative and quantitative information in decision-making	+	2			
(d) The interpretation of operating results and evaluation of the impact of optimum Decisions	+	2			
(e) The benefit of computer software (e.g. spreadsheets and statistics packages) in	+	2	1		
(f) The importance of effective communications to users of information	+	1	2		
Other area under this subject:					
The cost and management accounting framework					
(a) Cost and management accounting in comparison with financial accounting: their purposes, the role of cost accounting as part of a management information system, and the need for both financial as well as non-financial information	+	3	1		
(b) Cost classification concepts and terminology, such as	+				
(i) Direct and indirect costs,	+	3			
(ii) Fixed and variable costs,	+	3			
(iii) Period and product costs,	+	2			
(iv) Controllable and uncontrollable costs,	+	1			
(v) Avoidable and unavoidable costs,	-				
(vi) "Sunk" costs,	+	1			
(vii) Budgeted, standard and actual costs and their comparisons and analyses	+	1			
(c) The use of linear, curvilinear and step functions and how their calculations are used to analyze cost behavior	+	2			
(d) The concepts of cost units, cost centers and profit centers	+	1			
(e) describe, illustrate and comment on the planning and control uses of standard costing, budgeting and variance analysis	+	1			
(f) The difference between absorption and marginal costing systems	+	1			
Other area under this subject:					
Cost determination: the costing of resource inputs					
(a) Materials					
(i) Accounting for stock (inventory) movements	+	1			
(ii) Determination of optimum purchase quantities	-				

(iii) Material pricing issues	-				
(iv) Identification of accounting for stock losses	-				
(b) Labor	-				
(i) The difference between direct and indirect labor	-				
(ii) Types of labor remuneration methods	-				
(iii) Labor efficiency calculations and interpretations	+	1			
(iv) Recording labor costs	-				
(v) Calculation and interpretation of labor turnover rates	-				
(c) Overheads	-				
(i) Overhead cost analyses	-				
(ii) The apportionment and absorption of overhead costs, including reciprocal service situations	-				
(iii) Accounting for the over- and under-absorption of costs	+	1			
Other area under this subject:					
<i>Costing methods: the costing of resource outputs</i>					
(a) Job order, batch and contract costing methods					
(i) Characteristics of each method	+	1			
(ii) Accounting for direct and indirect costs, including the treatment of waste, scrap and rectification costs,	-				
(iii) Calculation of the profit on partially completed contracts	-				
(b) The process costing method:	-				
(i) Characteristics of the process costing method,	+	1			
(ii) Identification and use of appropriate cost units,	-				
(iii) Valuation of process transfers and work-in-process using equivalent units of production and based on FIFO and average costing methods,	-				
(iv) Accounting for normal and abnormal losses and gains, joint and by-products	-				
(c) Operation or service costing	-				
(i) Scope of operation or service costing,	-				
(ii) Identification of appropriate cost units,	-				
(iii) Considerations relating to the collection, classification and ascertainment of Costs	-				
(d) Standard costing	+	1			
Other area under this subject:					
<i>The pricing of goods and services</i>					
(a) Target and minimum pricing.	-				
(b) Price /demand relationships,	-				
(c) The pricing of special orders and short- life products,	-				
(d) Transfer pricing between divisions in a group,	-				
(e) Pricing in service industries,	-				
(f) Pricing internal services	-				
Other area under this subject:					
<i>Costing systems: marginal contrasted with absorption costing</i>					
(a) The concept of profit contribution	-				
(b) The difference between marginal and absorption costing	+	1			
(c) Marginal cost accounting: process cost accounting transactions in a marginal costing system	-				

(d) Cost-volume-profit (CVP) analysis: understanding the concepts of break-even and margin of safety	+	2		
Other area under this subject:				
<i>Cost and management accounting methods</i>				
(a) Cost control (as distinguished from cost determination); control over waste, scrap, spoilage and defective items	-			
(b) Determining and allocating or apportioning the costs of activities and outputs through the use of appropriate concepts, methods and techniques for:	+			
(i) Absorption costing,	+	1		
(ii) Marginal costing,	+	1		
(iii) Opportunity costing	-			
(c) Activity-based costing; use of cost drivers and activities	+	1		
(d) Alternative stock (inventory) management systems and models including total quality management (TQM), "just in time" (JIT), economic order quantities (EOQ), etc.	-			
(e) Consideration and application of information required in relation to	-			
(i) The costing of products and services	+	1		
(ii) Preparing plans	-			
(iii) Monitoring and controlling performance and	-			
(iv) Decision-making needs	-			
(f) Relevance, costs and the decision process	+	1		
(g) Cost reduction: techniques such as work-study, time and motion studies and value Analysis	+	1		
Other area under this subject:				
<i>Budget as a tool for decision-making</i>				
(a) Master budgets	+	2		
(b) Flexible budgets and variances analysis	+	1		
Other area under this subject:				
<i>Information for budgeting, planning and control purposes</i>				
(a) Objectives and concepts of budgetary systems	+		2	
(i) Budgeting as a multi-purpose activity	+	2	2	
(ii) Budgeting and behavioural influences	+	1	1	
(iii) Quantitative aids in budgeting: learning curve theory and application; limiting factors and linear programming	+	3		
(iv) Activity-based budgeting	+	1	1	
(v) Control theory and budgeting	+		1	
(vi) Uncertainty and budgeting	+	1		
(vii) Identification of relevance, strengths and weaknesses of budgeting and budgetary control	+	2	2	
(b) Types of budgetary systems: fixed and flexible budgets, zero-based budgets, and incremental, periodic and continuous budgeting	+	1	1	
(c) Developing and implementing budgeting systems: functional and subsidiary budgets and master budgets, including cash budgeting	+	3	2	
(d) Monitoring and controlling performance; the calculation of variances; the determination of the causes of variances	+	1		
(e) Short-term vs. long-term budgets	+		1	

