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Comparison of Management Accounting and Controlling in English-speaking and German-speaking countries.

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Declaration:

I hereby declare, that I have written this master thesis on topic **“Comparison of Management Accounting and Controlling in English-speaking and German-speaking countries.”** by myself and referenced all used literature and other sources in the attached list at the end of this work.

In Prague on 10^{th} November 2014 Sergey Davidyan

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Abstract:

The main goal of this diploma work is to analyze the differences and the similarities of controlling and management accounting frameworks in German-speaking and English-speaking countries. The attention is devoted to the economic background along with social premises that caused the emergence of controlling and management accounting in German-speaking and English-speaking countries. The essential task is also to investigate how and to which extent the distinctions between the two approaches affect the enterprise functioning. The primary research method used in the work is a descriptive method involving collection, analysis, synthesis and comparison of available data relevant to the subject.

Key words: controlling, management accounting, English-speaking, German-speaking

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Introduction

In today's turbulent world companies are constantly forced to adapt to the changing environment. Readiness and decision-making ability of managers has become a considerable competitive advantage. A prerequisite towards successful business governance is the availability of high-valued information about the environment as well as internal activities. If the company wants to operate efficiently, it needs to build a comprehensive information system with appropriate computer support and the follow-up system of internal reports.

One of the most important ideas of current development in accounting is the recognition that the business processes must be differentiated and displayed according to the needs of various users of accounting information. Unlike financial and tax accounting, where the pressure is put on building the unified interpretation and comparability of information which leads to the unification of reporting principles and practices across the business environment, internal accounting information is characterized by the fact that its content and structure is not the subject of outside regulation.

The above mentioned fact makes the internal accounting information very attractive for deep exploration. The internal accounting may serve not only as a tool for classical tasks as budgeting, planning, variance analysis, but also a discipline for effective decision-making on the highest level.

This work investigates the two disciplines – management accounting and controlling. They both mainly aim to collect and assess internal accounting figures in order to provide quality financial and non-financial information for the decision-making.

In a very broad sense, typical tasks conducted by management accountants and controllers include forecasting and planning, performing variance analysis, reviewing and monitoring costs inherent in the business. Being the business partners, they tend to help drive the success of the business therefore they create value for the company.

The work is divided into the 3 chapters:

1. The relation between Controlling and Management accounting.

In this part my main attention is devoted to the description of the two disciplines, what are they designed for and what are their main tasks.

2. The history of Management accounting and Controlling.

In this chapter my goal consists in exploring the prerequisites of the birth of each discipline. Furthermore, I look into the development of each subject from the earliest times to the present days.

3. The role of a management accountant and a controller.

The last part of the work deals with the roles of the management accountant and the controller. The attention is paid to the comparison of original work of each professional and the current responsibilities. A mutual comparison of the work conducted by the management accountant and the controller is provided.

The significant goal of this diploma work is to analyze the differences and the similarities of controlling and management accounting frameworks in German-speaking and English-speaking countries. The attention is devoted to the economic background along with social premises that caused the emergence of controlling and management accounting in German-speaking and English-speaking countries. Furthermore, the roles of the management accountants and the controllers are being investigated to provide a comprehensive overview of their typical as well as specific tasks.

1. The relation between controlling and management accounting.

The main attention in this chapter is devoted to the description of Controlling and Management Accounting.

1.1. Management accounting

In order to understand what management accounting is and to define its role in an enterprise, it's necessary to introduce the terms financial accounting that has particular connection with management accounting.

Financial accounting is the field of accounting that aims to provide financial statements for decision makers, such as stockholders, banks, government agencies and, in these latter days, employees. Financial accounting is designed to prepare accounting information for users outside the company or for those who aren't directly involved in day-to-day business.

It's very important to mention that financial accounting is highly regulated since financial statements can be subject to accounting fraud because management is usually rewarded based on their firm's performance which is measured based on the financial statements that they prepare.

There are two generally accepted standards that are designed as a common global language for business operations so that company statements are understandable and comparable across the countries. These are International Financial Reporting Standards (IFRS) and Generally Accepted Accounting Principles (GAAP).

According to IFRS[1] financial accounting shall provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity.

Useful information, in turn, must have the following characteristics:[2]

1) Relevance: Accounting information is relevant when it is capable of making a difference in a decision.

[1]The Conceptual Framework for Financial Reporting [online]. IFRS, 2013 [cit. 2014-09-07]. Available at: http://www.ifrs.org/IFRSs/IFRS-technical-summaries/Documents/English%20Web%20Summaries%202013/Conceptual%20Framework.pdf

[2] Conceptual Framework for Financial Reporting [online]. FASB, 2010 [cit. 2014-10-11]. Available at: http://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176157498129&acceptedDisclaimer=true

2) Reliability: Accounting information is reliable to the extent that users can depend on it to represent the economic conditions or events that it purports to represent.
3) Understandability: Accounting reports should be structured in a way as clear as possible to meet the requirements of external and internal users.
4) Comparability: Financial reports from different periods should be comparable with one another in order to derive meaningful conclusions about the trends in an entity's financial performance and position over time. Comparability can be ensured by applying the same accounting policies over time.

To summarize, financial accounting as a part of accounting is a discipline that is strictly regulated by certain institutions and committees and its primary goal is to depict company’s financial position on the basis of available information in a certain point of time. Thus, financial accounting isn’t efficient enough to predict the future of the company. Moreover, management staff nowadays demands information about “what is needed to be done” to achieve predefined goals.

The management of an enterprise focuses on measuring the factors that have a straight impact on the quality and quantity of output. The quality and quantity are the things which can be measured thereby there is always a responsible department or even a person who is in charge of making decisions about the quality and the quantity of good or services provided to a customer.

The management of an enterprise also seeks for sensible and internally generated information that helps to analyze not only the previous and ongoing development, but to change the run of the business concurrently.

From the time perspective, the management of a company is interested in accounting information which is relevant for current decision-making. The executives request the evaluation of predefined goals with actual ones. In this context, the availability of predefined goals and actual results in the informational system shifts the governance of an enterprise on the higher level allowing to find the best solutions in short-term, as well as, in long-term perspective.

From the above mentioned, it’s obvious that managers in a broader term need to operate with the real figures that can be counted up for decision-making. As an opposite to financial accounting where the data are to some certain extent synthetic and regulated, the accounting information for managers isn't a subject of external regulation and in this way such a pattern can't be united into one definition. We shall refer to a term management accounting in the text below.

Should one stick to a modern definition of management accounting, the IMA[3] definition might be the most complete. According to IMA "Management accounting is a profession that involves partnering in management decision-making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy."[4]

In every business, various transactions take place every day: purchases are made, expenses are incurred, payments are received, assets are sold and acquired. These events, arising out of the decisions and actions of management, exercise their effects and impact on the operational efficiency and position of the enterprise. Majority of transactions can be measured and expressed in money values. Since they affect the ongoing business of the enterprise, they need to be measured, recorded, analyzed and reported to the management, so that the management can evaluate their effect upon the enterprise.

For better understanding of the nature of the management accounting, we need first to examine its partial component – Cost accounting. CIMA describes cost accounting as "Gathering of cost information and its attachment to cost objects, the establishment of budgets, standard costs and actual costs of operations, processes, activities or products; and the analysis of variances, profitability or the social use of funds."[5]

Cost accounting focuses on the systematic recording and analysis of costs. Information about the cost of each product or service can be managed to find out where to save on costs, how to set prices accordingly to maximize profits. In my opinion, the main objects of cost accounting can be reported as the following:

- Examining and classifying the expenditures with reference to the cost of products and operations.

[3] The Association of Accountants and Financial Professionals in Business. In: [online]. [cit. 2014-09-08]. Available at: http://www.imanet.org/ima_home.aspx

[4] Management Accounting. In: [online]. [cit. 2014-09-08]. Available at: http://www.imanet.org/mgi/Management_Accounting.aspx

[5] WILCOX, Kate. CIMA official terminology. 2005 ed. Amsterdam: CIMA, 2005, p. 19. ISBN 9780750668279.

- Investigation of the cost of every unit, job, operation, process, department or service thus helping to identify and calculate a standard cost.
- A source of indication that any inefficiencies in the forms of waste of time, materials occur. Subsequent analysis of the reasons of low outcome may lead to remedial steps and to prevent unsatisfactory condition in future.
- Releasing necessary data to provide comparison of the financial results on weekly, monthly or quarterly basis as may be required by the management during the financial year, not only for the whole business but also for particular departments, units or even individual products.
- Providing actual figures of costs with planned ones thus enabling managers to estimate future rates or quotas.
- Depicting comparative cost data for various periods and different volumes of output.
- Providing information to maintain permanent inventories on stores and other materials at required level to ensure lean production.
- Stuffing the management with data necessary to make short-term decisions of various types, such as determination product prices, volume of production, possible trade discounts etc.

The limitations of financial accounting discussed above evoked the management to realize the significance of cost accounting. Regardless of the nature of business, financial transactions include expenditure on labour, materials and other items required for producing good or providing services. It's obvious that avoiding a chance of any possible waste at each step is a matter of high priority. Cost accounting systems increase the overall productivity of any enterprise and serve as an important tool in bringing positive results in form of lower costs.

To sum up, Cost accounting is a specific part of Management accounting that deals with budget creation, cost determination and analysis of variances, for instance. Data for cost accounts can be both financial and non-financial (for example, idle time, clock cards). Cost accounts provide the bulk of data and information for management accounting. The cost accounting department/function is responsible for cost data collection, analyzing cost behaviour, attributing cost to departments/units/objects and preparation of statements.

As compared with financial accounting and cost accounting, management accounting is rather new discipline that is still being transformed. Management accounting deals with such information that is useful to the management for decision-making. Unlike financial accounting, the main aim of management accounting is to equip internal users with the data relevant for decision-making.

Management accounting may contain all sources of essential information such as financial accounting, cost accounting, economic or statistical information to respective departments/units at various governing levels to assist them to increase performance of a company and also to evaluate themselves. Management accounting is about looking into future therefore it should be able to assess economic and business data to make it suitable for use by the management at different levels of an enterprise.

Table 1: Cost Accounting and Management Accounting

Basis	Cost Accounting	Management Accounting
1. Scope	Scope of cost accounting is limited to providing cost information for managerial uses.	Scope of management accounting is broader than that of cost accounting as it provides all types of information, i.e., cost accounting as well as financial accounting information for managerial uses.
2. Emphasis	Main emphasis is on cost ascertainment and cost control to ensure maximum profit.	Main emphasis is on planning, controlling and decision – making to maximize profit.
3.Techniques employed	Various techniques used by cost accounting include standard costing and variance analysis, marginal costing and cost volume profit analysis, budgetary control, uniform costing and inter-firm comparison, etc.	Management accounting also uses all these techniques used in cost accounting but in addition it also uses techniques like ratio analysis, funds flow statement, statistical analysis operations research and certain techniques from various branches of knowledge like

		mathematics, economics, etc. which so ever can help management in its tasks
4. Evolution	Evolution of cost accounting is mainly due to the limitations of financial accounting	Evolution management accounting is due to the limitations of cost accounting. In fact, management accounting is an extension of the managerial aspects of cost accounting.
5.Data base	It is based on data derived from financial accounts	It is based on data derived from cost accounting, financial accounting and other sources.
6.Status in organization	In the organizational set up, cost accountant is placed at a lower level in hierarchy than the management accounting	Management accounting is generally placed at a higher level of hierarchy than the cost accounting
9.Installation	Cost accounting system can be installed without management accounting	Management accounting cannot be installed without a proper system of cost accounting.

Source : Financial Accounting vs. Management Accounting [online]. [cit. 2014-09-10]. Available at: http://www.diffen.com/difference/Financial_Accounting_vs_Management_Accounting

The principal purpose of management accounting is to support the management at different levels to run business efficiently. Management accounting aims at systemizing responsibilities for implementation of plans and budgets. It examines transactions, mostly financial to allocate efficiently resource and as an outcome to provide satisfactory performance. According to the various authors, among them Colin Drury[6] and the group of the authors represented by Eric Noreen, Peter Brewer and Ray Harrison[7] the following classification of the key objectives of management accounting can be used:

[6] DRURY, Colin. Cost and management accounting: an introduction. 6. ed. London [u.a.]: Thomson, 2006,p. 18-20. ISBN 184480349x.
[7] NOREEN, Eric W, Peter C BREWER a Ray H GARRISON. Managerial accounting for managers. 2nd ed. New York: McGraw-Hill Irwin, c2011, p. 31-32. ISBN 0073527130.

1) Planning

Planning involves organizing the activities of a company based on the available information to set appropriate goals. It contains using the financial statements of the previous periods to predict the future results. It also deals with assessing alternative prospective plans and activities.

2) Reading financial documents

Management accounting assists management with required information therefore financial information should be presented in a way that it is easily understood. Easy readable format usually include charts, diagrams, graphs.

3) Supportive role in decision-making process.

Management accounting makes decision-making process more scientific with the help of various modern techniques. Figures related to cost, price, profit and savings for each of the available alternatives are collected and analyzed to provide a base for taking sound decisions.

4) A function of control

Management accounting possesses with accounting tools, for instance, standard costing and budgetary control that are useful for controlling performance. Cost control is traced through the use of standard costing and departmental control is checked through the use of budgets. Thus, individual and shared responsibilities can be controlled by management accounting.

5) Reporting function

Management accounting aims to constantly inform the management about the latest position of the enterprise through reporting system. The reports allow managers to take proper and quick decisions.

6) To facilitate coordination of operations

Management accounting provides tools for overall control and coordination of business operations. Budgets are important means of coordination.

Management accounting includes financial accounting and enriched with system of cost accountancy, budgetary control and statistical data with strong emphasis upon the establishment and operation of internal controls. Down below are illustrated typical spheres governed by management accounting.

1. Management accounting can't participate in a company's structure as an isolated discipline. It should be an integral part of management on different levels containing and complementing the features of accounting, cost accounting, and tax accounting and information systems.

2. The compilation and preservation of critical data for planning. The financial statements and accounts as well as the document files are somewhat a storehouse comprising large quantities of details about the past progress of the enterprise without which forecasts of the future could be very risky for an enterprise. The role of management accounting is to depict the past data in such way that it would reveal possible trends of events to the management. It also should present an assessment of anticipated changes in relevant areas directly or non-directly related to an enterprise. Only quality information based in recent data may provide effective assistance in the planning process.

3. Management accounting is a mean of communication of different departments at various levels in an enterprise. First, it ensures indispensable coordination of separate segments of an enterprise. Second, it defines the role of individual segments and maps them into the whole plan which in turn helps the management in directing their activities.

