MARTA KAWCZYŃSKA
TOMASZ WNUK-PEL

The role and functions of controllers in organization management

The role and functions of controllers in organization management

WYDAWNICTWO
UNIWERSYTETU
ŁÓDZKIEGO

MARTA KAWCZYŃSKA
TOMASZ WNUK-PEL

The role and functions of controllers in organization management

WYDAWNICTWO
UNIWERSYTETU
ŁÓDZKIEGO
ŁÓDŹ 2016

Marta Kawczyńska, Tomasz Wnuk-Pel – University of Łódź, Faculty of Management
22/26 Matejki St., 90-237 Łódź

REVIEWER
Lina Dagiliene

INITIATING EDITOR
Monika Borowczyk

TRANSLATOR
Karolina Pel

LANGUAGE CORRECTION
Mark Muirhead

PUBLISHING EDITOR
Joanna Balcerak

TYPESETTING
AGENT PR

COVER DESIGN
Stämpfli Polska Sp. z o.o.
Cover Image: © Shutterstock.com

Published by Łódź University Press
First Edition. W.07239.15.0.K

Publisher's sheets 8.0; printing sheets 8.75

ISBN 978-83-8088-408-3
e-ISBN 978-83-8088-409-0
https://doi.org/10.18778/8088-409-0

To my beloved parents
Marta Kawczyńska

To my beloved wife, Renata
Tomasz Wnuk-Pel

CONTENTS

INTRODUCTION

Business activities conducted by modern companies involve solving an ever growing number of problems and adjusting the processes they perform to a constantly changing market and business environment. In order to guarantee long-term success, companies need to constantly try to obtain and maintain a high position on the market. It is possible thanks to quick and appropriate responses to information about the changes which occur in the environment of the company.

Therefore, the system of controlling (the management accounting system) which provides information needed for decision-making and the management of processes becomes particularly important in terms of the global economy. However, the system itself has little value; it is only complete with people who prepare it and operate it. A controller (a specialist in terms of management accounting) is nowadays becoming one of the most significant employees of an organization; without his help, the management is unable to manage a company in an effective way (Burns & Scapens, 2000). Controllers, their qualifications and experience, as well as the role which the board assigns to the management accounting system, largely affect the success of controlling processes carried out in a company.

At the turn of the 20th and 21st centuries, companies went through rapid changes. Greater access to information, technological development and the globalization of markets introduced companies to new management methods. The changes taking place in organizations and in their management accounting systems affect the roles and responsibilities of controllers. It additionally resulted in setting higher requirements for professionals of management accounting. The requirements included extensive knowledge of business processes and being deep embedded in the operational activities of a company. These specialists must also be characterized by specific features and skills which will help them effectively perform assigned tasks (Siegel & Sorensen, 1999).

Management accountants function as advisors to people who are in charge of an organization. They relay information between the management and the rest of the staff, thus acting as a link between these two groups in the company. It is evident that controllers constitute a very important element in the organizational structure of an entity. Controllers provide services oriented to planning and

control to the board and managers of different levels. They are also responsible for achieving the company's objectives. Due to the significant impact on the type and scope of management information, controllers largely affect the strategic decisions made by the management. The work of controllers has become so important that most companies which already have a controlling department are planning its development by hiring new staff, developing their skills and broadening the scope of their activities (Financial Controlling Summit, 2014). The tasks of these specialists focus mainly on providing information to managers, strategic analysis, and acting as support for planning and control. Therefore, it is difficult to imagine an efficiently developing and successful company without a controlling department.

The growing importance of controlling in modern organizations and the increasing role of management accountants poses new challenges which they must deal with. However, the personnel of controlling departments are perceived in different ways by the management, depending on the company. In various organizations, the board assigns a different rank to controllers and the tasks performed by them. Despite the generally growing tendencies, the role of management accountants and the scope of their tasks are very different, and the changes in terms of their roles and the scope of activities tend to develop in different directions. It is quite common that in one organization the importance of controllers is still growing, while in another company their tasks are taken over by other employees.

Previous research investigating the activity of management accountants involved analyzing their tasks and the most important factors influencing the scope of controllers' responsibilities. The research allowed the authors to analyze controllers' position in the organizational structures of companies and to specify the attributes necessary in their work. At the turn of the 20th and 21st centuries, many authors studied the role and tasks of management accountants, and in particular they took into account the changes occurring in controllers' activities (Scapens *et al.*, 2003; Malmi *et al.*, 2001; Clinton & White, 2012; Siegel & Kulesza, 1994; Burns & Yazdifar, 2001; Burns *et al.*, 1999; Siegel & Sorensen, 1999; Siegel, 1996). In these studies, one can see big discrepancies between the tested aspects. However, most researchers perceive the turn of the centuries as a time when the role of controllers in companies became significant. These professionals, who thus far had mainly performed tasks involving the provision of information, then began to participate in the decision-making process.