(f) Quantitative aids in budgeting: least squares regression; scatter diagram with correlation; forecasting with regression; time series and seasonality concepts for the analysis of time -related data	-				
Other area under this subject:					
<i>Financial targets (du Pont etc)</i>	+	2			
<i>Analyzing Financial Performance</i>	+	2	2		
<i>Beyond Budgeting - new perspectives on budgeting</i>	+		2		
Standard costing					
(a)The uses and limitations of standard costing methods	+	1			
(b) The determination of standards	+	1			
(c) Identification and calculation of variances: sales variances (including quantity and mix); cost variances (including mix and yield); absorption and marginal Approaches	-				
(d) Identification of significant variances and their interrelationship	-				
(e) The uses of planning and operational variances	-				
(f) Trends, materiality and controllability of variances	-				
(g) Uncertainty and variance analysis	-				
(h) Identification of relevance, strengths and weaknesses of standard costing and variance analysis for performance and control	+	1			
Other area under this subject:					
Advanced Level of Management Accounting Studies					
Business planning					
(a) Proposing, evaluating and implementing ways to meet short and medium-term financial objectives, such as budgeting, monitoring and controlling cash flow, pricing, raising finance and repaying debt	+		2		
(b) The purpose and benefits of setting short-term objectives consistent with long-term Strategies	+		2		
(c) Seeking, clarifying and confirming information relevant to the determination of business objectives, such as information on current business position and past performance by using ratios and other analyses, and information on planned changes to systems and procedures	+		2		
(d) Developing and analyzing business plans to meet agreed objectives, including risk assessment of plans and all aspects of the business that they will influence, and analyses to include measures of value, profit optimization and utility	+		1		
(e) Long-term financial planning, including:	+				
(i) The issues to be considered when deciding whether to expand through internal growth or through an acquisition,	+		2		
(ii) Strategies a company might use in order to expand or maintain its current market position,	+		1		
(iii) The techniques for valuing individual shares and other securities and for valuing a business, and the application of these techniques in merger and acquisition situations,	-				
(iv) The arguments for and against mergers and acquisitions,	-				
(v) Methods of financing an acquisition,	-				
(vi) Appropriate merger and acquisition strategies and tactics,	-				
(vii) Tactics to follow when defending against a takeover bid,	-				
(viii) Planning for post-merger success and post- merger audits,	-				
(ix) Identifying schemes for financial restructuring and the issues involved in the	-				

decision process; methods of restructuring; buy-outs; going private; share repurchases; rescheduling debts; and joint ventures				
Other area under this subject:				
<i>The design of management accounting systems</i>				
(a) Developing and implementing appropriate systems	+		2	2
(i) Identification of cost units,	-			
(ii) Establishing cost, profit and responsibility centers,	+		3	
(iii) Determining methods for recording relevant information,	+		2	
(iv) The sources of information for recording and processing,	+		2	
(v) Computer-based information storage and processing,	+		1	
(vi) Analysis of output information and its dissemination to relevant individuals and departments	+		1	
(b) Consideration and application of information requirements in relation to:	-			
(i) The costing and processing of products and services,	-			
(ii) Preparing operating plans,	-			
(iii) Monitoring and controlling performance,	+		2	
(iv) Decision-making considerations	+		1	
(c) Considerations in negotiating and agreeing information requirements	+			
(i) The influence of size and the type of enterprise entity,	+		1	
(ii) The nature of activities and output of each entity,	+		2	
(iii) The long-term or short-term nature of decisions,	-			
(iv) Management structures and styles,	+		1	
(v) Conditions of uncertainty and risk,	-			
(vi) Qualitative and quantitative nature of the information requirements,	-			
(vii) Frequency, timing, format and degree of accuracy required	+		1	
Other area under this subject:				
<i>Evaluating the impact of changes in business structures, functions and performance measures on the applicability and appropriateness of management accounting techniques and methods</i>	+			3
Other area under this subject:	+		1	
<i>Performance measurement for planning and control</i>				
(a) Measurement of activity, productivity, profitability, quality and service	+			2
(b) The relationship of measurements to the type of entity (e.g. manufacturing or service, profit or non-profit, centralized or decentralized entity)	+		1	
(c) Ranges of measures: monetary and non- monetary; the use of percentages, ratios and Indices	-			
(d) The use of indices to allow for price and performance changes through time	-			
(e) Identification of areas of concern from the information produced	+		1	
(f) Relationship between business performance and managerial performance	-			
(g) Assessing management performance by reference to comparable internal and external information	-			
Other area under this subject:				
Evaluating strategic profit performance	+			2
Designing asset allocation systems	+			2
Linking performance to markets	+			2
Building balanced scorecards	+			2