4. Implementation of an efficient setup of feed-back reports. By pointing out the abnormal deviations between the actual and expected figures and by sticking to the basics of selectivity and relevance, such reports aid to start up the system called 'management by exception'.[8]

5. Providing methods and implementing techniques for evaluating the performance of the management in the light of the predefined objectives of an enterprise, thus assisting in the formation of the system based on MBO (Management by objectives).

6. Improving, modifying and sharpening the effectiveness of co-existing techniques of analysis. The management accountant should always think of increasing the

[8] BRAGG, Steven. What is management by exception? [online]. 2014 [cit. 2014-10-23]. Available at: http://www.accountingtools.com/questions-and-answers/what-is-management-by-exception.html

practicability of existing techniques. He should be on the lookout for the development of new techniques as well. Thus, management accounting serves not only as a tool in the hands of management, but also provides a technique of evaluating the performance of the management itself. It operates as a double-edged sword assisting the management in proper performance of its functions of planning, decision-making and control, and at the same time, enabling the owners and other interested parties to evaluate and appraise the management of the enterprise.

1.2. Controlling

The word "controlling" is associated with the word "control“, but in reality the meaning of the concept is completely different. Control or cost accounting are aimed at the past investigating time errors and miscalculations, while controlling is directed to the future to ensure long-term operations of the enterprise and its business units.

Controlling system aims to analyze planned and actual performance to eliminate errors and deviations in the present and in the future. Controlling system is suitable in cases where management functions are assigned to departments and services. At the initial stage of implementation controlling serves as a system that alerts about the occurrence of negative deviations in the ongoing business so that the timely counteracting measures are to be taken.

Controlling is based on self-management, self-responsibility and trust. There is no place for controlling in a centralized organization. Business process management requires competent solutions to deal with numerous problems governed by the internal and external factors.

The first problem that prevents us to decide is the absence of signals on the well-being of the enterprise. Lack of insufficient information about the current state and prospects of business don’t allow making a reasonable decision. Lack of tools to identify "bottlenecks" of the enterprise and intelligent recommendations for their elimination can be another major issue.

Controlling is the art of management, it is a directed determination of the future status of the enterprise activity functioning. In large enterprises controlling services are organized. As a consequence, another user come into sight - controller. The essence of a controller is an endeavor to manage the processes to eliminate any possible errors, deviations and failures, both in the present and in the future.

Controlling system is suitable in cases where the enterprise management functions are delegated to its units (departments, services). The main incentive of controlling from personnel management is that every employee is interested in prosperity of a company.[9] In such system each worker should be assessed for his/her contribution. Controlling is characterized by the following points:

- Independence instead of dependence.
- Self-governing instead of subordination.
- Trust rather than control.

Only such mechanism of controlling may lead to necessary changes in the relationship between employees and promote understanding between them. Controlling is defined in the conceptual literature in different ways. Shall we appeal to Rolf Eschenbach, he distinguishes the 4 conceptions of controlling:[10]

- Accountancy-oriented
- Information-oriented
- Practitioner’s approach
- Related to the management system

Controlling is the process that supports to achieve the ultimate objectives and results of the company. Controlling is compared with a modern navigation equipment of the ship, allowing the company to better navigate throughout the turbulent world of market relations.

Controlling as a system of rationalizing achievement of goals went quite a long way of development. The main stages of its improvement were directly related to changes in the external business environment where companies could not use the old methods of control.

[9] ESCHENBACH, Rolf. Controlling. Ed. 2. Prague: ASPI, 2004, p. 788 ISBN 80-7357-035-1.
[10] ESCHENBACH, Rolf. Controlling. Ed. 2. Prague: ASPI, 2004, p. 84-91 ISBN 80-7357-035-1.

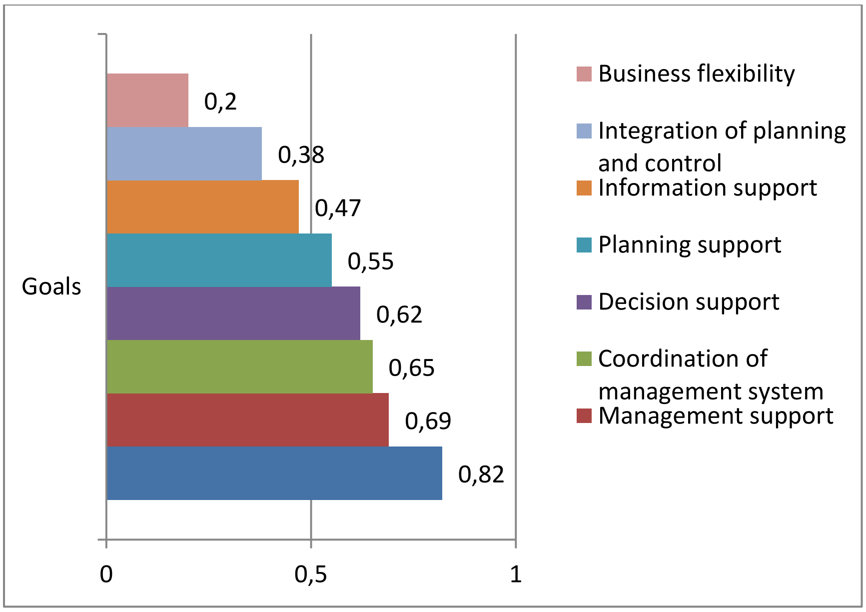
Throughout its development controlling has been and objectively remains as a necessary tool for successful and efficient doing business.

Objectives of controlling in the company can be divided into general and special. General objectives always coincide with the goals. General objectives of controlling are expressed predominantly in quantitative economic terms, for example, a certain level of profit, profitability or performance of an organization in a given level of guaranteed liquidity, minimizing the costs of the enterprise (or more precisely , to optimize costs) etc. General objectives of controlling don't provide an understanding of its uniqueness and difference from conventional management. Therefore, attention should be devoted to special controlling goals and objectives of the enterprise.

In general, a special goal of controlling services is to ensure the effectiveness of the management of the company with the help of analytical and methodological support for managers at all levels of the enterprise in the decision-making process. The support is handled by specialized financial instruments: accounting methods, analysis and costing, planning and budgeting, monitoring system, detection and analysis of deviations from the plan etc.

The common goal, of course, should be specified. Determination of the main goals of controlling is still a contentious issue. However, a number of important scientific researches conducted in the nineties of XX century by German scientists lead by Bernhard Amshoff have identified key objectives of controlling in any business or organization. Polls held in large and medium-sized German companies identified four of the most significant goals of controlling in the company (Fig. 1). At the top of the goals is ensuring control, followed by support of management, harmonization and integration of management systems and, finally, the fourth goal - ensuring the quality of managerial decisions.

Figure 1: The most significant goals of controlling in the company

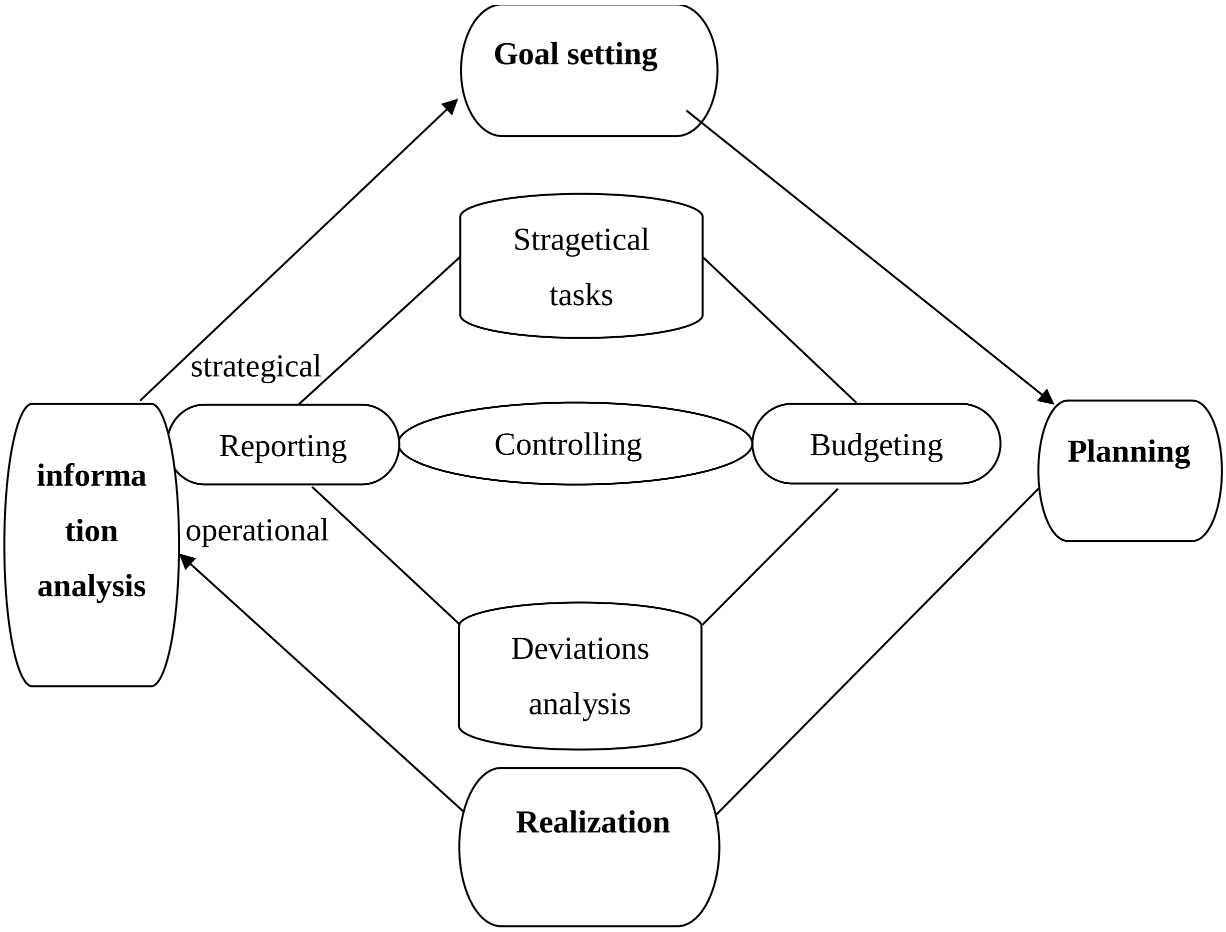


Source: Own collaboration. Based on AMSHOFF, Bernhard. Controlling in deutschen Unternehmungen Realtypen, Kontext und Effizienz. 2., aktualisierte Aufl. Wiesbaden: Gabler, 1993. ISBN 978-340-9221-283.

While the importance of the goals of the planning and provision of relevant information are the most important, the purpose of the integration of planning and control and the flexibility of the goal management are less popular in business practice in Germany.

In light of the findings of a study of German companies, we can state the main task of controlling in the following way: the construction of an effective system for enterprise adoption, implementation, monitoring and analysis of management decisions, ensuring the achievement of operational and strategic objectives of the enterprise. Implementing such a metatask is done through a set of tasks in the areas of accounting, planning and monitoring of the implementation of plans, providing analytical information to management, financial management, etc.

Figure 2: Task of controlling as a management support system



Source: Own collaboration

Since the main strategic goal of business is to maximize profits and increase the profitability, the main function of controlling is to manage costs and financial results of the company. However, the scope of controlling on an enterprise is incredibly wide, so one should consider the application of controlling on an enterprise more precisely.

In the field of management (production) accounting tasks include the creation of controlling system for collection and processing the information essential for management decision-making at different levels of governance. It also covers cost accounting organization not only for certain types of products, but also on the level of technological processes, the phases of production, marketing regions. In this group fall also problems on the selection or development of methods of cost accounting and cost calculation, criteria, financial and general economic indicators to assess the performance of the enterprise as a whole and its individual units.

According to Steven Bragg[11] the support of planning activities involves the following tasks of controlling:

- "It seeks to outline in general terms the characteristics and objectives of the firm.

- Stemming from the strategic plan is the development plan, which concerns itself with the development of new products, services, and markets.

- Also proceeding from the strategic plan is the operations plan, which focuses largely on the existing generation of products and existing markets. It is detailed in nature and specifies plans by individual function, which in essence becomes the annual plan."

Controlling service participates in the development of basic plans of the enterprise (sales, liquidity, investments) as well as it coordinates the individual plans from time and content prospective, checks plans for its completeness and integrity and takes part in the preparation of a single unified operational plan of the enterprise. Moreover, the management process of budgeting is one of the main tasks of controlling.

It should be noted that controlling service should not determine the plan itself, it should recommend how and when to compose a plan, how to do it in detail. It also aims to assess in advance the possibility of implementation of planned activities, eliminate the deviations from a plan, which is especially important to improve the effectiveness of budgeting in the enterprise.

However, the company's developed long-term planning practices should be periodically controlled by providing a serious analysis. Only the most efficient planning methods should be used in the enterprise, this process must not stand for ages.

The tasks of controlling also include risk management and risk assessment of the enterprise. As already noted, the risk is the possibility of unfavourable situations during the execution of plans and investment projects of the company. Risks are caused by different circumstances: a manifestation of nature forces (floods, earthquakes etc.), negative men influence and so on.

Risk management refers to activities aimed at mitigating the impact of risk on business results. It involves identifying the risks to which the entity is exposed to a greater

[11] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p. 59. ISBN 0470937424

extent, finding ways to avoid or reduce losses and the development of measures to compensate for the damage suffered.