In Poland, issues relating to the role and functions of management accountants have not been studied in scientific publications frequently but there are some examples of such research (Szychta, 2006; Dynowska, 2011; Łapińska & Dynowska, 2010; Zarzycka, 2012a, 2012b, 2016; Financial Controlling Summit, 2014; Sobańska, 2010b; Sierpińska & Niedbała, 2003; Ignaszewska, 2004; Goliszewski, 2002a, 2002b). Most authors focused on the methods and tools of

management accounting used in Polish companies. The role of controllers, the scope of their duties, and the requirements they face constituted in most cases only an additional element to empirical research.

Despite numerous studies conducted around the world, a comprehensive overview of changes in the activities of management accounting professionals is still lacking. So far, there has been no comprehensive analysis examining the current tasks of controllers, the challenges they encounter in companies in Poland, or their growing role in the future management of an organization. Therefore, filling this research gap is very important.

The main objective of this monograph is to determine the role of controllers in contemporary Polish companies. It also aims to outline the tasks which management accountants are responsible for, as well as the personal traits and professional abilities they should have.

In order to carry out the research, an extensive literature study was performed. It included an analysis of publications, both Polish and foreign, on management accounting. They were mainly monographs and articles published in major Polish and foreign journals. The literature review helped to determine the state of knowledge about controllers' activities, their role and responsibilities, as well as changes occurring in this area. The analysis of Polish publications allowed the authors to identify a research gap and it became the starting point for the empirical study they carried out.

The survey conducted among management accounting practitioners examined the activities of controllers in Polish companies. The questionnaire allowed the authors to determine the current role of controllers and the current scope of their duties. The study also addressed such issues as personality traits of management accountants necessary in their work and requirements for vocational training which controllers should have. Questions included in the questionnaire also allowed the authors to present the practitioners' opinions on controlling and the activities of management accountants in Polish companies.

For the purpose of the main aim, the structure of this monograph was divided into four chapters. The first chapter presents an outline of management accounting development and its essence. A presentation of different issues on management accounting from numerous sources, i.e., academic literature or those coined by management accounting organizations, is a starting point for further reflection. The following section provides a historical outline of management accounting. The authors analyzed the traditional approach by Garner (1954), as well as the views of Johnson and Kaplan (Johnson, 1986; Johnson & Kaplan, 1987). The same chapter additionally presents alternative views on the development of management accounting, as well as trends which emerged at the turn of the 20th and 21st centuries, especially the problem of relevance loss and recovery of management accounting.

The second chapter is devoted to management accountants. The information presented in this part was based on academic theoretical studies. This chapter describes the role of controllers and their position in the organizational structure of a company. The basic functions and tasks of controllers are presented here, as well as their personality features and professional skills that should be acquired in order to reliably perform their duties. This part also touches on the new role of controllers which has emerged in recent years, i.e., business partners.

The next chapter is based on previously conducted Polish and foreign empirical studies regarding management accountants. This part presents the main tasks performed by contemporary controllers in organizations and basic factors shaping them. The issue of awareness of controlling is also discussed. In previous studies, the attributes of management accountants and their position in the organizational structure of a unit were also analyzed, and therefore these issues are described in this chapter.

The last chapter of the monograph includes an analysis of conducted empirical research. Its main aim was to determine the role of contemporary controllers in Polish companies and to examine the scope of their tasks and the requirements they face in terms of vocational training and personality traits. This chapter contains the methodology of the study and the characteristics of the respondents. The results of the research constitute the most important part of this chapter; the results relate to the tasks and skills of management accountants in Polish companies. The information obtained by means of this research was compared with the results of major international and Polish research relating to this subject. The most important part except fourth chapter are the conclusions of the research, which are presented in the final section.

CHAPTER 1

THE ESSENCE AND OUTLINE OF MANAGEMENT ACCOUNTING DEVELOPMENT

1.1. The essence of management accounting

People who wish to define management accounting[1] may use many sources. One can refer to academic literature, leading academic textbooks or one can address definitions issued by management accountants' organizations.

In academic textbooks one may find two ways of perceiving management accounting – firstly, it can be perceived as a set of practical techniques, and secondly as a managerial function or a subsystem of the overall organizational information system (Wickramasinghe & Alawattage, 2007, p. 4). Management accounting seen as a set of calculative techniques is supposed to support the process of planning, decision-making and control by means of such methods as product costing, budgeting and variance analysis, cost-volume-profit analysis, or investment appraisal etc. The basic task of presenting management accounting as a set of techniques or functions has the emphasis on the development of tools and techniques that enable effective and efficient management. In the second case, management accounting is seen as a managerial function or as a subsystem of an organization's information system. This means that management accounting is one of many functions in a company, for instance a function of research and development, logistics, production, marketing, sales etc., and its main task is to support the processes of decision-making and control by providing financial and non-financial information. The attempts to define management accounting

[1] The term *management accounting* came into broader use after 1950, when William Vatter published the book *Management Accounting* (Jaruga, 2001, p. 45).

from selected Polish and foreign textbooks are presented below (chronological order):