Other information for decision-making purposes					
(a) Identification and application of relevant costs and appropriate techniques					
(i) Relevant costs, such as fixed or variable, direct or indirect, avoidable or unavoidable, and opportunity or sunk costs,					
(ii) Appropriate techniques, such as cost/volume/profit analysis, the use of limiting factors, and the recognition of risks and uncertainties					
(b) Use of relevant information for:					
(i) Application and interpretation of quantitative techniques for decisionmaking purposes,					
(ii) Adoption of new products,					
(iii) Product mix choices,					
(iv) Discontinuance of products,					
(v) Make or buy decisions,					
(vi) Decisions to sell or to further process products,					
(vii) Decisions to shutdown or temporarily close selected operations,					
(viii) The use of indexing of costs and revenues data, (ix) the use of discounted cash flow techniques in longer-term decision-making situations					
Other area under this subject:					
Non-financial performance indicators such as productivity per employee or per service unit	+		2		
Other area under this subject:					
The non-financial objectives of enterprises such as environmental and social Objectives	-				
Other area under this subject:					
Other subjects:					
The Role of Controllers	+		2		
Review of major Strategy Schools	+			3	
Implementing Strategy	+			3	
Diagnostic and Interactive Control Systems	+			3	
Target Costing	+			2	
Value Based Management	+			3	
Process management	+				3
IT for Process Management	+				2
Diffusion of Management Accounting Innovations	+				1
Incentive Systems	+				1

Appendix 7: Management Accounting contents at UT

University of Tartu

Courses:	Level:
Managerial Accounting = MA	Discussed superficially = 1
Controlling (Management Control) = C	Discussed intermediately = 2
Cost Management = CM	Discussed thoroughly = 3
Other,	

Basic Level of Management Accounting Studies:	+ / -	MA	C	CM
Background information				
(a) Importance of knowledge of the business processes and their technological Implications	+	2	2	
(b) The role of quantitative techniques in problem- solving situations	+	2	2	
(c) The value of qualitative and quantitative information in decision-making	+		2	
(d) The interpretation of operating results and evaluation of the impact of optimum Decisions	+	2	2	2
(e) The benefit of computer software (e.g. spreadsheets and statistics packages) in	-			
(f) The importance of effective communications to users of information	+	1	3	
Other area under this topic:				
The cost and management accounting framework				
(a) Cost and management accounting in comparison with financial accounting: their purposes, the role of cost accounting as part of a management information system, and the need for both financial as well as non-financial information	+	3		
(b) Cost classification concepts and terminology, such as	+			3
(i) Direct and indirect costs,	+	2		3
(ii) Fixed and variable costs,	+	2		3
(iii) Period and product costs,	+	2		1
(iv) Controllable and uncontrollable costs,	+	2		
(v) Avoidable and unavoidable costs,	+	2		2
(vi) "Sunk" costs,	+	2		
(vii) Budgeted, standard and actual costs and their comparisons and analyses	+	2		2
(c) The use of linear, curvilinear and step functions and how their calculations are used to analyze cost behavior	+		2	2
(d) The concepts of cost units, cost centers and profit centers	+	2	3	
(e) describe, illustrate and comment on the planning and control uses of standard costing, budgeting and variance analysis	+	1		
(f) The difference between absorption and marginal costing systems	+	2		
Other area under this topic:				
Cost determination: the costing of resource inputs				
(a) Materials	+	1		2
(i) Accounting for stock (inventory) movements	+	1		
(ii) Determination of optimum purchase quantities	+			2
(iii) Material pricing issues	+			2
(iv) Identification of accounting for stock losses	-			
(b) Labor	+	1		2

(i) The difference between direct and indirect labor	+	1		2
(ii) Types of labor remuneration methods	-			
(iii) Labor efficiency calculations and interpretations	-			
(iv) Recording labor costs	-			
(v) Calculation and interpretation of labor turnover rates	-			
(c) Overheads	+	2	2	2
(i) Overhead cost analyses	+	2	2	2
(ii) The apportionment and absorption of overhead costs, including reciprocal service situations	+			2
(iii) Accounting for the over- and under-absorption of costs	+		1	1
Other area under this topic:				
Costing methods: the costing of resource outputs				
(a) Job order, batch and contract costing methods	+	2		
(i) Characteristics of each method	+	2		
(ii) Accounting for direct and indirect costs, including the treatment of waste, scrap and rectification costs,	+	2		
(iii) Calculation of the profit on partially completed contracts	-			
(b) The process costing method:	+	2		
(i) Characteristics of the process costing method,	+	2		
(ii) Identification and use of appropriate cost units,	+	2		
(iii) Valuation of process transfers and work-in-process using equivalent units of production and based on FIFO and average costing methods,	+	2		
(iv) Accounting for normal and abnormal losses and gains, joint and by-products	+	2		
(c) Operation or service costing	+	2		
(i) Scope of operation or service costing,	-			
(ii) Identification of appropriate cost units,	-			
(iii) Considerations relating to the collection, classification and ascertainment of Costs	-			
(d) Standard costing	+	1		
Other area under this topic:				
The pricing of goods and services				
(a) Target and minimum pricing.	+	1	1	
(b) Price /demand relationships,	+		2	
(c) The pricing of special orders and short- life products,	+	1	2	2
(d) Transfer pricing between divisions in a group,	+	1	2	
(e) Pricing in service industries,	-			
(f) Pricing internal services	+		2	
Other area under this topic:				
Costing systems: marginal contrasted with absorption costing				
(a) The concept of profit contribution	+	1	2	2
(b) The difference between marginal and absorption costing	+	1		
(c) Marginal cost accounting: process cost accounting transactions in a marginal costing system	+	2		2
(d) Cost-volume-profit (CVP) analysis: understanding the concepts of break-even and margin of safety	+	2		3
Other area under this topic:				
Cost and management accounting methods				
(a) Cost control (as distinguished from cost determination); control over waste, scrap,	+			2