In general, the role of controlling in management can be expressed as: Management = Planning + Controlling.[12]

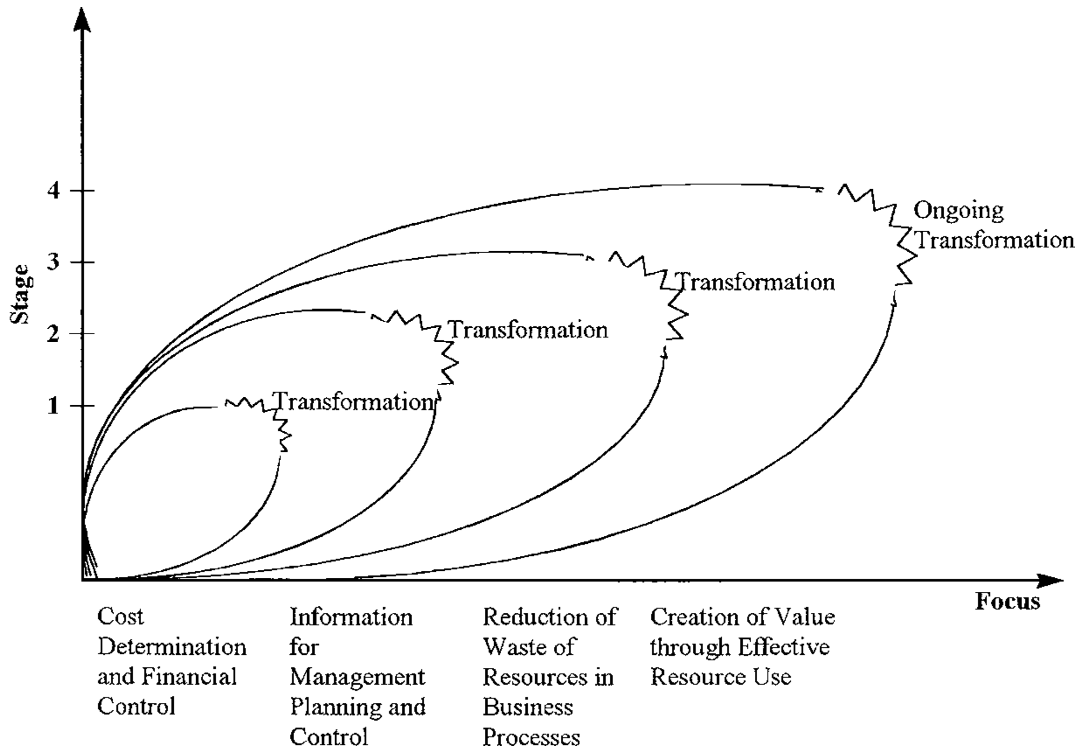
[12] Relationship between planning and controlling. MSG [online]. [cit. 2014-10-28]. Available at: http://managementstudyguide.com/relationship-planning-controlling.htm

2. The history of management accounting

2.1. Management accounting before the First Management Accounting Revolution (1700 – 1950s)

There are plenty of concepts concerning the birth of management accounting and exploring the stages of its formation. In the text below I'd like to apply to the management accounting development model suggested by International Federation of Accountants (IFAC):

Figure 3: Evolution of the Focus of Management Accounting



Source: EDITED BY MARC J. EPSTEIN, Edited by Marc J.John Y. Advances in management accounting. 1st ed. Amsterdam: Elsevier JAI, 2006, p. 232 ISBN 9780762313525.

IFAC recognizes 4 fundamental stages:

1) Prior to 1950, cost determination and financial control were the most relevant topics emphasizing the importance of budgeting and costing.
2) By 1965, the focus had shifted to the provision of information for management planning and control, through the use of technologies such as decision analysis and responsibility accounting.

3) By 1985, attention was focused on the reduction of waste in resources used in business processes, through the use of process analysis and cost management technologies.
4) By 1995, attention had shifted to the generation or creation of value through the effective use of resources, through the use of technologies, which examine the drivers of customer value, shareholder value and organizational innovation.

It should, however, be noted that although the four stages are recognizable, the process of change from one to another has been evolutionary. Consequently, each stage is a combination of the old and the new, with the old reshaped to fit with the new in addressing a new set of conditions in the management environment.

Shall we refer to the beginning of 19th century, nothing had been known about management accounting and little was concerned with cost accounting. Financial accounting, however, was already in use and basically every enterprise recorded financial information.

According to Johnson and Kaplan, the evocation of highly hierarchical enterprises[13] involved in textile industry, steel industry and railway sector created necessary demand for more complex systems for governing the company and, what is more important, the arise of such big complicated firms imposed a strong pressure on ironing then current accounting systems and principles.

The Industrial Revolution during the 19th century in the USA called up new challenges and had a strong impact on bringing in new accounting techniques and methods.

Business operations became more sophisticated, transactions within the manufacturing processes dramatically increased therefore it was a high demand to provide essential data to control costs and to maintain prices for manufactured goods. To illustrate how far the industrial revolution promoted the production of goods please see the table below.

[13] JOHNSON, H a Robert S KAPLAN. Relevance lost: the rise and fall of management accounting. 1st ed. Boston, Mass.: Harvard Business School Press, 1991, p. 20. ISBN 0875842542.

Table 2: Comparison of handicraft and manufacturing system

	Handicraft industry	Manufacturing system
Labour	Manual work	Machinery
Location	Home	Factory
Ownership and	Minor manual tools, that belong to worker	Powerful machinery, that belongs to owners of the capital
Production output	- Small volume production - Production is usually sold only in local market - Manufacturing is based on individual orders	- High volume production - Production is sold in international markets - Production is based on demand
Labor environment	Worker produced whole product from beginning, till the end.	- Worker produced only one part of whole production - Henry Ford production line system
Working	Worker used to work as much as he could, taking in account number of orders	Worker had fixed working hours
Workers and employers	Workers effort determined his income	Workers income was determined by his employers profitability

Source: Own collaboration

In the USA first cost accounting practices were in operation on textile factories already at the beginning of 19th century. Such companies used cost accounting (not as a discipline, but as a method) to find a relationship and to assign labour and overhead costs to calculate the transformation from raw material intro yarn and fabric.

Johnson and Kaplan indicated that the Boston Manufacturing Company was the very first to record manufacturing costs using quite a complex costs accounts set in 1815[14]. The same authors pointed out the company Lyman Mills which in 1850's used a rather complicated system of double-entry of financial ledgers and subledgers and, what is more exciting, factory ledgers with related inventory, payroll and production subledgers. The records of factory overheads and materials were distributed and assigned to different mill accounts by applying to floor space, number of looms etc.

The first working position under name "comptroller" appeared in the enterprise Atchinson, Topeka&Santa Fe Railway System which was no wonder. That time railway companies were growing rapidly consuming large investments and financial sources so the need of cost control aroused. To be precise, the railway companies as compared to other companies, operated with huge amounts of money that were received from customers. The need of tracing the costs and revenues of individual railway stations was obvious. In turn, it led to a possibility to control performance of individual stations by employing such ratio as return of sales or ton-mile ratio. The last had been a reliable tool to control costs.

[14] JOHNSON, H a Robert S KAPLAN. Relevance lost: the rise and fall of management accounting. 1st ed. Boston, Mass.: Harvard Business School Press, 1991, chapter II, p. 20. ISBN 0875842542.

The breakthrough in the theory of management accounting came in the end of 19^{th} century with the book “Accounting principles and practice” by Neuner John J. The author declared a standpoint that cost accounting should be investigated not from a purely economic point of view, but from managerial outlook, thus combining accounting and management achievements.

There were plenty articles that were published in the beginning of the 20^{th} century. Among them are “Standards and wage incentives for office activities” by Farrell A.C. in 1936, “Distribution cost analysis and its influence on pricing policy” by Freeman E.S. in 1933, Sales cost accounting by Dennison H.S. in 1928. By the way, Dennison Manufacturing Company could be also considered as one of pioneers of management accounting. The company could boast with well-structured reports containing financial and cost parts separately.

If we travel back to the end of 19^{th} century to England, our attention may appeal the book by two gentlemen Emile Garcke and John Fells. In 1887 the book “Factory Accounts: Their Principles and Practice” by Emile Garcke and John Manger Fells was published in England. By all means the book had remained as a base source on cost accounting in 19 the century. Its influence was significant taking into account the number of editions that reached seven reprints by 1922.

Emile Garcke and John Manger Fells used the double-entry form of accounts to integrate it entirely with financial accounting records. They insisted that the integration is required to coordinate the activities of a plant that had numerous departments with many subsidiary ledgers.

Another topic that they worked on was a conception of overhead costs. Garcke and Fells realized that factory costs should be associated with jobs while administrative costs should be recorded straightly in profit and loss account. They understood that fixed costs didn’t change prior to the volume of production and therefore should be excluded from overhead allocations. Moreover, they determined fixed costs as somewhat an obstacle to managerial analysis.

Although not documented officially, the publications mentioned before may represent a view that management accounting emerged in the beginning of 20^{th} century. Along with that one may suppose such a birth couldn’t have committed without revolutionary achievements in cost accounting in the end of 19th century as well as economic reasons (big enterprises using machines, industrial revolution etc.).

On the level on an enterprise, cost accountants were not within the management of a company in times when profits were constantly rising. However, as profits were diminishing and cost accounting became complex, they gained in importance.

The beginning of 20th century was marked by the Du Pont Corporation innovative system of measuring performance and General Motors reorganization. That time The Du Pont Company diversified its activities and the management needed such accounting system that would provide control over all products value chains, coordinate performance of individual subdivisions while meeting owners' interests. As an outcome, the ROI ratio was introduced based on the wish of company's management to track return on capital and at the same time justify investment financing decisions.

To sum up, the era until 1950's was indeed very important and productive since it accumulated the knowledge in the field of cost accounting and had been a stage when the first management accounting ideas appeared and developed. For instance, Johnson and Kaplan emphasize that nearly all management accounting practices that are still in use had been developed by 1925.[15]

2.2.Management accounting between 1950's and 1970's

After the World Was II, the USA and the UK didn't face much competition in the world thus there was no strong demand to focus on innovations within products. The attention was more or less devoted to ironing current processes, for instance, increasing production capacity or reducing costs.

As a proof, Epstein and Lee concurred that management accounting methods developed after the WW II reflected economic theory and were based on the 3 pillars:

- Processes in the enterprise were routinized at operational level
- The external environment is stable without any major negative events
- The purpose of management accounting is to support decision-making.

[15] JOHNSON, H a Robert S KAPLAN. Relevance lost: the rise and fall of management accounting. 1st ed. Boston, Mass.: Harvard Business School Press, 1991, chapter VI, p. 125. ISBN 0875842542.

The general tendency was to revise the use of cost accounting in such was that it would be represent certain value for internal users, particularly managers. The first school to introduce the course of management accounting was the Harvard Business School right after the end of the World War II.

By the end of the WW II, the Business School faculty had undergone a massive reform of the MBA program. Under the new program, students were obliged to learn a course called Elements of Administration, which was composed of sixth subparts. On of such parts was "Administrative Accounting and Statistics". It combined Accounting Principles with Business Statistics. The course was taught from a managerial perspective rather than purely economic or accounting view. That time Robert Anthony was a prominent lecturer of the course.

The concept of management accounting as the subject for a text began with his Management Accounting: Text and Cases whose first edition appeared in 1956. The book differed much from other cost accounting books in that it emphasized the decision-making role of cost management over the techniques of cost determination.

Charles Horngren, the author of another influential book "Cost Accounting: A Managerial Emphasis (1962)" acknowledged Anthony's contribution to the field of Management Accounting: "he was a pioneer in emphasizing the importance of motivation issues in the design of management control systems".[16] Anthony's longtime colleague, Charles Christenson, has written, ''Bob did more than anyone else to introduce a conceptual structure to management control. ... His 1965 book, Planning and Control Systems, became the bible of the field''.[17]

The Anthony's definition (1965) of management control was the following: "the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives".[18]

He understood the role of management accounting as a medium between the strategic goals expressed by maintaining respective plans and operational control. Strategic plans

[16] ZEFF, Stephen A. The Contribution of the Harvard Business School to Management Control 1908–1980. Journal of Management Accounting Research: December 2008, Vol. 20, No. s1, p. 195.
[17] ZEFF, Stephen A. The Contribution of the Harvard Business School to Management Control 1908–1980. Journal of Management Accounting Research: December 2008, Vol. 20, No. s1, p. 195.
[18] ANTHONY, Robert N. The management control function. Boston, Mass.: Harvard Business School Press, c1988, p. 10. ISBN 0875841848

were associated with setting up the objectives that would have a long-term effect whilst operational control was related to the daily tasks. He saw management control as a linkage between these two. Although the professor Robert Anthony overviewed management accounting as a broad discipline, he mainly focused his attention on various control activities that would help management to make decisions.

A little bit more sophisticated approach toward the management accounting can be found in the work of Lowe E.A "On the idea of a Management Control System: Integrating Accounting and Management Control". The author defines management control as "a system of organizational information seeking and gathering, accountability and feedback designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behavior of its employees is measured by reference to a set of operational sub-goals (which conform with overall objectives) so that the discrepancy between the two can be reconciled and corrected for".[19]

As compared to Anthony's definition, Lowe's one signalizes that management control system should aim to regulate the organization themselves. It's obvious from the definition that he emphasized the social factor in form of employees' behavior.

Charles T. Horngren advocated the content of cost accounting books and came to a conclusion that the emphasis on cost-control and management decision-making increased from 27% in 1945-1950 to 54% during the 1960's. This undoubtedly can be an evidence of growing concernment in applying cost accounting information for decision-making purposes.[20]

There were several works aimed to reveal the use of relevant costs for decision-making. The biggest distinction between direct and absorption costing was related to fixed costs cover. When the direct costing is used, fixed costs are distributed to the products actually sold, while absorption costing assumes that overheads are appertained to all manufactured units. In general, the classification of costs, direct and indirect, variable or fixed, period of product gained in importance within the evolution of management accounting.

[19] LOWE, E. A. On the idea of a management control system: integrating accounting and management control. Journal of Management Studies, 1971, p. 5.
[20] HORNGREN, C. T. Cost and management accounting: Yesterday, and today. Journal of Management Accounting Research, 1989, p. 21-32.

There was also a strong attitude to implement mathematical techniques into management accounting, especially in the USA in 1960's. The Era of so called Mew Mathematics began. New Mathematics or New Math was a brief, dramatic change in the way mathematics was taught in American grade schools, and to a lesser extent in European countries, during the 1960s. The name is commonly given to a set of teaching practices introduced in the U.S. shortly after the Sputnik crisis in order to boost science education and mathematical skill in the population so that the perceived intellectual threat of Soviet engineers, reputedly highly skilled mathematicians, could be met.

As a consequence, the field of Math was taken very seriously. Since the education had to be well-equipped with mathematical methods, management accounting had to reflect it as well. The algorithms such as marginal costing, discounted cash flows, statistical methods started to be used as inseparable parts of management accounting.

The transformation of cost accounting to management was recognized not only on individual basis as mentioned above, but also by the professional accounting organizations. The United Kingdom Institute of Cost and Works Accountants changed the name of its journal from Cost Accounting to Management Accounting in 1965. The name of the Institute was changed to the Institute of Cost and Management Accountants in 1972. In the USA the National Association of Cost Accountants changed its name to the National Association of Accountants in 1957.

2.3.Management accounting since 1980's up to current times

The last 3 decades of the 20th have been described as extremely intensive in terms of rapidly changing business environment. The enterprises had to meet increased competition, new trends in production as well as information boom.

Development of international communications, open international markets and improved international transportation must have been the main reasons that started the severe competition in the world. As an outcome, a strong pressure had been put on the management of competitive companies to improve the quality of its production and to facilitate necessary measures in order to become more efficient. Furthermore, customer satisfaction became an important topic for consideration.