- "the key role of management accounting is supporting the managers of the business in their financial decision-making process and being part of that management team" (Ward, 1996, p. 5);
- "management accounting includes techniques and processes which are meant to prepare and convey financial and non-financial information to managers and staff, so that they can make better decisions and manage the company as a whole" (Jaruga, 2001, p. 42);
- "management accounting is oriented towards internal users of information. It is a system of collecting, classifying, aggregating, analyzing and presenting financial and non-financial information, which supports managers in decision--making and control" (Sojak, 2002, p. 22);
- "management accounting deals with how information about costs and other financial and non-financial information should be used for planning, controlling, continuous improvement and decision-making" (Hansen & Mowen, 2003, p. 2);
- "a multi-dimensional, flexible and internally integrated system using economic calculation, which involves collecting, preparing, processing, interpreting, presenting and evaluating information that meets specific needs of managerial functions" (Świderska, 2004b, p. 163);
- "management accounting is the process of measuring, analyzing, and reporting financial and non-financial information that helps managers make decisions to fulfil the goals of an organization. Management accounting is an important element in the control system" (Horngren *et al.*, 2005, p. 5);
- "management accounting is concerned with the provision of information to people within the organization to help them make better decisions and improve the efficiency and effectiveness of existing operations. Management accounting could be called internal accounting" (Drury, 2008, p. 7);
- "the purpose of management accounting is to provide information fulfilling the special needs of managers *at all* levels in an organization, and employees (or teams) determining its future and measurement of performance, used to estimate and evaluate the company's goals, as well as to motivate employees" (Sobańska, 2009, p. 68).

The analysis of the definitions presented above allows us to observe that individual authors draw attention to many different aspects of management accounting. It should be noted that several issues are raised particularly often, namely, information, problems which can be solved thanks to management accounting information, the people who find this information useful, and the goals that management accounting must fulfill. Most definitions in a straightforward way refer to the fact that management accounting is meant to "provide information" (Jaruga, 2001, p. 42; Sojak, 2002, p. 22; Świderska, 2004b, p. 163; Drury, 2008, p. 7); some authors emphasize that they mean both "financial and non-financial

information" (Jaruga, 2001, p. 42; Sojak, 2002, p. 22; Świderska, 2004b, p. 163; Horngren *et al.*, 2005, p. 5). Information provided by the system of management accounting is mainly used in "decision-making" – all definitions refer to this point. The second area of using information from management accounting is "planning and control" (Sojak, 2002, p. 22; Horngren *et al.*, 2005, p. 5). In terms of addressees of the information, the authors of these definitions are unanimous – "managers" are the addressees of the information. A few definitions additionally emphasize the fact that management accounting allows "the company's goals to be fulfilled" (Jaruga, 2001, p. 42; Horngren *et al.*, 2005, p. 5; Sobańska, 2009, p. 68). Individual authors emphasize a few additional issues; they claim that management accounting:

- "is used for continuous improvement" (Hansen & Mowen, 2003, p. 2);
- "is a multidimensional, flexible and internally integrated system" (Świderska, 2004b, p. 163);
- "provides information to all levels of management" (Sobańska, 2009, p. 68);
- "is used for performance measurement and motivating employees" (Sobańska, 2009, p. 68).

Definitions coined by accounting organizations[2] seem to see the changes in the theory and practice of management accounting. The International Federation of Accountants (IFAC) changed the definition of management accounting between 1988 and 1998, putting emphasis on the problem of the use of resources. Thus: "management accounting refers to that part of the management process which is focused on adding value to organizations by attaining the effective use of resources by people, in dynamic and competitive contexts" (Sharman, 2003, p. 46).

The definition of management accounting was also developed by the world's largest organization of management accountants i.e., the Institute of Management Accountants – IMA. IMA (at that time the National Association of Accountants – NAA) in 1981 (p. 1) published a Definition of Management Accounting, which was defined as "…the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control an organization and to assure appropriate use of and accountability for its resources."

The second largest organization of management accountants, Britain's CIMA (Chartered Institute of Management Accountants) perceived management accounting as an integral part of the management process. According to the definition coined by CIMA (CIMA, 2005, p. V), "management accounting is defined as the application of the principles of accounting and financial management

[2] One of the first definitions of management accounting was presented in 1958 by the American Accounting Association – according to this definition management accounting is "the application of appropriate concepts and techniques in processing the historical and projected economic data of an entity to assist management in establishing plans for reasonable economic objectives and in the making of rational decisions with a view toward achieving these objectives" (Wickramasinghe & Alawattage, 2007, p. 5).

to create, protect, preserve and increase value for the stakeholders of for-profit and non-profit organizations in the public and private sectors."

The analysis of management accounting definitions and the role of management accountants in organizations allows several issues to be observed. In comparison to previously analyzed definitions from selected Polish and foreign textbooks, it should be emphasized that in the definitions presented by accounting organizations, attention is drawn to the fact that management accounting:

- should help to formulate and implement an organization's strategy (IFAC, 2005, p. 4; CIMA, 2005, p. V; AAP, 2007, p. 20; IMA, 2008, p. 1);
- is focused on adding value to organizations (Sharman, 2003, p. 46; CIMA, 2005, p. V);
- should enable the effective use of an organization's resources (IFAC, 2005, CIMA, 2005, p. V).