spoilage and defective items				
(b) Determining and allocating or apportioning the costs of activities and outputs through the use of appropriate concepts, methods and techniques for:	+	1		2
(i) Absorption costing,	+	1		
(ii) Marginal costing,	+	1		
(iii) Opportunity costing	+	1		
(c) Activity-based costing; use of cost drivers and activities	+	1		2
(d) Alternative stock (inventory) management systems and models including total quality management (TQM), “just in time” (JIT), economic order quantities (EOQ), etc.	+	1	1	2
(e) Consideration and application of information required in relation to	+	1		
(i) The costing of products and services	+	1		2
(ii) Preparing plans	-			
(iii) Monitoring and controlling performance and	+		2	
(iv) Decision-making needs	+	1	2	
(f) Relevance, costs and the decision process	+	1	2	
(g) Cost reduction: techniques such as work-study, time and motion studies and value Analysis	+			2
Other area under this topic:				
<i>Budget as a tool for decision-making</i>				
(a) Master budgets	+	2		
(b) Flexible budgets and variances analysis	+	1	1	
Other area under this topic:				
Beyond budgeting	+		1	
<i>Information for budgeting, planning and control purposes</i>				
(a) Objectives and concepts of budgetary systems	+		2	
(i) Budgeting as a multi-purpose activity	+		2	
(ii) Budgeting and behavioural influences	-			
(iii) Quantitative aids in budgeting: learning curve theory and application; limiting factors and linear programming	-			
(iv) Activity-based budgeting	+	1	2	2
(v) Control theory and budgeting	+		2	2
(vi) Uncertainty and budgeting	-			
(vii) Identification of relevance, strengths and weaknesses of budgeting and budgetary control	-			
(b) Types of budgetary systems: fixed and flexible budgets, zero -based budgets, and incremental, periodic and continuous budgeting	+	1		
(c) Developing and implementing budgeting systems: functional and subsidiary budgets and master budgets, including cash budgeting	-			
(d) Monitoring and controlling performance; the calculation of variances; the determination of the causes of variances	-			
(e) Short-term vs. long-term budgets	+	1	1	1
(f) Quantitative aids in budgeting: least squares regression; scatter diagram with correlation; forecasting with regression; time series and seasonality concepts for the analysis of time -related data	-			
Other area under this topic:				
Beyond budgeting	+		2	
<i>Standard costing</i>				
(a) The uses and limitations of standard costing methods	+	1		

(b) The determination of standards	+	1		
(c) Identification and calculation of variances: sales variances (including quantity and mix); cost variances (including mix and yield); absorption and marginal Approaches	-			
(d) Identification of significant variances and their interrelationship	-			
(e) The uses of planning and operational variances	+	1		
(f) Trends, materiality and controllability of variances	-			
(g) Uncertainty and variance analysis	-			
(h) Identification of relevance, strengths and weaknesses of standard costing and variance analysis for performance and control	-			
Other area under this topic:				
Advanced Level of Management Accounting Studies				
<i>Business planning</i>	-			
(a) Proposing, evaluating and implementing ways to meet short and medium-term financial objectives, such as budgeting, monitoring and controlling cash flow, pricing, raising finance and repaying debt	+		2	
(b) The purpose and benefits of setting short-term objectives consistent with long-term Strategies	+		2	
(c) Seeking, clarifying and confirming information relevant to the determination of business objectives, such as information on current business position and past performance by using ratios and other analyses, and information on planned changes to systems and procedures	+		1	
(d) Developing and analyzing business plans to meet agreed objectives, including risk assessment of plans and all aspects of the business that they will influence, and analyses to include measures of value, profit optimization and utility	+		1	
(e) Long-term financial planning, including:				
(i) The issues to be considered when deciding whether to expand through internal growth or through an acquisition,	+		2	
(ii) Strategies a company might use in order to expand or maintain its current market position,	+		2	
(iii) The techniques for valuing individual shares and other securities and for valuing a business, and the application of these techniques in merger and acquisition situations,				
(iv) The arguments for and against mergers and acquisitions,				
(v) Methods of financing an acquisition,				
(vi) Appropriate merger and acquisition strategies and tactics,				
(vii) Tactics to follow when defending against a takeover bid,				
(viii) Planning for post-merger success and post-merger audits,				
(ix) Identifying schemes for financial restructuring and the issues involved in the decision process; methods of restructuring; buy-outs; going private; share repurchases; rescheduling debts; and joint ventures				
Other area under this topic:				
<i>The design of management accounting systems</i>				
(a) Developing and implementing appropriate systems	+	1	2	
(i) Identification of cost units,	-			
(ii) Establishing cost, profit and responsibility centers,	+	1	3	
(iii) Determining methods for recording relevant information,	-			
(iv) The sources of information for recording and processing,	+		1	
(v) Computer-based information storage and processing,	-			
(vi) Analysis of output information and its dissemination to relevant individuals	+		2	