The economies of the Europe, predominantly in the western part and the USA experienced positive rates of GDP which in turn meant higher demand of the population.

The companies switched to advanced production technologies such as robotics to satisfy the constantly rising demand.

Within the new technologies applied, the behavior of costs have dramatically changed: the direct labor costs as well as inventory costs decreased, at the same time depreciation, engineering and information data costs grew.

Along with the changes in production and demand, the society has become different. The information world switched society’s attention from manufacturing the material goods to services-related industries therefore the information has become indispensable not only across the company, but on the international level.

The leading management accounting experts like Johnson and Kaplan criticized traditional cost accounting systems. They presumed that those systems couldn’t provide a fair value to the management since they were not up-to-date and lack the characteristics to meet the new production environment.[21]

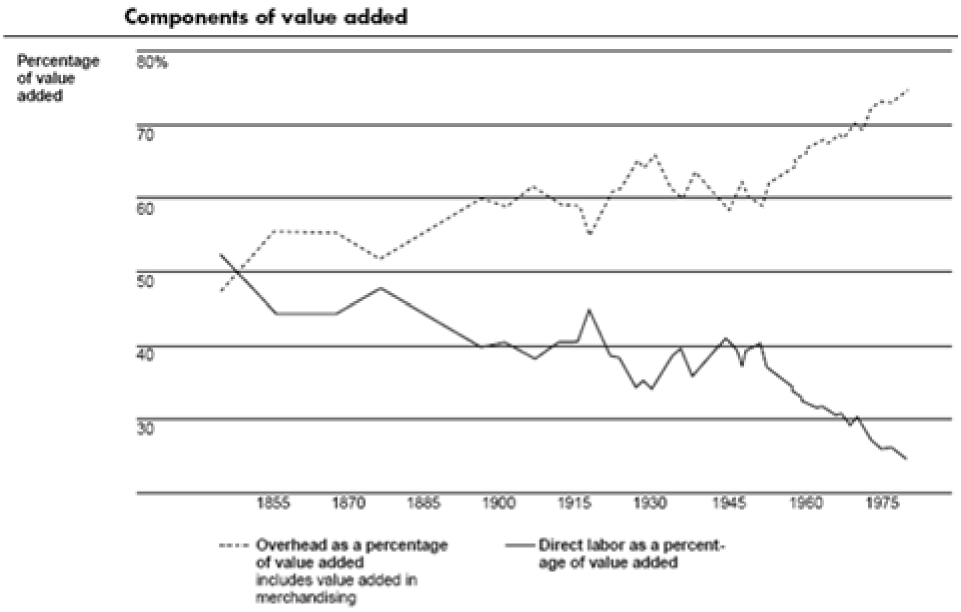
They urged to:

- Implement management accounting into non-financial areas
- Develop innovative practices that would fit the need of management
- To advance comprehension of the actual problems and needs of managers

Two other researchers, J.G. Miller and T.E. Vollmann, published an article, The Hidden Factory (1985), where they insisted that manufacturing managers had faced an issue of rising overheads costs that they couldn’t control efficiently. As a proof, professors referred to the ratio of direct costs to value added that has been declining almost permanently through the last 100 years. The opposite tendency can be traced for overhead costs that were steadily increasing for the last 100 years.

[21] JOHNSON, H a Robert S KAPLAN. Relevance lost: the rise and fall of management accounting. 1st ed. Boston, Mass.: Harvard Business School Press, 1991, p. 194. ISBN 0875842542.

Figure 4: Direct labor and overheads as a percentage of value added



Source: MILLER, J.G. a T.E VOLLMANN. The Hidden Factory [online]. [cit. 2014-11-09]. Available at: https://hbr.org/1985/09/the-hidden-factory/ar/1

They authors pointed out that the drivers of support or overhead costs were hidden in traditional accounting systems and that transactions, which were typically presented in an enterprise were the real explanation of huge proportion of the overhead cost accumulated. Logically, they concluded that if the overhead costs were gathered as a result of the transactions, the only way to reduce them was to monitor and control those transactions. They divided these transactions into 4 categories:

- “Logistical transactions - ordering, executing, receiving, expediting, shipping.
- Balancing transactions ensure matching the supply of materials, labor and capacity with demand.
- Quality transactions - inspection, rework, training, engineering, field support.
- Change transactions - changes in engineering designs, schedules, standards, routings.”[22]

The article “Hidden Factory” became a base on which Robin Cooper and R.S. Kaplan introduced a new product costing system, which they referred to as “Activity Based Costing”. The Activity-based costing was first defined in the book by Robert S. Kaplan

[22] Miller, J. G. and T. E. Vollmann. 1985. The hidden factory. Harvard Business Review (September-October): 142-150.Summary by James R. Martin, Ph.D, CMA [online]. [cit. 2014-09-15]. Available at: http://maaw.info/ArticleSummaries/ArtSumMillerVollman85.htm

and W. Bruns “Accounting and Management: A Field Study Perspective”. ABC seeks to identify cause and effect relationships to objectively assign costs. Once costs of the activities have been identified, the cost of each activity is attributed to each product to the extent that the product uses the activity.

To wrap up, the period from late 1970’s to the present day has brought in the new techniques and methods to the management accounting discipline that helps to measure and to assess more complex business environment as well as it had prominent impact on scientific research in the field. In the table below are reflected the most significant points of the management accounting evolution:

Table 3: The management accounting evolution

Stages/ Methods	**Cost determination and financial control**	**Information for management planning and control**	**Reduction waste of resources in business processes**	**Creation of value through effective resource use**
	1760-1950	**1950-1965**	**1965-1985**	**1985-2000**
Cost determination and accounting	Cost determination			
	Standard cost accounting	Double standard cost accounting		
	Direct cost accounting			
	Records of cost accounting			
	Allocation of indirect costs			
	Uniform cost accounting	Marginal cost accounting	Activity based accounting	
	Absorption cost accounting	Target cost accounting	Activity based management	
Planning	Budgeting	Discounted cash flow		
		Transfer costing		
Controlling	Budgeting control	Responsibility accounting		
	Return on investments (ROI); Ton-mile ratio	Gentani system	Constant improvement method	
	Variances analysis	Kaizen system	Just in time system	
Strategic analysis			Life cycling costing	Value chain analysis
				Five forces model
				PEST, SWOT analysis
				Customer profitability and Competitors analysis
				Balanced scorecard

Source: Own collaboration

The first half of the 20th century can be characterized by the development of cost management predominantly. Up to the 1950's, the companies paid their attention on cost information that was used primarily for inventory valuation, budgeting and variance control, rather than decision-making.

The situation has changed in the second half of the 20th century. First books that pointed out the importance of cost information for decision-making were published. There were certain researches that discovered, for instance, the concept of relevant costs as well as many other techniques for decision-making purposes.

The last 3 decades of the 20th century are known as a timeframe when rapid development of production and computer technologies took place. Such a quick change had not been met by the management accounting field with satisfactory sufficiency as some industries, particularly electronic or robotic needs more sophisticated management accounting systems.

In the book "Relevance Lost: The Rise and Fall of Management Accounting" by Johnson and Kaplan, the authors, for example, stated that "…the scientific management movement can be recaptured by innovative managers and academic researchers who are committed to developing new concepts for designing relevant management accounting systems".[23]

I assume that another interesting point is a hypothesis that management accounting development seems to follow the historical trends. During the scientific management era the focus had been mostly on information for control purposes. In the time between the First World War and the Second World War the focus switched the efficient use of capital and decision-making in short terms.

After the end of the World War II mathematical approach toward the development of management accounting had been prevailing, at least in the USA and the UK.

It is also evident that the last two decades have witnessed a remarkable response to the criticism of irrelevance levelled against management accounting in the late 1980's. There has been a plethora of new techniques and models providing information to improve the strategic position of organisations. It is not entirely clear what these trends can be

[23] JOHNSON, H a Robert S KAPLAN. Relevance lost: the rise and fall of management accounting. Boston, Mass.: Harvard Business School Press, c1991, p. 18. ISBN 0875842542.

ascribed to and might include interrelationships with general economic, sociological, political or academic development, but conclusion in this regard requires further research.

3. The history of controlling

To start with, I'd first like to discuss briefly the perception and development of controlling in the Anglophone countries, mainly in the USA. The word controlling is derived from the word control which has at least 4 generally accepted definitions: 1) to manage; 2) to check or verify; 3) to restrict an activity or a tendency; 4) to restrain the emotions. The word originated form Anglo-Norman contreroller – "keep a copy of roll accounts". In the text below we shall refer to the second definition.

As mentioned earlier, the first companies to introduce the function of comptroller were American railway companies. The word comptroller evolved in the 15th century through a blend of the French compte ("an account"), but through some period of time the English word controller took over the lead.

In 1931 in New York City the Controllers Institute of America was found. The original vision was to create a society of members who would define their profession, exchange the ideas from practice and to work with government on improving the general economy. It had become a place with more than 100 members within the first year. In 1934 the first issue of the Controller magazine was published.

The new community was found under the name Controllership Foundation in 1944. The purpose of the institution was to conduct researches and to determine the role of a controller in an enterprise. In 1946 the book "The place of the controller's office in the business organization" was published. The document defined 17 special functions of a controller and 6 general functions listed below:[24]

1) To maintain a general plan and to coordinate partial plans with the help and communication of competent managers. According to required business needs such plans should contain standard costs, the expenditure-based budget, sales plan, along with investments and finance plans.
2) To compare actual outcomes with the planned ones and to interpret the results to the all levels of corporate management. It relates to the design of a system of records and information processing.

[24] HORVÁTH, Von Péter. Controlling. 9. vollständig überarbeitete Aufl. München: F. Vahlen, 2003, p. 27. ISBN 9783800629923.

3) To check the validity of companies' goals and measure the success of remedies and actions that would contribute to achieve business goals. Then, to inform the all concerned departments about the results and to initiate permanent consulting to help them.
4) To prepare necessary reports for the public authorities and to control tax matters.
5) To anticipate the effects of external environment and its influences on business.
6) To take care about the insurance of company assets and to monitor insurance coverage.

In 1962, The Institute changes name to Financial Executives Institute (FEI) and allows non-controllers to join; name change spurred by the increasing role of financial executives.

As can be traced from the previous chapter, Controlling in terms of controllership had been transformed into Management Accounting so the year 1962 can be regarded as the end of Controlling Era in the USA.

In the German-speaking countries, however, controlling has become not only a practical discipline, but also gained a role of a scientific field. The concept of controlling appeared in Europe right after World War II. The reason lied in the sphere of the international market. Lots of American companies opened their subsidiaries in Germany. As a consequence, first German controllers appeared.

Unlike traditional American companies, most influential German enterprises more or less focused on the technological achievements rather than managerial achievements. The reason can be found in different approaches to controlling. In the USA the function of controlling is inextricably connected with top management, however, in Germany a controller is a position which serves as an advisory body to senior management.

Another reason may be due the fact that new managerial approaches were mainly developed in the USA, leaving aside the methods applied by Toyota in Japan, which had been taken over many non-Japanese companies. For the automotive industry, in which Germany has a very strong background and which is characterized by strong global competition, some of these Japanese techniques are currently a commonplace (for instance, Kanban or JIT methods).

As outlined in the previous chapter, the 1950's and 1960's had been characterized by a high demand in Europe. That, on the one hand, made possible huge economies of scale; on the other hand, it didn't force companies to narrowly control costs. The turning point occurred in 1970's when the energy crises erupted.

The two worst crises of this period were the 1973 oil and the 1979 energy crisis, caused by interruptions in exports from the Middle East, for example in 1979 due to the Iranian Revolution. The crisis as well as growing competition led to the fact by the middle of 1970's there were hardly any big German enterprise without a position of a controller.

Subsequently, as controlling were expanding in business environment, it also got a theoretical base. In 1979 German professor Peter Horvath published a very famous and successful book "Controlling". During 1980's and mainly 1990's controlling started to be taught in the universities and the number of chairs or departments had increased significantly.

In Austria the most influential author and proponent of Controlling is Rolf Eschenbach. He was a person who actually founded an Austrian Österreichische Controller-Institut in 1982 as an alternative to the original American Controllers Institute of America.

Both growing controlling position in German-speaking countries and the widespread adoption of information technologies gave a birth to various companies engaged in the software support for controlling functions. In Austria, the area is mainly represented by Winterheller Software Gesellschaft m.b.H., which was founded in 1988 by professor Manfred Winterheller at the University of Graz. In Germany in Hamburg, for example, was founded CP Corporate Planning AG in 1989. It was opened upon "the vision to make available a software program, with the respective know-how, to management accounting staff, by means of which they can perform their tasks simply, safely and with pleasure. Today, Corporate Planning is one of the leading corporate performance management software vendors in Europe and, in the Corporate Planning Suite, offers versatile planning, reporting and analysis methods on an integrated technological platform with a uniform "look and feel".”[25]

As can be understood from the text above, the theoretical background of controlling in Germany-speaking countries is indeed broad. There are various authors that deal with the field of accounting and each has its unique opinion on the mission of controlling. Horvath, however, concluded that the tasks of controlling are not anyhow new, but their coordinated operation may provide a new quality system.

In order to give a more comprehensive view on the main aspects of controlling research and teaching practice in German-speaking countries, we should at least identify and mark the most important points of the study conducted by Utz Schäffer and Christoph Binder Controlling “Eine Analyse deutschsprachiger Zeitschriften von 1970 - 2003”.

The authors looked deeply into the German system of high education as well as they examined the institutionalization of controlling at German universities. The word German in this case means German-speaking countries including Austria and the large area of Switzerland.

As of the year 1971, Prof. Dr. Elmar Mayer established a working group AWW Köln (Arbeitsgemeinschaft Wirtschaftswissenschaft und Wirtschaftspraxis im Controlling und Rechnungswesen).[26] The motto of the group was “Do today what others will think tomorrow”. The central goal of the AWW was to promote communication between business and science. In order to provide comprehensive knowledge and to enrich Accounting and Controlling subjects the AWW program was integrated into the main study at FH Cologne.