In addition to the concept of management accounting, one can encounter the term of controlling in the literature. There are several different views on the relationship between these concepts, and they are subject to analysis which attempts to answer the question whether they are separate or identical concepts (Dobroszek, 2014).

The beginnings of controlling should be sought in the United States where the institution of a controller and the concept of controlling emerged; it was then defined as "controllership". It was a set of methods and tasks that supported business management and was accounting-oriented. The concept of "controllership" was developed by an American organization, FEI – the Financial Executive Institute (Dobroszek & Szychta, 2009, p. 25). The term "controlling" was not popular in the United States; controlling was formed institutionally, and widespread in the practice of controllers (Dobroszek, 2014). In the US, both in practice and in theory, there was no clear terminology concerning the concept of controlling (Dobroszek, 2014, p. 94).

The situation was different in Germany, where controlling was adopted and developed on a large scale; it evolved in different directions and referred to different areas of operation and objects. Thus, it has developed its own terminology, which was adopted and later widely used in Germany. In Germany and other German-speaking countries, the term "controlling" was used to refer to the concept of improving management processes. In later years, a detailed discipline emerged which was named controlling (Sobańska *et al.*, 2010). It included, inter alia, management and organization, theories of production, cost accounting, planning, and accounting. However, it was considered to be a separate discipline from management accounting. It was claimed that management accounting was intended only to provide information, while controlling involved participating in the management process. In German-speaking countries in the 1990s, one could observe the development of strategic controlling. Tools which were used in strategic controlling, and the reasons behind its development, indicated that

there was no significant difference when compared to the development of strategic management accounting (Sobańska *et al.*, 2010).

The Commission for Management Accounting/Controlling which was established in 2004 at the Accountants Association in Poland attempted to define the relationship between management accounting and controlling. The relationship was defined in the following way: "the analysis of concepts of controlling and management accounting revealed that goals, tasks, methods and techniques show no significant differences. Even practitioners working in those professions are called the same. In the practice of international companies – mainly of American and German capital – where those two concepts collide, no differences or problems are observed" (Sobańska *et al.*, 2010, p. 61). Slight differences between these concepts which were described in the German literature in the 1980s have now lost their meaning. Similarly, differences in the information links of these areas with external accounting or financial accounting have been eliminated. This happened due to the process of the globalization of principles concerning the preparation of financial reports defined in the International Accounting Standards (Sobańska *et al.*, 2010, p. 61). Contemporary definitions of management accounting formulated by leading professional organizations such as CIMA, IMA and IFAC, clearly show that accounting ceased to be a passive source of information. Its role has evolved into active participation in the management process. Management accounting, as well as controlling, has become an integral part of this process. Also, according to Leszczyński and Wnuk-Pel, "there are no substantive differences between the two approaches, there is only a problem of terminology" (Leszczyński & Wnuk-Pel, 2006, p. 639).

A management accountant occupies the position of information manager, participating in solving key problems of the company and in the design of management systems and organizational structures (Sobańska *et al.*, 2010). Currently, management accountants are strategic partners, similar to controllers. Thus, it has become evident that controlling and management accounting stand for the same system, the only difference being the name. Therefore, in this monograph the terms controlling and management accounting (or controller and management accountant) will be used interchangeably.

1.2. The development of management accounting prior to 1980[3]

Until the 1980s, the history of cost accounting and management accounting was not considered to be very useful for understanding the current state of practice. From the beginning of the 19th century, the cost accounting and

[3] Chapters 1.2. and 1.3. are a revised version of Chapter 1 from a monograph by Tomasz Wnuk-Pel (2011).

management accounting systems which developed in companies were seen as imperfect forms of more complex and more perfect systems which developed in the late 20th century. Due to the fact that historically developed cost accounting systems and management accounting systems were mainly seen as imperfect and simplified forms of systems used in the later period, interest in the history of management accounting was relatively small. It was seen as insignificant in terms of understanding both the current theory and practice (Loft, 1995).

In the late 1980s, these views began to change, especially thanks to publications by Johnson and Kaplan (Johnson, 1986; Johnson & Kaplan, 1987; Johnson, 1992). They prepared an analysis of the current state of practice of cost accounting and management accounting, which was preceded by an extensive overview of the history of management accounting in practice, as they claimed that a full understanding of the present state of cost accounting and management accounting systems was probably not possible without knowledge of the history of cost accounting and management accounting. At the turn of the 20th and 21st centuries, the history of management accounting became very popular and was broadly discussed.

Studying the history of management accounting raises some very important issues. Assuming that the subject of these studies will be the practice of cost accounting and management accounting systems, two of these issues are key: (a) what sources should the analysis be based on, and (b) in what context should the analysis be carried out? These problems will be briefly presented later.