and departments				
(b) Consideration and application of information requirements in relation to:	-			
(i) The costing and processing of products and services,	+	1	2	2
(ii) Preparing operating plans,	+		2	
(iii) Monitoring and controlling performance,	+		2	
(iv) Decision-making considerations	+	1	2	
(c) Considerations in negotiating and agreeing information requirements	+		2	
(i) The influence of size and the type of enterprise entity,	+	1	1	
(ii) The nature of activities and output of each entity,	+		1	
(iii) The long-term or short-term nature of decisions,	+	1	1	
(iv) Management structures and styles,	+	1		
(v) Conditions of uncertainty and risk,	-			
(vi) Qualitative and quantitative nature of the information requirements,	-			
(vii) Frequency, timing, format and degree of accuracy required	-			
Other area under this topic:				
<i>Evaluating the impact of changes in business structures, functions and performance measures on the applicability and appropriateness of management accounting techniques and methods</i>				
Other area under this topic:				
<i>Management accounting change and contingency theory</i>	+	2	2	2
<i>Performance measurement for planning and control</i>				
(a) Measurement of activity, productivity, profitability, quality and service	+	1	1	
(b) The relationship of measurements to the type of entity (e.g. manufacturing or service, profit or non-profit, centralized or decentralized entity)	+	1	1	
(c) Ranges of measures: monetary and non-monetary; the use of percentages, ratios and Indices	+		2	
(d) The use of indices to allow for price and performance changes through time	-			
(e) Identification of areas of concern from the information produced	-			
(f) Relationship between business performance and managerial performance	+		2	
(g) Assessing management performance by reference to comparable internal and external information	+	1	1	
Other area under this topic:				
Balanced Scorecard	+		2	
Performance measurement and management systems	+		2	
<i>Other information for decision-making purposes</i>				
(a) Identification and application of relevant costs and appropriate techniques	+	2		
(i) Relevant costs, such as fixed or variable, direct or indirect, avoidable or unavoidable, and opportunity or sunk costs,	+	2	2	2
(ii) Appropriate techniques, such as cost/volume/profit analysis, the use of limiting factors, and the recognition of risks and uncertainties	+	2	1	
(b) Use of relevant information for:	+	2		
(i) Application and interpretation of quantitative techniques for decisionmaking purposes,	+	2		
(ii) Adoption of new products,	+	2		2
(iii) Product mix choices,	+	2		2
(iv) Discontinuance of products,	+			1
(v) Make or buy decisions,	+	2		1
(vi) Decisions to sell or to further process products,	+	2		1
(vii) Decisions to shutdown or temporarily close selected operations,	+	2		2

(viii) The use of indexing of costs and revenues data, (ix) the use of discounted cash flow techniques in longer-term decision-making situations	-			
Other area under this topic:				
Target costing	+			2
<i>Non-financial performance indicators such as productivity per employee or per service unit</i>	-			
Other area under this topic:				
Customer aspects indicators			2	
Internal process indicators			2	
Innovation and personal indicators			2	
<i>The non-financial objectives of enterprises such as environmental and social Objectives</i>	-			
Other area under this topic:				
Other topics:				
Management accounting practice in Estonian companies	+	2		2

Appendix 8: Percentages of Management Accounting contents at SBEL & UT

Basic Level of Management Accounting Studies:

	credits: 2 2 2 6					3 5 5 5 18						
	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>1. Background information</i>												
(a) Importance of knowledge of the business processes and their technological implications	2	2		4	1,49	2				2,00	1,29	
(b) The role of quantitative techniques in problem- solving situations	2	2		4	1,49	2				2,00	1,29	
(c) The value of qualitative and quantitative information in decision-making		2		2	0,75	2				2,00	1,29	
(d) The interpretation of operating results and evaluation of the impact of optimum decisions	2	2	2	6	2,24	2				2,00	1,29	
(e) The benefit of computer software (e.g. spreadsheets and statistics packages)						2	1			3,00	1,94	
(f) The importance of effective communications to users of information	1	3		4	1,49	1	2			3,00	1,94	
sum:	7	11	2	20	7,46	11	3			14,00	9,15	
%	6,80	11,46	2,90	7,46		15,71	5,88			9,15		

	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>2. The cost and management accounting framework</i>												

(a) Cost and management accounting in comparison with financial accounting:	3			3	1,12		3	1			4	2,58
their purposes, the role of cost accounting as part of a management information system, and the need for both financial as well as non-financial information												
(b) Cost classification concepts and terminology, such as												
(i) Direct and indirect costs,	2		3	5	1,87		3				3	1,94
(ii) Fixed and variable costs,	2		3	5	1,87		3				3	1,94
(iii) Period and product costs,	2		1	3	1,12		2				2	1,29
(iv) Controllable and uncontrollable costs,	2			2	0,75		1				1	0,65
(v) Avoidable and unavoidable costs,	2		2	4	1,49							
(vi) "Sunk" costs,	2			2	0,75		1				1	0,65
(vii) Budgeted, standard and actual costs and their comparisons and analyses	2		2	4	1,49		1				1	0,65
(c) The use of linear, curvilinear and step functions and how their calculations are used to analyze cost behavior			2	2	4	1,49		2			2	1,29
(d) The concepts of cost units, cost centers and profit centers	2		3		5	1,87		1			1	0,65
(e) describe, illustrate and comment on the planning and control uses of standard costing, budgeting and variance analysis	1			1	0,37		1				1	0,65
(f) The difference between absorption and marginal costing systems	2			2	0,75		1				1	0,65
sum:	22	5	13	40	14,93		19	1			20	13,07
%	21,36	5,21	18,84	14,93			27,14	1,96			13,07	