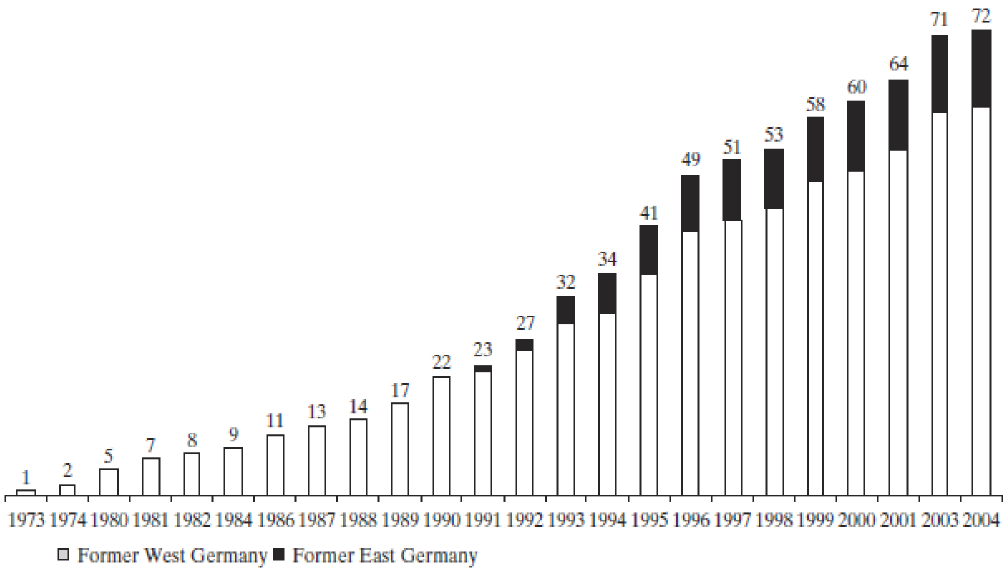
The first chair of Controlling appeared at TU of Darmstadt in 1973. Interestingly, the first chair was established in Technical University by Peter Horvath who then became a prominent and one of the most respectful proponents of controlling in Europe. In 1979 he published the textbook Controlling that has become a well-known resource for researchers and practitioners. He also acted as a co-author of the journal “Controlling” which was issued from 1989. What is more, along with the professor Erich Zahn he was a co-founder

[25] Who we are. Corporate planning AG [online]. [cit. 2014-10-10]. Available at: http://www.cp-ag.com/index.php/uk/company/
[26] IDW - INFROMATIONSDIENST WISSENSCHAFT. [online]. [cit. 2014-10-10]. Available at: https://idw-online.de/en/

of Horvath&Partners Company that started to operate in 1981. As for now, it's an international company with more than 500 employees functioning in 11 countries.

According to the study of Utz Schäffer and Christoph Binder there were 72 chairs at the universities bearing the word controlling:

Figure 5: Development of controlling chairs at German-speaking universities between 1973 and 2004



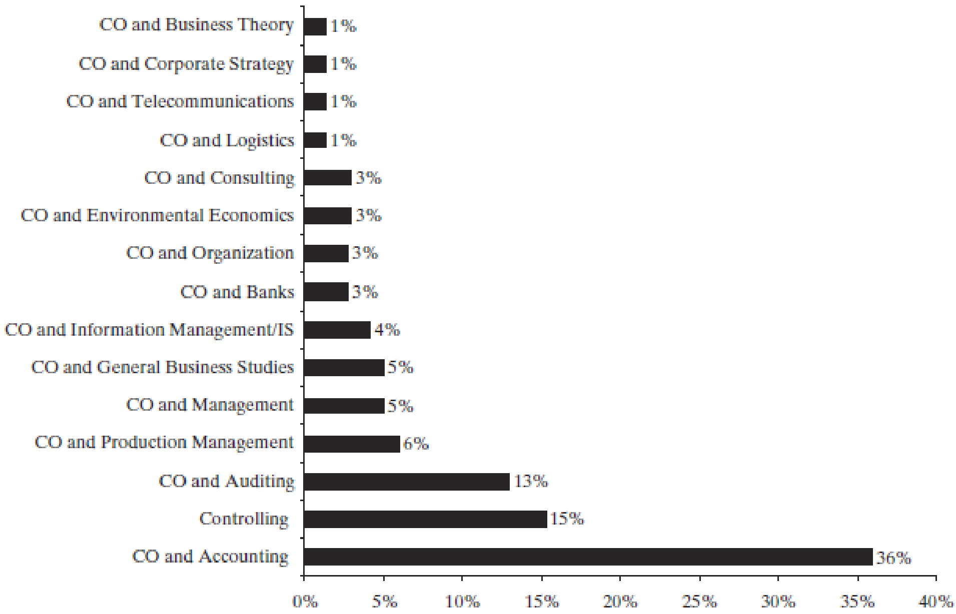
Source: SCHAFFER, U. a C. BINDER. "Controlling" as an academic discipline: the development of management accounting and management control research in German-speaking countries between 1970 and 2003. Accounting History. 2008-02-01, vol. 13, issue 1, p. 39. DOI: 10.1177/1032373207083926. Available at: http://ach.sagepub.com/cgi/doi/10.1177/1032373207083926

Apparently, the first two decades weren't much successful in terms of spreading controlling discipline among the universities. By 1990, there were only 22 chairs out of 92 business faculties. In 1990 the Reunification of German Democratic Republic and Federal Republic of Germany occurred. From 1990 to 1996 the number of chairs has increased more than twice. It's also obvious that the topic controlling gained in significance in the Former East Germany. In 2004 there were already 72 chairs including 14 chairs in the Former East Germany.

I suggest that such a rise can be explained by many reasons, but I suspect the three are prevailing. First, there was no demand for controlling in GDR (German Democratic Republic) since the economy was centrally planned. After the reunification, the former GDR part became a free market economy thus the need for new techniques in form of controlling appeared. The second reason may lie in demand for the graduates with controlling skills due to turbulent environment in modern World. The last, but not least motive is a general extension of controlling ideas.

As mentioned above, most of controlling chairs weren’t offered exclusively, but had been a part of more broad courses. The particular names of the courses as well as it range is depicted in the graph below:

Figure 6: Focus of controlling chairs (according to chair title)

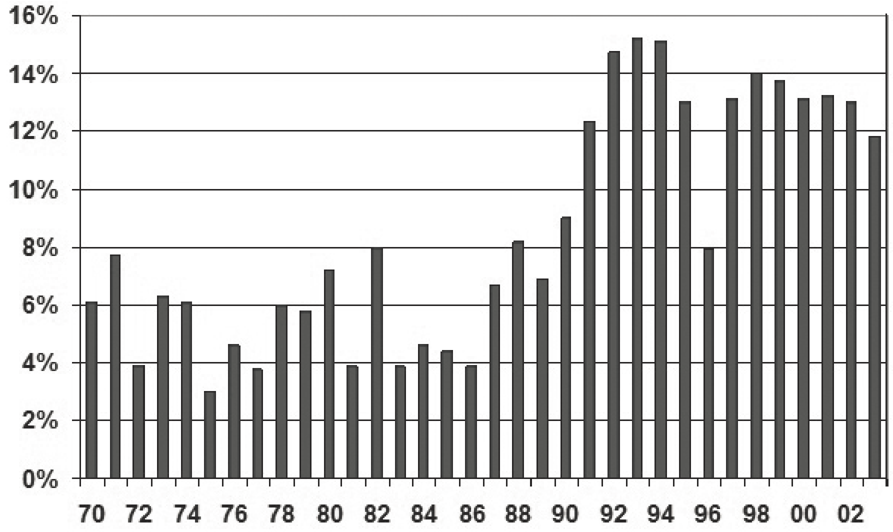


Source: SCHAFFER, U. a C. BINDER. "Controlling" as an academic discipline: the development of management accounting and management control research in German-speaking countries between 1970 and 2003. Accounting History. 2008-02-01, vol. 13, issue 1, p. 38. DOI: 10.1177/1032373207083926. Available at: http://ach.sagepub.com/cgi/doi/10.1177/1032373207083926

It’s obvious that controlling is still being taught together with other disciplines. Only 15% of chairs are exclusively devoted to controlling. The rest 85% are connected to other disciplines. Among them “Controlling and Accounting” and “Controlling and Auditing” along with pure “Controlling” forms a majority amounting to 64%.

Following the increasing number of chairs during the 1970-2003 period we can also track an increasing share of controlling-related articles in business administration journals:

Figure 7: The number of controlling-specific articles in German-language academic journals



Source: SCHAFFER, U. a C. BINDER. "Controlling" as an academic discipline: the development of management accounting and management control research in German-speaking countries between 1970 and 2003. Accounting History. 2008-02-01, vol. 13, issue 1, p. 46. DOI: 10.1177/1032373207083926. Available at: http://ach.sagepub.com/cgi/doi/10.1177/1032373207083926

From 1972 to 1990 the percentage of controlling articles never exceeded 10 % reaching around 6 % on average. The reunification of Germany as well as certain popularity of controlling supported and promoted by many proponents including Peter Horvath and Rolf Eschenbach led to a state when share of controlling articles in German-speaking world doubled amounting to 12 % on average during 1990 to 2000's timeframe.

During the time the topics that are discussed at university level have varied as well the importance of them have been changing from time to time. There were two notable researches carried out by the professor Bernard Hirsch from the University of Armed Forces in Munich in 2003 and the group of authors Wolfgang Becker Björn Baltzer and Liudmila Häusser from University of Bamberg in 2011.

Both researches among many other things pointed out which controlling techniques are mostly discussed in class. In both surveys the teachers represented by professors of German universities were asked to identify and mark the most popular and important controlling methods discussed in classes.

Table 4: The most popular and important controlling methods discussed in classes.

Rank	Hirsch (2003)	Becker/Baltzer/ Haeusser (2011)
1	(Traditional) Cost Accounting	Balanced Scorecard
2	(Strategic) Planning	(Traditional) Cost Accounting
3	Budgeting	(Strategic) Planning
4	Transfer Pricing	Budgeting
5	Balanced Scorecard	Portfolio Analysis
6	Key Performance Indicators	Key Performance Indicators
7	Investment Appraisal	Target Costing
8	Activity-based Costing	Profit Analysis
9	Profit Analysis	SWOT-Analysis
10	Various, e.g. Target Costing	Various, e.g. Benchmarking

Source: Own collaboration

If we compare both tables, we can outline that the topic “Balanced Scorecard” has gained in importance. Why is it so? The concept itself was proposed by professor of Harvard University Robert S. Kaplan and David Norton, an American management consultant. They released a book “The Balanced Scorecard: Translating Strategy into Action” in 1996 which has become somewhat a Bible of Balanced scorecard methodology.

Upon their opinion, the traditional financial measures such as return on capital, return on investment, payback period and many others didn’t offer a complete and fair overview of business performance. In turn, such incomplete information is kind of an obstacle in attempt to create a long-term business value.

As an outcome, they suggested a system which examines performance in four areas: financial analysis, the most traditionally used performance indicator, includes assessments of measures such as operating costs and return-on-investment; customer analysis looks at customer satisfaction and retention; internal analysis looks at production and innovation, measuring performance in terms of maximizing profit from current products and following indicators for future productivity; and finally, learning and growth analysis explores the effectiveness of management in terms of measures of employee satisfaction and retention and information system performance.

The methodology has become very popular throughout the time. According to 2GC Balanced Scorecard usage survey:[27]

- 31% of companies reported Balanced Scorecard as extremely helpful, 42% as a very helpful.
- 34% of interviewed companies use BSC for strategic management, 35% for reporting, 17% for operational management.
- 29% of companies used external consultants to design Balanced Scorecard.
- The most significant impacts of Balanced Scorecard implementation were found in business actions (83%) and behaviors (58%); Appraisal has impact of 63% and reward system has lower impact (about 30%).
- Most Balanced Scorecards were used for the purpose of planning (79%), budgeting (70%), goal setting (51%).

The spread of balanced scorecard methodology has affected German-speaking countries as well, that's why this topic has become more popular and more discussed not only on business level, but also at universities.

As for now, controlling is popular as never before. Controlling methods and techniques are no longer a case of pure profit organizations, but also a matter of interest of non-profit companies.

There is a strong positive attitude towards controlling in reforming countries, for example, the former states of Warsaw Pact. The state of controlling in these countries can't be described as developed since many companies are in process of implementing some basic tools of controlling such as budgeting, cost accounting, planning etc. Overall, controlling as any other discipline is changing within the permanently transforming environment and, from the other angle, the transforming environment calls up new challenges for controlling, both in academic and business spheres.

[27] Balanced Scorecard Usage Survey 2011 [online]. 2GC, 2011 [cit. 2014-11-23]. Available at: http://2gc.eu/files/resources/2GC-BSCSurvey110926Screen.pdf

4. The role of a management accountant

In this chapter I'd like to discuss the changing role of a management accountant in the today's world. The previous chapter gave an overview of what is the role of management accounting. My aim is to broaden and to explore in detail what are current capabilities and requirements for management accountants.

As was described earlier, the role of a management accounting has been constantly changing for many reasons. Since our goal is to assess the current status of management accountant profession, it would be appropriate to depict the environment in which accounting professionals work.

There is no dispute that the business environment has changed significantly over the last 2-3 decades. Competition has become more vital since the globalization united the economies of particular states into one system. Companies have to pay more attention to customer's needs and demands than it used to be before.

The new business environment has also evoked a huge revolution in number of corporate fields, for instance, the need for quality control increased, customer-focused approach has become predominant, the intellectual capital has gained in importance. The globalization trend has influenced the accounting craft, particularly the management accounting branch.

Throughout the time management accounting concepts and techniques has been transforming. We're in the phase when according to Gary Siegel and James E. Sorensen the pressure of globalization in form of stronger competition and advancement of technology put pressure to get information much sooner.

Nowadays management accounting plays much bigger role than it used to be. As a consequence, management accountants become more respectful and oriented on decision-making rather than being bean counters only. In order to support such a view let's address our attention to the IMA study conducted in 1999.

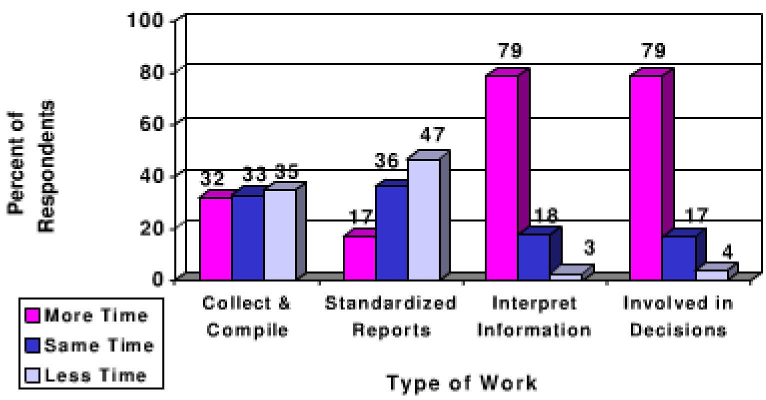
The Institute of Management Accountants (IMA) studied how the work of management accountants and their skills have changed over the past five year and what further changes would occur in the next three years.