It must be emphasized that, in the case of analyzing the history of management accounting, the selection of sources is absolutely fundamental, since it determines the perception of history and the use of different methods of management accounting. One will obtain a completely different perception of the history of management accounting if the analysis is based on publications in journals, books, and textbooks and otherwise if it is carried out on the basis of manuals and comments on the cost accounting systems actually functioning in companies. The first type of sources will ensure a study about the development of theoretical methods of management accounting, whereas the second type of sources will ensure an analysis of the development of the practice of certain methods of cost accounting and management accounting. Any analysis of the history based on books and publications will certainly indicate a much faster development of methods of management accounting, because it is limited to theoretical solutions and their limited use in practice; however, an analysis based on systems functioning in practice (on the basis of documentation[4]) will show a much slower development, i.e.:

[4] It should be emphasized that even analysis of the documentation of cost accounting and management accounting systems functioning in specific companies does not provide answers to such questions as how, by whom and for what decisions the information from these systems is used in specific companies.

- some methods known in theory are quickly used by a small group of companies, yet their wider diffusion is slow and belated (e.g. standard costing or variable costing were used from the beginning of the 20th century);
- some methods known in theory are used to a small extent by companies and they never find wider application (e.g. use of linear programming in decision-making or regression analysis for separation of variable and fixed costs).

The context in which the development of cost accounting and management accounting is analyzed influences the image of its history. The history of management accounting can be seen as a process of improvement and wider use of cost accounting techniques such as indirect cost calculation.[5] From the point of view of the economy, especially the theory of transaction costs, the history of cost accounting and management accounting can be seen in conjunction with the development of organizational forms of companies – from this point of view, the development of management accounting can be perceived as a condition for the effective management of increasingly complex organizations (Johnson & Kaplan, 1987). Authors such as Hopper & Armstrong (1991), Hoskin & Macve (1994) or Miller & O'Leary (1994), perceive the history of cost accounting and management accounting in a different way. They stress that the development of management accounting should be seen as a method of employee control or a method of disciplining them (Hoskin & Macve, 1994) and a link of power in a company with the knowledge provided by the accounting system (Miller & O'Leary, 1994).

The history of management accounting involves many different approaches, each of which indicates its essential elements and a context in which it needs to be seen. Basic approaches to the history of cost accounting and management accounting can be divided into three categories.[6] The conventional and neoclassical approach, the Johnson and Kaplan approach, based on the theory of transaction costs, and alternative approaches which emerged in response to the views expressed by Johnson and Kaplan.

The conventional approach to the history of management accounting

The history of cost and management accounting,[7] understood in the traditional way, focused on the development of management accounting techniques where articles in professional magazines and books constituted the basic sources for the

[5] The most prominent author who expressed such views was Paul S. Garner – he explained his views in his book (1954) *Evolution of Cost Accounting to 1925*, University of Alabama Press (repr. 1976).

[6] This division is clearly an oversimplification, because proponents of different approaches inspired each other, yet it is a convenient form applied for the analysis and confrontation of different views on the history of management accounting.

[7] Due to the high importance of the theory and practice of management accounting in the US and Great Britain, the monograph concentrates on the history of management accounting in those two countries.

study. According to Garner (1954), who was the most famous advocate of this trend, the methods of cost accounting which were used until the end of the 19th century were very simplified and in most companies they did not create a system; additionally, people did not try to integrate these methods with business accounts or financial reports. The cost accounting system of companies focused on the definition of direct product costs (direct materials and wages), and the calculation of indirect costs was not taken into account.

The end of the 19th century (according to Garner it was about 1885) was a turning point in the development of cost accounting. In his book entitled *Evolution of Cost Accounting to 1925*, Garner (1954) describes the intense development of cost accounting methods at the time, noting that there were systematic attempts to allocate indirect costs (analogous to direct materials and wages) to products. He also mentions integration of cost accounting methods with accounts and financial reporting into one coherent system. The development of increasingly sophisticated methods of cost accounting at the turn of the centuries led in turn to a significant improvement of cost calculation of products, especially all categories of production costs (indirect in particular); it also facilitated the improvement of cost accounting of spoilage, rework and scrap (the 1920s) and the development of standard costing. The history of costing described in the book by Garner ends in 1925, as he claims that after that year there was no original or significant contribution to the development of cost accounting.

According to the conventional approach to the history of cost and management accounting, theoretical and practical methods of cost accounting evolved along with the evolution of the business environment. The growth in demand for information about costs, and the effects of business activities which contributed to the development of cost accounting that provided this type of information, was mainly triggered by the development of production methods and its concentration, and the development of markets and growing competition. Thus, cost accounting is perceived in this approach as an instrument that provides essential information for managers in constantly changing conditions (internally and externally). Cost accounting is therefore nothing more than a tool that evolved along with the development of industrial organizations, so that managers of these companies were able to manage them in an effective way. According to these views, the changing demand for information about costs was satisfied with the development of new methods of cost accounting.

The traditional approach to the history of cost and management accounting represented by Garner has a major weakness – as mentioned earlier, the research conducted by Garner relied entirely on publications in professional journals, books and textbooks. These studies did not take into account an important source of knowledge about the practice of cost accounting and management accounting, i.e., manuals of cost accounting systems actually in use in companies. Therefore,

the choice of sources raises the question whether Garner described the common practice of costing or the state of cost accounting theory (possibly used in a small number of companies). The attempt to answer this question led to the emergence of the neoclassical approach to the history of cost accounting.