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>3. Cost determination: the costing of resource inputs</i>											
(a) Materials											
(i) Accounting for stock (inventory) movements	1			1	0,37	1				1	0,65
(ii) Determination of optimum purchase quantities			2	2	0,75						
(iii) Material pricing issues			2	2	0,75						
(iv) Identification of accounting for stock losses											
(b) Labor											
(i) The difference between direct and indirect labor	1		2	3	1,12						
(ii) Types of labor remuneration methods											
(iii) Labor efficiency calculations and interpretations						1				1	0,65
(iv) Recording labor costs											
(v) Calculation and interpretation of labor turnover rates											
(c) Overheads											
(i) Overhead cost analyses	2	2	2	6	2,24						
(ii) The apportionment and absorption of overhead costs, including reciprocal service situations			2	2	0,75						
(iii) Accounting for the over- and under-absorption of costs		1	1	2	0,75	1				1	0,65
sum:	4	3	11	18	6,72	3				3	1,96
%	3,88	3,13	15,94	6,72		4,29				1,96	

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>4. Costing methods: the costing of resource outputs</i>											
(a) Job order, batch and contract costing methods											
(i) Characteristics of each method	2			2	0,75	1				1	0,65

(ii) Accounting for direct and indirect costs, including the treatment of waste,	2			2	0,75						
scrap and rectification costs,											
(iii) Calculation of the profit on partially completed contracts											
(b) The process costing method:											
(i) Characteristics of the process costing method,	2			2	0,75	1				1	0,65
(ii) Identification and use of appropriate cost units,	2			2	0,75						
(iii) Valuation of process transfers and work-in-process using equivalent units of	2			2	0,75						
production and based on FIFO and average costing methods,											
(iv) Accounting for normal and abnormal losses and gains, joint and by-products	2			2	0,75						
(c) Operation or service costing	2			2	0,75						
(i) Scope of operation or service costing,											
(ii) Identification of appropriate cost units,											
(iii) Considerations relating to the collection, classification and ascertainment of											
costs											
(d) Standard costing	1			1	0,37	1				1	0,65
sum:	15			15	5,60	3				3	1,96
%	14,56			5,60		4,29				1,96	

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>5. The pricing of goods and services</i>											
(a) Target and minimum pricing.	1	1		2	0,75						
(b) Price /demand relationships,		2		2	0,75						

(c) The pricing of special orders and short - life products,	1	2	2	5	1,87						
(d) Transfer pricing between divisions in a group,	1	2		3	1,12						
(e) Pricing in service industries,											
(f) Pricing internal services		2		2	0,75						
sum:	3	9	2	14	5,22						
%	2,91	9,38	2,90	5,22							

	UT					SBEL					
<i>6. Costing systems: marginal contrasted with absorption costing</i>	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(a) The concept of profit contribution	1	2	2	5	1,87						
(b) The difference between marginal and absorption costing	1			1	0,37	1				1	0,65
(c) Marginal cost accounting: process cost accounting transactions in a marginal costing system	2		2	4	1,49						
(d) Cost-volume-profit (CVP) analysis: understanding the concepts of break-even and margin of safety	2		3	5	1,87	2				2	1,29
sum:	6	2	7	15	5,60	3				3	1,96
%	5,83	2,08	10,14	5,60		4,29				1,96	

	UT					SBEL					
<i>7. Cost and management accounting methods</i>	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(a) Cost control (as distinguished from cost determination); control over waste, scrap, spoilage and defective items			2	2	0,75						
(b) Determining and allocating or apportioning the costs of activities and outputs											

through the use of appropriate concepts, methods and techniques for:												
(i) Absorption costing,	1			1	0,37		1				1	0,65
(ii) Marginal costing,	1			1	0,37		1				1	0,65
(iii) Opportunity costing	1			1	0,37							
(c) Activity-based costing; use of cost drivers and activities	1		2	3	1,12		1				1	0,65
(d) Alternative stock (inventory) management systems and models including total	1	1	2	4	1,49							
quality management (TQM), "just in time" (JIT), economic order quantities (EOQ),												
etc.												
(e) Consideration and application of information required in relation to												
(i) The costing of products and services	1		2	3	1,12		1				1	0,65
(ii) Preparing plans												
(iii) Monitoring and controlling performance and		2		2	0,75							
(iv) Decision-making needs	1	2		3	1,12							
(f) Relevance, costs and the decision process	1	2		3	1,12		1				1	0,65
(g) Cost reduction: techniques such as work-study, time and motion studies			2	2	0,75		1				1	0,65
and value analysis												
sum:	8	7	10	25	9,33		6				6	3,92
%	7,77	7,29	14,49	9,33			8,57				3,92	