The study is based on the experience of 300 practicing management accountants from the IMA and AICPA membership rosters. The respondents only with at least 7 years of experience were interviewed so that they were able to answer questions about the changes through the last 5 years. Furthermore, in-person interviews with management accountants at five companies known to be the leaders took place to ensure the validity of results.

Right in the beginning of the study the authors represented by principal investigators Gary Siegel and James E.Sorensen made a remark concerning the term “management accountant”. They stated: “The term ‘management accountant’ is prevalent in the academic accounting literature, but is rarely used in practice. Respondents refer to themselves as working 'in finance,’ as analysts, business partners, business managers, or controllers.”[28] Despite the diversity of names, the essence still remains the same.

The graph down below highlights the work conducted by management accountants:

Figure 8: Change in nature of work over the past five years, 1995-1999



Source: SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montreal, NC: Institute of Management Accountants, 1999, s. 11.

One can observe that the collection and compiling information activity still remains the core for management accountants. Barely 35 % of respondents spend less time on it, on the other hand, 30 % indicated they spend more.

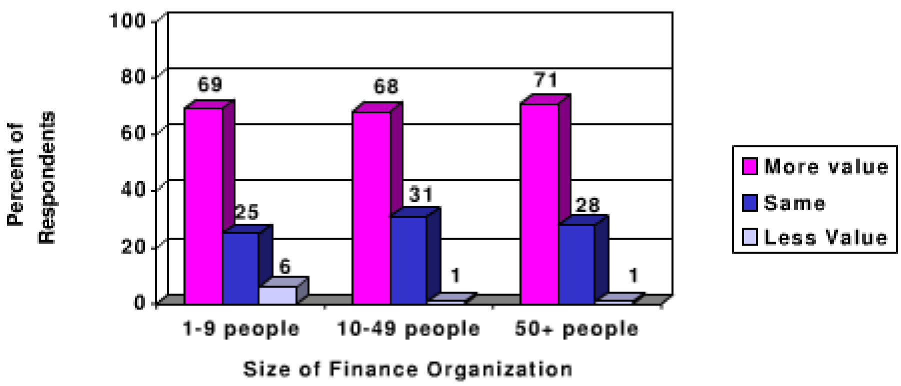
28 SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montrale, NC: Institute of Management Accountants, 1999, p. 8.

It's clearly evident that almost 50 % respondents spend less time preparing standardized reports than it was so 5 years ago. Nearly third the respondents spend the same time and only 17 % devoted more time to this activity.

The most interesting results can be found within the next two categories: "interpret information" and "involved in decisions". In both cases almost 80 % of accounting professionals admitted the increase in time spent on interpretation of information as well as they were more intensively involved in decision-making. Less than the fifth part indicated that they spend the same time on interpretation of information and decision making. There were also respondents who stated that they spend less time on above mentioned activities, but the percent of them is really low to be further investigated and examined.

The study took a look into the image of management accountants. It was revealed that the perception of management accountants by people outside the finance field has changed.

Figure 9: Change in perceived value of the finance function, 1995-1999

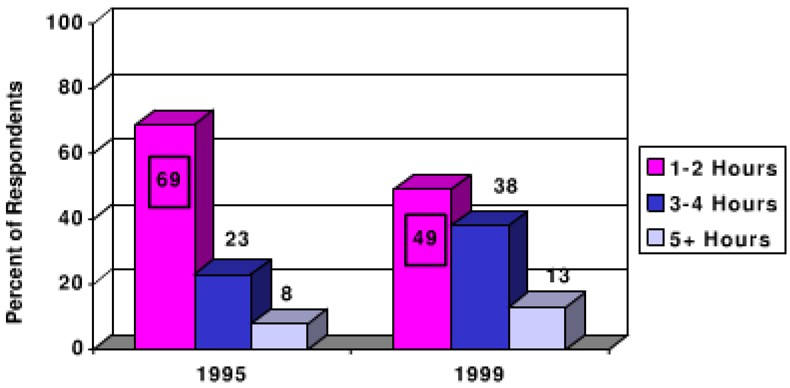


Source: SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montrale, NC: Institute of Management Accountants, 1999, p. 13.

Around 70 % of respondents agreed that management accountants bring more value to the company, a negligible part of respondents, however, believed that management accountants bring less value to the company.

The graph below represents change in hours spent sharing business information. It covers the period from 1995 to 1999.

Figure 10: Hours per day spent sharing business information, 1995-1999

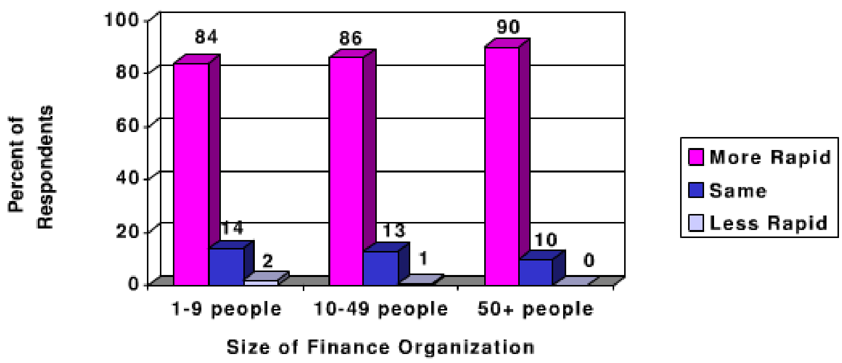


Source: SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montreal, NC: Institute of Management Accountants, 1999, p. 17.

Given quite a short period of time (5 years), the results are more than satisfying and optimistic. Such evidence proves that management accountants have become a part of broader teams meaning they spend more of their time communicating with others. The number of respondents who spent 1-2 hours on sharing business information decreased by 20 % in 5 years while an increase of 15 % can be observed in the group of respondents spending 3-4 hours. A 5 % growth is evident in the group of accounting professionals who spend more than 5 hours on sharing business information.

Among the number of findings the researchers found out that environment became more rapid. The changes that management accountants faced were accelerating. Most of respondents admitted that the rate of change in the finance function had become more rapid comparing to the 1990-1995 period.

Figure 11: Rate of change in the finance function over the past five years, 1995-1999



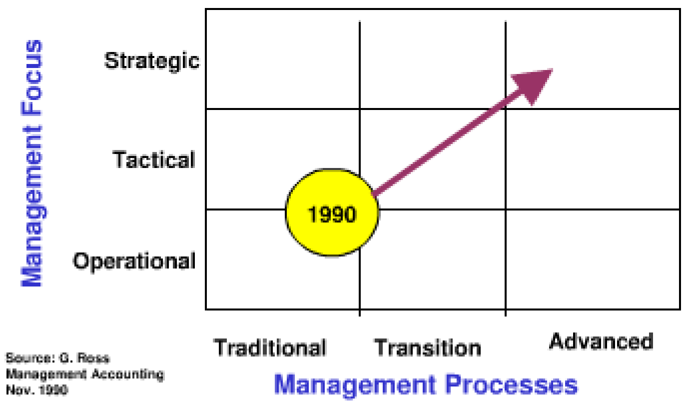
Source: SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montreal, NC: Institute of Management Accountants, 1999, p. 21.

As the business environment was changing, the attitude of management accountants toward the work they were doing changed too. They predicted that the trend towards business partnering would continue with the following characteristics:

1) Reporting of information would become less intensive, planning and analysis would increase their role.
2) Consulting and partnering would gain in importance due to rapidly altering business area.
3) They insisted that they would spend more time being connected with operations directly rather than being just providers of information.
4) Decision-making would become a sort of daily work.

It's obvious that management accounting has been heading to become not a pure accounting discipline, but to become a part of strategic decision-making. The authors published a standpoint of Gerald Gross who predicted in his Management accounting article that "to survive as a profession in a new technological world, management accountants should begin to use more sophisticated tools and become involved in strategic level in their companies."

Figure 12: Where the profession is headed



Source: SIEGEL, Gary a James E. SORENSEN. Counting More, Counting Less. Montreal, NC: Institute of Management Accountants, 1999, p. 25.

A vital and strategic meaning of management accounting for an enterprise well-being, however, wasn't firstly predicted by Gerald Gross. Not to underestimate his achievement, but for the sake of truth we shall appeal to Ken Simmonds who introduced the term "strategic management accounting" in 1981.

The term strategic management accounting (SMA) has been used to describe the process of ‘provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring business strategy’.[29] Later on, the definition was subsumed by the CIMA: “A form of management accounting in which emphasis is placed on information which relates to factors external to the firm, as well as non-financial information and internally generated information.”[30]

He argued that management accounting should not assess the internal processes, but become somewhat a tool to gain a comparative advantage over competitors in the market. He concentrated his attention on movement of market share and saw management accounting as a mean to help a company to maintain a right strategy to obtain the biggest share in market which would inevitably force the competitors to leave the market.

Charles T.Horngren along with Srikant M. Datar and Madhav V. Rajan in their book “Cost Accounting: A Managerial Emphasis” use the term strategic cost management which, in fact, has the same purpose as the strategic management accounting.

The authors recognize that management accountants are those who work closely with managers to help them in maintaining a strategy based on “the sources of competitive advantage—for example, the cost, productivity, or efficiency advantage of their company relative to competitors or the premium prices, a company can charge relative to the costs of adding features that make its products or services distinctive.”[31] In other words, strategic cost management in a narrower meaning is a set of techniques which exclusively apply on strategic matters of an enterprise.

A towering role of management accountants was acknowledged in the IFAC study “Competency profiles for management accounting practice and practitioners” by William Birkett from 2002. The study deals with development of competences that would ensure an efficient use of the organizations’ resources towards the value creation. The study recognizes management accounting as a branch of a management which adds value for shareholders by permanently chasing the effectiveness of resources used.

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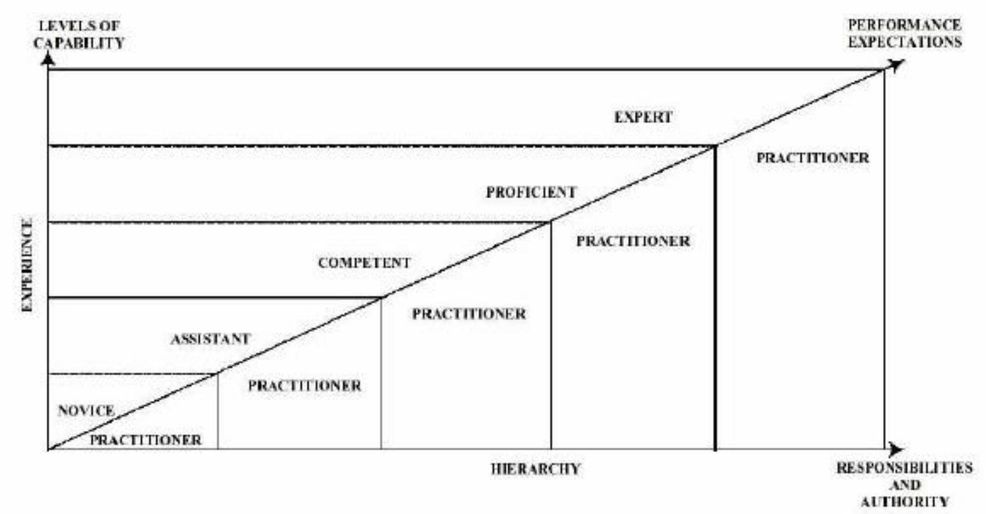
[29] SIMMONDS, K. 1981. ‘*Strategic management accounting*’, Management Accounting, 59(4), p.26–29.

[30] WILCOX, Kate. CIMA official terminology. 2005 ed. Amsterdam: CIMA, 2005, p. 54. ISBN 9780750668279.

[31] HORNGREN, Charles T, Srikant M DATAR a Madhav V RAJAN. Cost accounting: a managerial emphasis. 14th ed. Upper Saddle River, N.J.: Pearson/Prentice Hall, c2012, p. 5. ISBN 0132109174.

The study attempts to associate competency and the performance expectations of a management accountant and to define the role of management accountant. The study deals with 5 types of management accounting practitioners who differ one from each other in level of performance, responsibilities and experience:

Figure 13: Roles in management accounting



Source: BIRKETT, William P. Competency profiles for management accounting practice and practitioners. New York, N.Y.: International Federation of Accountants, Financial and Management Accounting Committee, c2002, p. 47.. ISBN 188746462x

The graph above represents the dependence of experience on hierarchy of a management accountant. It suggests that more experienced accountants are equipped with more capabilities which, in turn, assure higher performance expectations. As a result, an increase in experience, responsibility and authority shifts a management accountant in the hierarchy. What are then the different roles which distinguish the distinction between novice practitioners and, for instance, expert practitioners? The table below explains it in detail:

Table 5: Performance expectations

Novice practitioner	Assistant practitioner	Competent practitioner	Proficient practitioner	Expert practitioner
Assist Participate Display	Assist Participate Liaise	Perform Contribute Collaborate Liaise Monitor Respond Report Develop Manage	Perform Collaborate Direct Liaise Propose/advise Negotiate Represent Consult Develop Establish Manage Lead	Initiate Institute Approve Review Secure Liaise Negotiate Represent Contribute Build Realize Sustain Manage Lead

Source: EDITORS, Jane Baxter. Practices, profession and pedagogy in accounting: essays in honour of Bill Birkett. Sydney, N.S.W: Sydney University Press, 2009, p. 357. ISBN 9781920899202.

Since pure words don't tell everything, I believe there is a need to explore the differences between each stage of hierarchy more convincingly. According to the IFAC study, novice practitioner is a body who understands the management accounting function as a way to help the organization to create "add value" and shows interest in developing personal capabilities and skills to better fit the management accounting function.

Assistant practitioners should be able to demonstrate the awareness of processes and employ capabilities of management accounting function to maximize the positive effect on enterprise. Moreover, they should focus on adding value and move forward onto business support role.

Competent practitioners should be not only aware of processes, but understand them. They should further develop the capabilities of the Management Accounting Function for maximum organizational effect. Furthermore, one of the main tasks is to plan and develop their personal skills to meet increasing requirements in accordance with the hierarchy model.

Proficient practitioners are involved in strategic issues more than the first three. They are responsible for establishing a long-run vision for the function through developing initiatives. What is more, their task contains assigning work responsibilities within the Function as well as monitoring the performance. Last but not least, it's their goal to assess the progress of the Function exploring how well the capabilities are advancing.

Expert practitioners are the very last stage. They establish a comprehensive picture of the role of the Management Accounting Function. Once the picture is identified, they set directions for the Function. In addition, they formulate and plan the developmental map for the Function in specific terms. They are also responsible for assessing of present and future outcomes.