In contrast to Garner's approach, neoclassicists based their studies on analyzing documentation relating to cost accounting systems actually in use in companies.[8] The case study method applied by neoclassicists, e.g. Fleishman and Parker (1992), enabled a different look at the history of cost accounting. Although they generally agreed with Garner, they claimed that cost accounting was used by managers much earlier than the late 19th century (traditional approach). Neoclassicists based their research on case studies and maintained that methods and techniques such as control and allocation of indirect costs (used in practice at the end of the 20th century) had actually been known much earlier than previously thought. These methods had been used by managers a long time before to reduce costs, manage profitability and to shape competitive strategy.

The diverse views on the time of the birth of individual cost accounting methods, represented by advocates of conventional and neoclassical approaches, stem from the fact that they based their studies on different source materials. Traditionalists, on the basis of materials published in periodicals and books, analyzed the development of cost accounting which was based on knowledge that was already established and was not a novelty, and which could be used by a larger group of companies. The research carried out by neoclassicists was based on the analysis of companies' archives. On the one hand it is more difficult to generalize (analysis of individual cases), yet on the other hand, it allows an in-depth presentation of pioneering implementations of cost accounting in a particular company and specific conditions. The research conducted by neoclassicists additionally enables analysis of the reasons behind the implementation of specific methods and the ways in which the information from cost accounting is used in the process of management.

The history of cost accounting and management accounting presented by traditionalists and neoclassicists, although different, have a lot in common. Both traditionalists and neoclassicists share the view that cost and management accounting

[8] One such case study was Boulton and Watt's Soho Works – a company manufacturing steam engines at the end of the 18th century. The production process in this company was better organized than in similar companies, parts and ready-made products were standardized, and the entire production process was thoroughly planned. Cost accounting enabled inventory control and accurate material costing as well as production costs estimates. Therefore, in the company, the four areas of cost accounting i.e., cost control, indirect costing, decision-making and standard costing were very developed. Boulton and Watt's Soho Works case study is an excellent example that techniques of cost accounting such as standard costing, which diffused at the turn of the 19th and 20th centuries, had been successfully implemented in individual companies even one hundred years earlier (Fleishman & Parker, 1992).

are a set of techniques which adapt to the ever-changing business environment and are used by managers. Both traditionalists and neoclassicists claim that management accounting is evolving, improving with time the tools and techniques it uses, so that managers find it constantly useful for the process of management.

The history of management accounting according to Johnson and Kaplan

At the end of the 20th century, Thomas H. Johnson and Robert S. Kaplan were the most well-known researchers of the history of cost accounting and management accounting. Their two books (Johnson, 1986; Johnson & Kaplan, 1987) launched a global debate on the history of cost and management accounting in the 19th and 20th centuries (Johnson, 1975a, 1980, 1981, 1983).

One of the most controversial, and at the same time one of the most important theses by Johnson and Kaplan was included in their book *Relevance Lost*, where they claimed that the development of cost accounting and management accounting was not originated by the emergence and development of large enterprises which needed such systems. Johnson and Kaplan claimed that it was just the opposite, i.e., systems of cost accounting and management accounting developed much earlier than large industrial organizations, and that the earlier development of these systems enabled these big organizations to emerge. This occurred due to the fact that management accounting drew managers' attention to potential benefits resulting from coordinating exchange processes within the company instead of implementing this exchange by means of the market, and that in turn made the owners create larger organizations. Johnson and Kaplan claimed that the development of cost and management accounting systems was an economic necessity because the emergence of large organizations (such as the companies they analyzed in their book e.g. Lyman Mills, Carnegie Steel Company, Louisville & Nashville, Field Company, E.I. Du Pont de Nemours Powder Company or General Motors) was possible due to the fact that new methods of cost accounting (such as standard costing, budgeting or ROI) allowed for the rational and effective management of those organizations. Thus, a brief description of the cost accounting development worked out by Johnson and Kaplan is presented below.[9]

While in the 18th century companies carrying out one type of activity focused on a single process, in the nineteenth century their operations expanded to many processes, but still under one type of activity (e.g. textile companies did not limit themselves to a single production process as they had done in the eighteenth century, for instance spinning, but they began to perform the processes of spinning, weaving, finishing, etc.). The centralized implementation of many processes in one business

[9] It needs to be stressed that Johnson and Kaplan do not distinguish these stages unequivocally, their definition is simplified, yet it facilitates analysis.

allowed the companies to generate a larger value compared to the value obtained by means of exchanging the results of these processes on the market, as had been done in the eighteenth century. At the beginning of the integration of production processes, entrepreneurs probably aimed to improve labor control and secure a stable level of production and sales. With time, however, potential profitability improvements as a result of increased efficiency and cost reduction were noticed (Johnson & Kaplan, 1987, pp. 20–21).