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>8. Budget as a tool for decision-making</i>											
(a) Master budgets	2			2	0,75	2				2	1,29
(b) Flexible budgets and variances analysis	1	1		2	0,75	1				1	0,65

sum:	3	1		4	1,49		3			3	1,96
%	2,91	1,04		1,49			4,29			1,96	

9. Information for budgeting, planning and control purposes	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(a) Objectives and concepts of budgetary systems											
(i) Budgeting as a multi-purpose activity		2		2	0,75	2	2			4	2,58
(ii) Budgeting and behavioural influences						1	1			2	1,29
(iii) Quantitative aids in budgeting: learning curve theory and application; limiting factors and linear programming						3				3	1,94
(iv) Activity-based budgeting	1	2	2	5	1,87	1	1			2	1,29
(v) Control theory and budgeting		2	2	4	1,49		1			1	0,65
(vi) Uncertainty and budgeting						1				1	0,65
(vii) Identification of relevance, strengths and weaknesses of budgeting and budgetary control						2	2			4	2,58
(b) Types of budgetary systems: fixed and flexible budgets, zero - based budgets, and incremental, periodic and continuous budgeting	1			1	0,37	1	1			2	1,29
(c) Developing and implementing budgeting systems: functional and subsidiary budgets and master budgets, including cash budgeting						3	2			5	3,23
(d) Monitoring and controlling performance; the calculation of variances; the determination of the causes of variances						1				1	0,65

(e) Short-term vs. long-term budgets	1	1	1	3	1,12			1			1	0,65
(f) Quantitative aids in budgeting: least squares regression; scatter diagram with correlation; forecasting with regression; time series and seasonality concepts for the analysis of time -related data												
(+1) Beyond budgeting		2		2	0,75			2			2	1,29
(+2) <i>Financial targets (du Pont etc)</i>							2				2	1,29
(+3) <i>Analyzing Financial Performance</i>							2	2			4	2,58
sum:	3	9	5	17	6,34		19	15			34	22,22
%	2,91	9,38	7,25	6,34			27,14	29,41			22,22	

	UT					SBEL						
<i>10. Standard costing</i>	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
(a) The uses and limitations of standard costing methods	1			1	0,37	1				1	0,65	
(b) The determination of standards	1			1	0,37	1				1	0,65	
(c) Identification and calculation of variances: sales variances (including quantity and mix); cost variances (including mix and yield); absorption and marginal approaches												
(d) Identification of significant variances and their interrelationship												
(e) The uses of planning and operational variances	1			1	0,37							
(f) Trends, materiality and controllability of variances												
(g) Uncertainty and variance analysis												
(h) Identification of relevance, strengths and weaknesses of standard						1				1	0,65	

costing and											
variance analysis for performance and control											
sum:	3			3	1,12		3			3	1,96
%	2,91			1,12			4,29			1,96	

Advanced Level of Management Accounting Studies:

	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>11. Business planning</i>												
(a) Proposing, evaluating and implementing ways to meet short and medium-term financial objectives, such as budgeting, monitoring and controlling cash flow, pricing, raising finance and repaying debt		2		2	0,75		2			2	1,29	
(b) The purpose and benefits of setting short-term objectives consistent with long-term strategies		2		2	0,75		2			2	1,29	
(c) Seeking, clarifying and confirming information relevant to the determination of business objectives, such as information on current business position and past performance by using ratios and other analyses, and information on planned changes to systems and procedures		1		1	0,37		2			2	1,29	
(d) Developing and analyzing business plans to meet agreed objectives, including		1		1	0,37		1			1	0,65	

risk assessment of plans and all aspects of the business that they will influence,												
and analyses to include measures of value, profit optimization and utility												
(e) Long-term financial planning, including:												
(i) The issues to be considered when deciding whether to expand through		2		2	0,75			2			2	1,29
internal growth or through an acquisition,				0	0,00						0	0,00
(ii) Strategies a company might use in order to expand or maintain its current		2		2	0,75			1			1	0,65
market position,												
(iii) The techniques for valuing individual shares and other securities and for												
valuing a business, and the application of these techniques in merger and												
acquisition situations,												
(iv) The arguments for and against mergers and acquisitions,												
(v) Methods of financing an acquisition,												
(vi) Appropriate merger and acquisition strategies and tactics,												
(vii) Tactics to follow when defending against a takeover bid,												
(viii) Planning for post-merger success and post- merger audits,												
(ix) Identifying schemes for financial restructuring and the issues involved in the												
decision process; methods of restructuring; buy-outs; going private; share												
repurchases; rescheduling debts; and joint ventures												

sum:	10	10	3,73	10	6,54
%	10,42	3,73	19,61	6,54	

	UT					SBEL					
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
<i>12. The design of management accounting systems</i>											
(a) Developing and implementing appropriate systems								2		2	1,29
(i) Identification of cost units,											
(ii) Establishing cost, profit and responsibility centers,	1	3		4	1,49		3			3	1,94
(iii) Determining methods for recording relevant information,							2			2	1,29
(iv) The sources of information for recording and processing,		1		1	0,37		2			2	1,29
(v) Computer-based information storage and processing,							1			1	0,65
(vi) Analysis of output information and its dissemination to relevant individuals and departments		2		2	0,75		1			1	0,65
(b) Consideration and application of information requirements in relation to:											
(i) The costing and processing of products and services,	1	2	2	5	1,87						
(ii) Preparing operating plans,		2		2	0,75						
(iii) Monitoring and controlling performance,		2		2	0,75		2			2	1,29
(iv) Decision-making considerations	1	2		3	1,12		1			1	0,65
(c) Considerations in negotiating and agreeing information requirements											
(i) The influence of size and the type of enterprise entity,	1	1		2	0,75		1			1	0,65
(ii) The nature of activities and output of each entity,		1		1	0,37		2			2	1,29
(iii) The long-term or short-term nature of decisions,	1	1		2	0,75					0	0,00
(iv) Management structures and styles,	1			1	0,37		1			1	0,65