To sum up, all the above mentioned bodies to lesser or bigger extent contribute to the value of a company. As the study conducted by IMA in 1999, the study by IFAC 3 years later verified and confirmed a strengthening role of management accountants.

Shall we explore modern literature regarding the question of how management accountants can contribute to company's success; let's address our attention to 5 points formulated by Professor of accounting Ronald W. Hilton from Cornell University. According to him "managerial accountants add value to an organization by pursuing five major objectives:

1. Providing information for decision making and planning, and proactively participating as part of the management team in the decision-making and planning processes.
2. Assisting managers in directing and controlling operational activities.
3. Motivating managers and other employees toward the organization's goals.
4. Measuring the performance of activities, subunits, managers, and other employees within the organization.
5. Assessing the organization's competitive position, and working with other managers to ensure the organization's long-run competitiveness in its industry."[32]

The author explains each of 5 points based on the Disney's experience of building the Animal Kingdom. The author stresses the importance of management accountants by explaining that such strategic decision as a new theme park would be intensively negotiated and consulted with accounting professionals to find out the costs of building and its operational costs throughout its life. A part of an analysis would be a budget with detailed future revenues and costs.

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[32] HILTON, Ronald W. Managerial accounting: creating value in a dynamic business environment. 9th ed. New York: McGraw-Hill/Irwin, c2011. ISBN 0078110912. Available at: https://www.inkling.com/read/managerial-accounting-ronald-hilton-9th/chapter-1/how-managerial-accounting-adds

He outlines the **attention-directing function** of management accountants that aims to inform and point out to managers about the issues which requires their attention and action.

The author sees the role of management accountants in motivating the employees on different levels including top managers toward the common organizational goals. He presumes that budgeting could be a medium in this case. Once the budget is established and resources are allocated, then possible deviations should be explained and necessary steps should be done.

Along with tracking the performance of company as whole, management accountants also measure the performance of various parts of the company and, what is more, they figure out the performance of the individuals, namely progress in achieving the company's goals. Measured performance then could become a basis for calculating bonuses, providing promotions or increasing salaries.

The last, but not least professor Hilton indicates how the changing business environment affects the role of managerial accountant. Nowadays management accountant are ought to continuously assess the firm's position against the competition in the market "with an eye toward continuously improving".[33]

The roles of management accountants may differ depending on the size, type, internal culture, industry and many other factors. I assume that the role of management accountants is constantly changing due to turbulent business environment. The market circumstances along with the increasing role of intellectual property provided by human capital impose strong pressure on management to achieve better results. As a consequence, the management can attain better result by engaging all employees in decision-making process. From only providing information for the purpose of internal business activity, management accounting as a discipline and management accountants as practitioners already moved towards creating value demanded by customer and other stakeholders.

[33] How Managerial Accounting Adds Value to the Organization [online]. [cit. 2014-11-01]. Available at: https://www.inkling.com/read/managerial-accounting-ronald-hilton-9th/chapter-1/how-managerial-accounting-adds

5. The role of a controller

In this chapter, the main attention is devoted to the role of a controller in an organization. I’d like to designate the traditional role of the controller and concentrate on the modern position of the controller in an enterprise. I assume the explanation of controller’s role will also provide a mutual comparison with the management accountant’s role.

Professor Jerold L.Zimmerman describes the controller as “the firm’s chief management accountant and (who) is responsible for data collection and reporting. The controller compiles the data for balance sheets and income statements and for preparing the firm’s tax returns. In addition, this person prepares the internal reports for the various divisions and departments within the firm and helps the other managers by providing them with the data necessary to make decisions—as well as the data necessary to evaluate these managers’ performance.”[34]

He differentiates the various levels of the controller function in the organization stating that in most big organizations there are controllers who are responsible for only a certain part of business, for instance, a manufacturing plant and are obliged to report not only to a plant manager, but also to a corporate controller. He emphasizes the role of the controller as a decision-making and control assistant: “The controller must balance providing information to other managers for decision making against providing monitoring information to top executives for use in controlling the behavior of lower-level managers.”[35]

Steven M. Bragg compares the controller to “the ship’s navigator, who warns the captain of current or foreseeable problems in the shoals of the business environment that lie ahead and on all sides.”[36]

As many other authors, Mr. Bragg outlines the most essential and widely broaden functions performed by the controller. Among them are planning, organizing, directing, measuring, financial analysis and process analysis. While the first four are more or less

[34] ZIMMERMAN, Jerold L. Accounting for decision making and control. 7th ed. New York: McGraw-Hill/Irwin, c2011, p. 10-11. ISBN 0078136725-

[35] ZIMMERMAN, Jerold L. Accounting for decision making and control. 7th ed. New York: McGraw-Hill/Irwin, c2011, p. 11. ISBN 0078136725-

[36] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p. 1. ISBN 0470937424.

common for any management position, the last two can be regarded as the functions that make the controller a bit different actor in the management team. The author recognizes the role of the controller as a person who should have "excellent communication skills"[37] in order to distribute sensitive and essential information to the management team.

One may ask: "Is it ever possible for the controller to be involved in all 6 functions and fulfill them entirely?" Of course, it isn't so. Steven Bragg argues that "the controller primarily manages the work of other people"[38]. The statement acknowledges the rising importance of controllers and proves their management oriented role.

The author sees the complexity of the controller's role and recommends that a successful controller should possess 6 key qualifications: analysis of information, communication ability, company and industry knowledge, management skill, provision of timely cost-effective services and technical knowledge.

Both the analysis of information and the communication ability are the base for successful interaction with the management team. The controller has to understand financial information and compile various financial ratios and indicators in order to present them to the management in such way that every member will be able to puzzle out the most relevant and crucial information.

The good comprehension of company and industry is needed for the controller to make correct predictions on the impact of the accounting division. Accounting systems of companies operating in different industries vary significantly. For instance, a manufacturing company accounting is something dissimilar compared to purely services providing company. The understanding of such distinctions is a matter of professionalism of the controller.

The management skill is indispensable for the controllers of higher standing in the organizational hierarchy. It's assumed that the controller will lead a group of subordinates. Apparently, an interaction with them can be efficient only in case the controller is well

[37] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p. 2. ISBN 0470937424.
[38] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p. 5. ISBN 0470937424.

equipped with management knowledge including planning, organizing, directing and measuring functions.

By provision of timely and cost-effective services Mr. Bragg means, first of all, a way of how the controller needs to lead the accounting department stating that "the most efficient methods are used to complete each task and the attention of the department is focused squarely on the most urgent tasks."[39]

Technical knowledge is the last, but not the least point mentioned by the author. He appeals to the regulations and accounting rules which are widely accepted in the world and which may vary in details. The knowledge of GAAP and IFRS principles allows the controllers to prepare accurate financial statements.

Mr. Bragg paid his attention to the ethics of the controller's work. He has concerns that the controller may swindle financial statements, for example, due to monetary imperfectness in a way that they represent much better financial position of the company until "management suddenly finds that the entire company is rife with ethical problems of all kinds."[40] The author sees the role of the controller as an initiator who must persuade the management to introduce ethical standards that would underlie all company operations and therefore the whole company.

International Group of Controlling in controller's mission statement defined the five points upon which controllers should act:

1. design and accompany the management process of defining goals, planning and management control so that every decision maker can act in accordance with agreed objectives.

2. ensure the conscious preoccupation with the future and thus make it possible to take advantage of opportunities and manage risks.

3. integrate an organization's goals and plans into a cohesive whole.

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[39] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p. 6. ISBN 0470937424.

[40] BRAGG, Steven M. The controller's function: the work of the managerial accountant. 4th ed. Hoboken, N.J.: Wiley, c2011, p.11. ISBN 0470937424.

4. develop and maintain all management control systems. They ensure the quality of data and provide decision-relevant information.

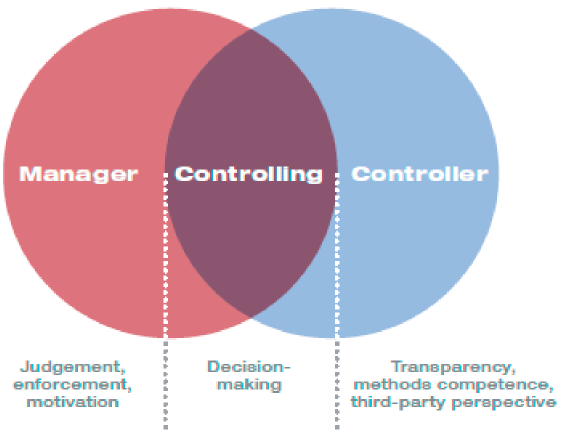
5. are the economic conscience and thus committed to the good of an organization as a whole."[41]

All the points formulated by the IGC have a strategic underlying meaning and emphasize the increasing role of the controlling as a discipline and the controllers as representatives of the profession.

It would quite a big oversight to skip the publication of the International Controller Association and the International Group of Controlling named "The essence of Controlling – The perspective of ICV and IGC". The aim of the paper is to review the term "Controlling" as well as the role of the modern controller.

The authors represented by Siegfried Gänßlen, Heimo Losbichler, Rita Niedermayr, Lukas Rieder, Utz Schäffer and Jürgen Weber share the view of Albrech Deyhle on the role of the controller; someone who generates the controlling field along with the manager:

Figure 14: Set diagram of intersection adapted from Albrecht Deyhle



Source: Perspective of the International Controller Association (ICV) and the International Group of Controlling (IGC). International Controller Association (ICV) and International Group of Controlling (IGC) [online], 2012, p.4 [cit. 2014-10-25]. Available at: http://www.igc-controlling.org/img/pdf/grundsatzposition_e.pdf

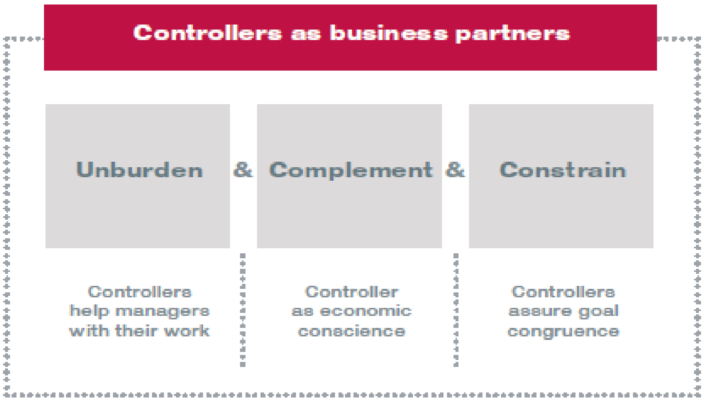
The paper examines in which ways controllers can support managers so that the interaction between them is effective. The authors foresee the controller's role as

[41] Controller's mission statement. International Group of Controlling [online]. [cit. 2014-10-25]. Available at: http://www.igc-controlling.org/img/pdf/controller-en-2013.pdf

complementary and supplementary. They presume that controllers can ease the manager's responsibilities by taking over the task in which controllers can be successful, for example, organizing or planning matters. They stress the controller's role as a preventer of ineffective decisions which can be made by the management. They also outline an adaptive role of the controller who should "need to adjust to the individuality of each manager accordingly" because every manager possesses different skills, experience etc.

As the study conducted by IMA (refer to the chapter "The role of a management accountant") has shown the growing importance of management accountants, the same outcome can be traced through the paper "The essence of Controlling – the perspective of ICV and IGC". Weber and Schaffer suggest that controllers and managers should work hand in hand. Managers are supposed to set up the goals while controllers need to "act as proactive, complementing partners of management". As well as professor Jerold L.Zimmerman, the authors emphasizes the balancing role of the controller. According to them, the controller should be a part of management process proactively participating in decision-making; however, he has to perform a function "as guardian of company interests and critical counterpart or sparring partner ("involvement versus independence")."

Figure 15: Management support by controllers according to Weber/ Schäffer



Source: Perspective of the International Controller Association (ICV) and the International Group of Controlling (IGC). International Controller Association (ICV) and International Group of Controlling (IGC) [online], 2012, p.5 [cit. 2014-10-25]. Available at: http://www.igc-controlling.org/img/pdf/grundsatzposition_e.pdf

There are five areas in which controllers can assist managers according to the study:

1) Economic transparency. The controller should ensure that all business results, processes and strategy are transparent and understood by the management correctly.
2) Controllers are responsible for participation in defining goals, planning and management control procedures as well as they ought to contribute to the goal-setting by critical assessment.
3) The coordination function. Since controllers are interlacing through different departments on various levels of the enterprise, their goal is to ensure coherence between the particular plans.
4) Controllers are the ones who along with managers configure and make possible a mutual cooperation between management control systems. The authors point out that "management often lacks the time, interest and expert skills to carry it out ("the controller as a specialist for methods and systems")."
5) Controllers should proceed with typical tasks, but also to be kind of consultants who would help managers in decision-making for the future-related goals.

The ICV and the IGC formulated the sixth core competencies that controllers should have in order to establish a strong support for managers:

Figure 16: Core competencies of controllers

Source: Perspective of the International Controller Association (ICV) and the International Group of Controlling (IGC). International Controller Association (ICV) and International Group of Controlling (IGC) [online], 2012, p.6 [cit. 2014-10-25]. Available at: http://www.igc-controlling.org/img/pdf/grundsatzposition_e.pdf

Once we compare the above mentioned skills with the Mr. Bragg's ones, we can see that they more or less repeat each other, although some differences are visible. In my opinion, the most interesting point out of the six is the behavioral knowledge (psycho-"logic"). Many authors including the above mentioned have concluded that successful interaction between controllers and managers is key success for defining and executing the goals of a company. Despite this fact only few deal with this matter particularly.

Recently Peter Horvath and Andreas Aschenbrucker issued an article "What makes controllers (more) successful: it's all about behavior!" The authors explored the essence of decision-making behavior and how it has changed over the time. The look deeply into the logic of interaction between the individuals and what lies behind it.

Peter Horvath and Andreas Aschenbrucker appeal to Albrecht Deyhle who supposed that listing all the facts about the matter is not enough for successful interaction and decision-making, but the "psycho-logic" has to be considered as well.

They start with rather controversial title "The homo oeconomicus is dead!" where explain that the theory of unbounded rationality is obsolete in nowadays world because nobody can fully understand and possess all the benefits and disadvantages of all the options. Should we consider such a perfect logic and suppose the rational behavior exists in full extent, then it would be enough to serve the managers with all relevant information so that they could make an optimal decision.

In 1950's Herbert Simon dispelled the theory of unbounded rationality and proved that people can't make absolutely rational decision and came up with the theory of bounded rationality which is now broadly accepted. According to this theory, people look for a satisfactory solutions rather than the best possible.