The cost accounting systems which functioned in companies in the 19th century had one general goal – to evaluate the effectiveness of many processes concentrated in one organization. Different types of businesses coped with this task in slightly different ways: (a) the basic task of cost accounting in industrial enterprises was to estimate the cost of processing materials or work in progress separately at each stage of production (Johnson, 1972, pp. 466–474; Livesay, 1975, pp. 84–90, 109–118; Johnson, 1981, pp. 511–516; Johnson & Kaplan, 1987, pp. 32–34); (b) the main purpose of cost accounting in railway companies was to estimate the cost of one ton-mile in the cross-section of each department (Johnson & Kaplan, 1987, pp. 34–42); (c) the key task of cost accounting in distribution companies and trade companies was to control the margin, profit and inventory turnover (Johnson & Kaplan, 1987, pp. 34–42).

At the end of the 19th century, manufacturers of complex machines (e.g. sewing machines, weights, etc.) needed information which would allow them to assess the effectiveness of employees performing specialized operations. The increasing diversity of products, often produced on special order, resulted in the need for information allowing the assessment and control of the company's profitability – so determining costs and product profitability became more important. In response to this demand, in the late 19th and early 20th centuries, a number of new methods of cost accounting emerged. Perhaps the most important were standard costing, budgeting, return on investment, and product costing for the purpose of profitability analysis. These issues are briefly analyzed below.

In some companies manufacturing complex devices and machines, managers and engineers went a little bit further in terms of the development of cost accounting systems. Instead of focusing solely on actual cost keeping, they introduced into the systems of cost accounting information about standard costs of materials and labor needed for the product to be manufactured. Information from standard costing (see Szychta, 2007, pp. 39–40; Sobańska, 2009, p. 74; Jaruga *et al.*, 2010, p. 42) was used in three ways (Johnson & Kaplan, 1987, pp. 49–51):

- standards provided information used for planning production process, in which material waste and labor time were minimized (according to Frederick Taylor, one of the creators of scientific management, standards were only used for monitoring materials and labor in a physical sense – kilograms or hours, but not in the sense of cost – monetary terms);

- standard costs provided information for the control of actual costs (also including information regarding direct costs – materials and labor); Longmuir, Emerson and Harrison contributed the most to the control of actual costs by means of standards;[10]
- standard costs could simplify inventory pricing (it must be noted, however, that accountants before the Second World War did not accept the idea of introducing standard costs into accounts, it happened after the war).[11]

Apart from standard costing, budgeting was one of the most important methods of cost accounting used at the turn of 19th and 20th centuries (see Szychta, 2007, p. 38; Sobańska, 2009, p. 74; Jaruga *et al.*, 2010, p. 43).

The primary reason for budgeting was the coordination and control of indirect material flows, work in progress, and ready-made goods by individual processes in various departments of the company, up to the end-customer. Budgeting also communicated the financial objectives of a company to the managers of individual departments and ensured compatibility of operational plans prepared by managers of departments with the financial goals of the entire company. Budgeting made managing large organizations easier, because it allowed the responsibility for operational decisions to be delegated to the mid-level management, and at the same time it ensured control mechanisms of these managers' results by comparing planned and actual results of their activities. In this specific area, flexible budgeting turned out to be a particularly important method, as it allowed a detailed analysis of the causes of variances of actual business results (profits) from the planned results. This enabled managers to separate variances of profit due to changes in the activity level of individual departments from the variances caused by differences in the effectiveness of these departments. The determination of the causes of variances and the responsibility for these variances enabled suitable reaction.

[10] The first practical application of standard costing, along with a variance analysis of actual costs, was recorded at the turn of the 19th and 20th centuries, while two consultants, Harrington Emerson and Charter G. Harrison, authored the first publications describing the modern system of variance analysis. Emerson was probably the first author who drew attention to the fact that variances from standard costs can benefit managers and can be divided into those that are controlled by them and those that are beyond their control (many years later, this concept became the foundation for flexible budgeting). Harrison, in turn, published a set of equations for the analysis of variances of actual costs from standard costs. The achievements of Emerson and Harrison were widely described by Solomons (1968).

[11] It should be emphasized that, in contrast to the first two objectives of standard costing, i.e., physical and cost control of materials and direct labor, authored by engineers, the third objective, i.e., the use of standard costs for inventory pricing, was invented by accountants. Accountants, in terms of standard costing, focused on ways of recognizing variances of actual costs from the standard in the accounting system, yet they were not interested in how the information about variances could be helpful in management.

Return on investments – ROI – was complimentary to budgeting in companies functioning at the turn of the 19th and 20th centuries. This measure was used to control the effectiveness of the capital employed, but it was not employed in the entire company, it was restricted to individual units (Kaplan, 1984, pp. 397–399). As with budgeting, ROI was used to harmonize the goals of individual departments with the objectives of the entire company. Implementing this measure (its first implementation was in the E.I. Du Pont de Nemours Powder Company) drew managers' attention not only to effective performance of internal processes, but also to the effective use of capital (see Szychta, 2007, pp. 40–41; Sobańska, 2009, p. 76; Jaruga *et al.*, 2010, p. 43).