(v) Conditions of uncertainty and risk,												
(vi) Qualitative and quantitative nature of the information requirements,												
(vii) Frequency, timing, format and degree of accuracy required								1			1	0,65
sum:	6	17	2	25	9,33			17	2		19	12,42
%	5,83	17,71	2,90	9,33				33,33	9,09		12,42	

	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>13. Evaluating the impact of changes in business structures, functions and performance measures on the applicability and appropriateness of management accounting techniques and methods</i>							1			1	0,65	
<i>(+1) Management accounting change and contingency theory</i>	2	2	2	6	2,24				3	3	1,94	
sum:	2	2	2	6	2,24		1		3	4	2,61	
%	1,94	2,08	2,90	2,24			1,96		30,00	2,61		

	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>14. Performance measurement for planning and control</i>												
(a) Measurement of activity, productivity, profitability, quality and service	1	1		2	0,75			2		2	1,29	
(b) The relationship of measurements to the type of entity (e.g. manufacturing or service, profit or non-profit, centralized or decentralized entity)	1	1		2	0,75		1			1	0,65	
(c) Ranges of measures: monetary and non- monetary; the use of percentages, ration and indices		2		2	0,75							
(d) The use of indices to allow for price and performance changes												

through time												
(e) Identification of areas of concern from the information produced							1				1	0,65
(f) Relationship between business performance and managerial performance		2		2	0,75							
(g) Assessing management performance by reference to comparable internal and external information	1	1		2	0,75							
(+1) Balanced Scorecard		2		2	0,75			2			2	1,29
(+2) Performance measurement and management systems		2		2	0,75			2			2	1,29
sum:	3	11		14	5,22			2	6		8	5,23
%	2,91	11,46		5,22				3,92	27,27		5,23	

	UT					SBEL						
	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
<i>15. Other information for decision-making purposes</i>												
(a) Identification and application of relevant costs and appropriate techniques												
(i) Relevant costs, such as fixed or variable, direct or indirect, avoidable or unavoidable, and opportunity or sunk costs,	2	2	2	6	2,24							
(ii) Appropriate techniques, such as cost/volume/profit analysis, the use of limiting factors, and the recognition of risks and uncertainties	2	1		3	1,12							
(b) Use of relevant information for:												
(i) Application and interpretation of quantitative techniques for decisionmaking purposes,	2			2	0,75							

(ii) Adoption of new products,	2		2	4	1,49						
(iii) Product mix choices,	2		2	4	1,49						
(iv) Discontinuance of products,			1	1	0,37						
(v) Make or buy decisions,	2		1	3	1,12						
(vi) Decisions to sell or to further process products,	2		1	3	1,12						
(vii) Decisions to shutdown or temporarily close selected operations,	2		2	4	1,49						
(viii) The use of indexing of costs and revenues data, (ix) the use of discounted cash flow techniques in longer-term decision-making situations											
(+1) Target costing			2	2	0,75			2		2	1,29
sum:	16	3	13	32	11,94			2		2	1,31
%	15,53	3,13	18,84	11,94				9,09		1,31	

	UT					SBEL					
<i>16. Non-financial performance indicators such as productivity per employee or per service unit</i>	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(+1) Customer aspects indicators		2		2	0,75						
(+2) Internal process indicators		2		2	0,75						
(+3) Innovation and personal indicators		2		2	0,75						
sum:		6		6	2,24						
%		6,25		2,24							

	UT					SBEL					
<i>17. The non-financial objectives of enterprises such as environmental and social objectives</i>	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%
(+1) Management accounting practice in Estonian companies	2		2	4	1,49						

(+2) The Role of Controllers								2			2	1,29
sum:	2		2	4	1,49			2			2	1,31
%	1,94		2,90	1,49				3,92			1,31	

	UT					SBEL						
18. Other Topics	MA	C	CM	Tot.	%	MA I	MAC	SMA	OMA	Tot.	%	
Review of major Strategy Schools								3		3	1,94	
Implementing Strategy								3		3	1,94	
Diagnostic and Interactive Control Systems								3		3	1,94	
Value Based Management								3		3	1,94	
Process management									3	3	1,94	
IT for Process Management									2	2	1,29	
Diffusion of Management Accounting Innovations									1	1	0,65	
Incentive Systems									1	1	0,65	
sum:								12	7	19	12,42	
%								54,55	70,00	12,42		

	UT					SBEL						
	MA	C	CM	Tot.		MA I	MAC	SMA	OMA	Tot.		
all points this course:	103	96	69	268		70	51	22	10	153		
% of Total	38,43	35,82	25,75	100,0		45,75	33,33	14,38	6,54	100,0		