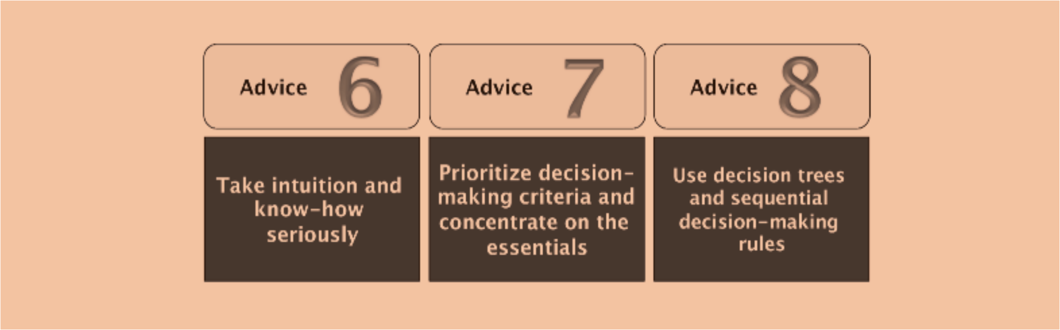
Later on, as pointed out by the authors, the ABC group leading by Gerd Gigerenzer found out that "simple problem- solving and decision-making strategies that ignore information — often require little effort and lead to good or even better results." The authors made a conclusion that "the goal of decision-making is not to find the optimum solution to a problem, but to use Simon's concept of satisficing to find a satisfactory solution".

The researchers discuss the cognitive biases and the use of fast and frugal heuristics in management work and provide some valuable advices on how together controllers and managers may eliminate the flaws in decision-making behavior:

Figure 17: Recommendations on How Managers and Controllers Can Be Sensitized to Cognitive Biases in Their Decision-Making Behavior

Source: HORVATH, P. a A. ASCHENBRUCKER. What makes controllers (more) successful: It's all about behavior!" Summary. Cost Management (November/December), 2013, p. 23

Figure 18: Recommendations on Possibilities and Requirements for Using the Fast and and Frugal Heuristics



Source: HORVATH, P. a A. ASCHENBRUCKER. What makes controllers (more) successful: It's all about behavior!" Summary. Cost Management (November/December), 2013, p. 23

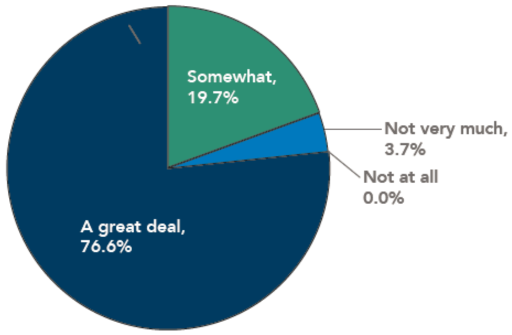
In their opinion, the two models of decision-making are not complementary since they contradict each other: "The use of fast and frugal heuristics leads to efficient and satisfactory solutions, and the use of heuristics leads to cognitive bias, respectively. This is due to differences in what is understood by the term "heuristics."

One of the latest researches on the controller's role was provided by the IMA (Association of Accountants and Financial Professionals in Business). Titled "Evolving Role of the Controller" it has been compiled by the two authors – Denis Desroches and Raef Lawson.

The paper focuses on the changing role of the financial controller with the past three years and is based on 567 received responses out of 6531 surveys sent. The respondents were mainly represented by controllers (81,69 %) finance and accounting managers (7,00 %) and finance directors (5,39 %). The research aims to contribute to understanding the modern role of the financial controller and how their own perception of the controller's role has changed through the last three years. The respondents were asked quite a number of questions. I would like to cover the most meaningful ones.

The respondents were asked the question: "To What Extent Is Adding Value to Your Organization a Priority?"

Figure 19: To What Extent Is Adding Value to Your Organization a Priority?

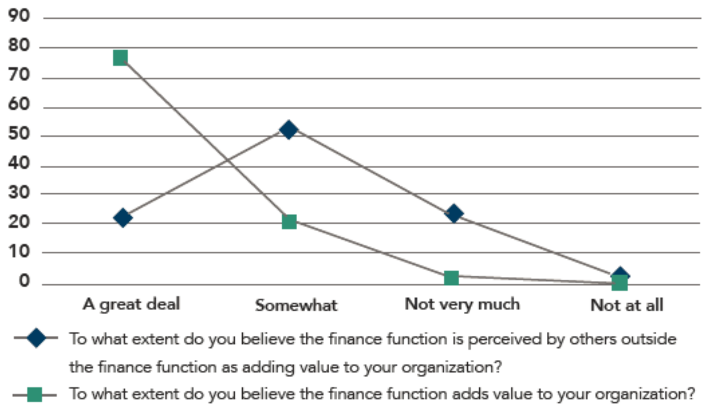


Source:DESROCHES, Denis a Raef LAWSON. Evolving Role of the Controller. Institute of Management Accountants, 2013, p. 6.

The vast majority of respondents admitted that adding value to the organization has become "a great deal" and is a high priority matter, around 20 % agreed that it's partly prioritized activity and only 3,7 % didn't feel that adding value to the organization could be considered as an important task for them.

It's rather interesting and unexpected, but the respondents perceive that their role for the outside staff isn't seen the same:

Figure 20: Extent that Finance Function Adds Value to the Organization



Source:DESROCHES, Denis a Raef LAWSON. Evolving Role of the Controller. Institute of Management Accountants, 2013, p. 6.

Only 20 % believe that their role is perceived by those outside of the finance area as adding value to the organization, more than 50 % suspect that they are seen as adding value to the organization to some particular, not very high extent, more than 20 % answered with “not very much”.

The authors recognize the three reasons of such a variance. First, the reason lies in “lack of understanding by others as to the contribution of the finance function. Second, controllers and financial professionals aren’t communicating good enough to present their contributions to other staff in the company. Finally, “a corporate culture that does not enable finance to sufficiently contribute to the organization.”[42]

The paper also covered the question regarding the changing role of the controller within the last three years, namely about the position (more strategic or tactic oriented) of the controller.

[42] **DESROCHES, Denis a Raef LAWSON. Evolving Role of the Controller. Institute of Management Accountants, 2013, p. 5.**

Figure 21: How has the Role of Senior Finance Professional in Your Organization Changed in the Past Three Years?

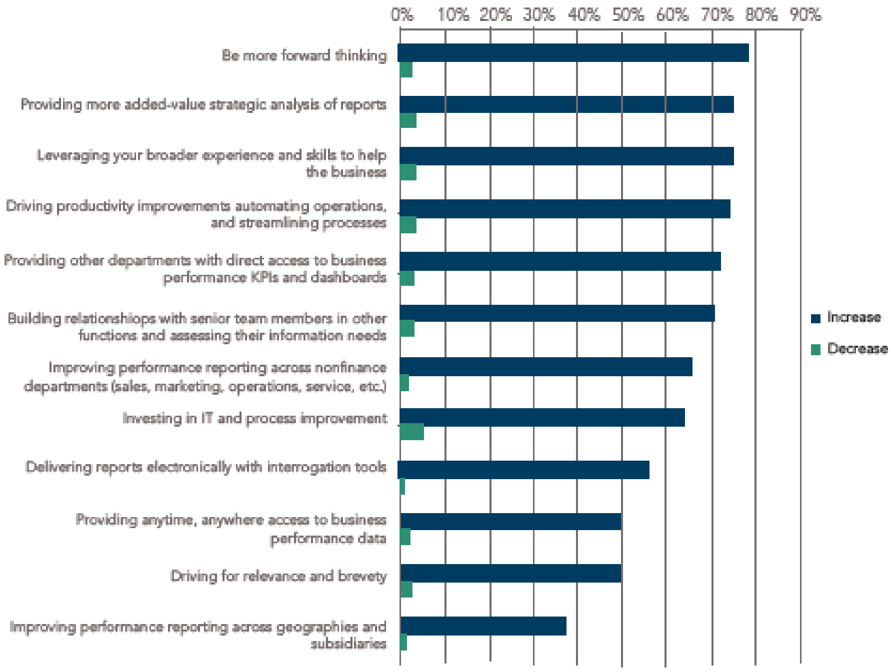
The role entails more responsibility than it used to—senior finance professionals are more directly involved in strategic decision making and analysis in addition to day-to-day finance execution and other responsibilities.	52.9%
The role has become more about strategic decision-making analysis, while senior finance professionals'direct role in day-to-day finance execution has been reduced.	26.9%
The role has become less strategic and more about day-to-day finance execution.	8.5%
The role has changed very little or not at all.	11.8%

Source: DESROCHES, Denis a Raef LAWSON. Evolving Role of the Controller. Institute of Management Accountants, 2013, p. 5.

The absolute majority amounting to 79,8 % noted the increasing responsibility as well as much higher involvement in strategic decision-making than it used to be before. Along with that, they also recognized the reduction in day-to-day typical finance activities. Surprisingly, 8,5 % noted an opposite trend – more day-to-day activities rather than strategic matters.

The authors asked the survey respondents about the changes on how they spent time over the last 3 years:

Figure 22: How CFO Time Spent has Changed in the Past Three Years?



Source: DESROCHES, Denis a Raef LAWSON. Evolving Role of the Controller. Institute of Management Accountants, 2013, p. 8.

Evidently, the strategy-related topics aimed at future have become more demanding for the controllers. Around three third of interviewed professionals admitted the need to apply more forward-thinking skills. Furthermore, the demand for providing more added-value analysis of reports increased significantly, which is supported by around 75 % of respondents. Moreover, the controllers indicated that their skills and experience have become vital to help business in decision-making.

All in all, as within the management accounting, the trend within controlling is similar: management accountants and controllers are now involved more in strategic decision-making by assisting the management in goal determination and its execution. They certainly have become business partners. They are not “bean” counters or purely the analysts of financial information anymore.

Conclusion

The main goal of this work was to provide a comparison between management accounting and controlling. The three dimensions were chosen as the most influential. First, the attention was paid at the description of management accounting and controlling. Second, I looked into social and historical development of both disciplines. Finally, the investigation of the capabilities and the responsibilities of managerial accountants and controllers was carried on.

Management accounting and controlling are the fields which main aim is to help with governing the enterprise on operational and strategic levels through the number of techniques and tools. While the term management accounting is widely spread in English-speaking countries, controlling as a term is mostly circulated in German-speaking countries, mainly in Germany, Austria and Switzerland. In the article “Experiencing change in German controlling: management accounting in a globalizing world” the authors stated “There is seldom anyone who would be labelled as a (or the) management accountant in German companies.”[43]

Professor Kupper recognizes the paradox between the terms and states that in contrast to the Anglophone label “management accounting”, the term “controlling” is generally used in Germany as a description of the field of activity of management accountants.[44]

Shall we appeal to the differences between the examined disciplines in terms of techniques and tools used, we will barely find some. The study conducted by the CIMA pointed out that “There is certainly overlap between the techniques and functions of management accounting in the UK and those carried out by a controller in Germany, but it is not complete.”[45]

The slight difference can be seen in regards to the use of non-financial information. In German-speaking countries controlling in the current state is mostly aimed at providing

[43] Research executive summaries series [online]. CIMA [cit. 2014-11-10]. p.3 ISSN 1744-7038. Available at:http://www.cimaglobal.com/Thought-leadership/Research-topics/Management-and-financial-accounting/Experiencing-change-in-German-controlling-management-accounting-in-a-globalising-world-

[44] KÜPPER, Hans-Ulrich. Controlling: Konzeption, Aufgaben und Instrumente. 4., überarb. Aufl. Stuttgart: Schäffer-Poeschel, 2005, p. 4-6 ISBN 978-379-1022-994.

[45] Research executive summaries series [online]. CIMA [cit. 2014-11-10]. p.3 ISSN 1744-7038. Available at:http://www.cimaglobal.com/Thought-leadership/Research-topics/Management-and-financial-accounting/Experiencing-change-in-German-controlling-management-accounting-in-a-globalising-world-

financial figures such as EBIT, volume of sales or overall productions expenses, while management accounting in Anglophone countries pays more attention to non-financial information related to sustainability reporting, corporate social responsibility reporting or environmental reporting.

From the historical point of view, management accounting in its simple form had been in operation since the 1850's when couple of large companies used cost accounting practices to establish the prices or to assign different expenses.

Later, after the World War II it was a presumption that cost accounting needed to be revised as it didn't fit then current needs. Since the environment was rather stable and cost accounting practices were more or less standardized, there was a demand to enrich cost accounting with managerial approach towards governing the company. There was a certain and straight tendency to combine cost accounting and decision-making process in a way that cost accounting techniques would support decision-making process thus enabling the management to make more efficient decisions. The term management accounting had become a generally accepted.

Shall we appeal to the modern times; we may notice that management accounting has transformed a lot due to the obvious reasons such as the emergence of international markets, high competition and information boom. The rapid growth of western economies was accompanied with rising demand for goods and services from customer therefore companies had to adapt new strategies to satisfy growing needs. Management accounting started to lack the qualities that management of the company needed to have to be effective in decision-making.

Management accounting had to change itself into a modern adding-value field rather than being pure cost-oriented. To fill the gap, there were found numerous techniques and tools such as SWOT-analysis, balanced scorecard or competitor's analysis. Consequently, the role of management accounting as a strategic tool has prevailed.

Controlling as a discipline migrated from the United States of America after the World War II when many big American companies opened their subsidiaries in Germany thus the techniques and tools used in American enterprises moved to the German ones. Apparently, controlling in Germany followed the trends of management accounting to some extent. It, however, should be emphasized that management accounting throughout the history was more practical instrument rather than theoretical. On contrary, controlling as a field gained its popularity and importance in academic literature. This standpoint is supported by number of researches conducted on universities level and described in chapter 3 of this work.

If we focus our attention at the roles of the management accountant and the controller in the enterprise, we won't notice any big difference since the two disciplines are overlapping each other as outlined earlier.

For the sake of truth, we need to mention that in practice the position of management accountant is rather seldom as the majority of professionals consider themselves as business partners or business managers. The studies I looked through has shown the growing importance of the management accountant as a body who stands almost on the one level with management of the company and assists with decision-making, even on the very top level.

What is more, the value-adding role of management accountants is evident. They not only stick to the financial accounts, but also assess the competitive position of the company and the performance of particular companies' units. Also, their involvement is seen across the whole company as they may play a role of intermediaries who engage all employees in decision-making by implementing the system of performance indicators.

The above mentioned can be fully applied to the position of the controller in the enterprise. The growing importance of the controller has been supported by several studies. In other words, there is no place in the company for the controller as a pure "bean counter". The changes in the environment have led to the changes in profession. Controllers have become a confident business partners who are responsible for strategic matters of the enterprise along with the management team.

List of figures

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