Authors of scientific management,[12] including Frederick Taylor or Harrington Emerson, treated the new methods of cost accounting (e.g. standard costing) as a tool to control process efficiency, but not as a tool to evaluate the performance of the entire company. Hamilton Church saw the second opportunity to use cost accounting systems; for him, product costing was the most important tool that linked all the analyses carried out in the company with the main goal of the organization (Szychta, 2007, p. 39). Church supported the idea of using cost of products to analyze how the profitability of individual products influences the profitability of the entire company.[13] The cost of product comprised direct labor and direct materials, indirect production costs and an appropriate proportion of the cost of sales and overheads. The calculation of product costs proposed by Church required allocating indirect costs for products (allocating indirect costs for products was not often used in the practice of manufacturing companies at the time). Church was well aware of the fact that simple methods of cost accounting for indirect costs of production, not to mention the indirect costs of sales and management, which involved calculation in proportion to the cost of direct labor or direct materials, were not appropriate (Johnson & Kaplan, 1987, p. 54). He stressed that such methods can be used only in companies producing a small number of similar products, but they are completely unsuitable for product costing in more complex companies. Church was convinced that the cost of a product should reflect the resources used for the production or sales of a given product.

[12] Karmańska (2003, p. 35) describes the relationship of management and management accounting, both in practice and theory, in more detail. She notices that "conceptual and methodical and instrumental changes in management accounting were preceded by the emergence of another school of management. It became evident that the 'theoretical workshop' of management accounting was compliant with the theory of these schools. This fact makes us realize the strong relationships between management and management accounting, both in theory and practice."

[13] Church first formulated the postulate that product costing for the purpose of decision-making in management was in line with product costing in financial statements; until the end of the 19th century, product costing in financial statements had nothing to do with product costing for the purpose of management.

In his opinion, indirect costs are the cost of various factors of production, each of which should be, in an ideal system of cost accounting, accounted separately for products in which production it is involved. For practical reasons, however, he proposed a division of indirect costs by responsibility centers and allocating these costs to products by means of rates calculated separately for each department. Church postulated as accurately as possible the cost calculation for products, not only indirect costs of production but also overheads and cost of sales, as a large part of these costs are associated with particular products.

The aim of Church's proposal was to estimate the cost of products for the purpose of management decision-making and not for the purpose of reporting – the cost of products calculated for managers was supposed to be merely an additional item in financial reports. It should be noted that, in comparison to the cost accounting systems used at the end of the 19th century, it was a considerable improvement. While existing systems focused on the control of efficiency of internal processes, from the end of the 19th century people started to pay more attention to the impact of internal processes on the overall profitability of a company (Szychta, 2007, pp. 39–40). Focusing on the efficiency of processes was sufficient for companies producing a small range of products in a few processes – in order to ensure the profitability of the entire company, it was enough to control the efficiency of processes. In the case of more complex companies producing a wide range of products, often tailored to the individual needs of customers, this approach was not enough. The system of cost accounting was supposed to monitor the efficiency of processes, and also provide information about whether these effective processes manufacture profitable products and how their profitability reflected the profitability of the entire organization. The provision of this type of information soon became the most important goal of cost accounting systems in organizations which were complex, implemented many processes and produced a wide range of products.

The shape of cost accounting and management accounting before the early 20th century was mainly determined by practitioners (Johnson & Kaplan, 1987, p. 176). On the one hand, they were the owners and managers of the 19th century textile companies, steel companies (Andrew Carnegie), railway companies (Albert Fink), trade companies (Marshall Field's), multi-plant organizations of varied production (Pierre du Pont, Hamilton Barksdale) or diversified, multi-branch corporations (Alfred Sloan, Donaldson Brown). On the other hand, engineers, who belonged to the stream of scientific management (Percy Longmuir, Harrington Emerson, Charter Harrison, Hamilton Church) were significantly involved in the development of cost accounting and management accounting methods. According to Johnson and Kaplan, until the beginning of the 20th century, costing and management accounting was developed mainly in practice and by practitioners; later it began to gradually change, and the cost and management accounting

began to evolve mainly due to university researchers, such as Maurice Clark, R.S. Edwards, Ronald Coase, William Vatter, Eugene Grant, George Terborgh, Joel Dean, Robert Anthony and Herbert Simon. Their most significant achievements are presented below.

In the late 1920s, when according to Johnson and Kaplan cost accounting began to be seen primarily through the prism of financial accounting (Johnson & Kaplan, 1987, p. 154), many academic centers emphasized that it should also be helpful in making managerial decisions. Academic researchers, among them Maurice Clark, began to highlight the importance of isolating the variable and fixed costs of a company (Szychta, 2007, pp. 44–45). Clark noted that cost analysis should be conducted in a defined period of time because fixed costs in a short span of time may become variable costs in the long term. He is also credited with the development of such concepts as differential costs or sunk costs. Clark is also known for the notion of "different costs for different purposes," which is still important today in making business decisions with the use of cost accounting. It should also be noted that, according to Clark, in order to provide relevant information for decision-making by the cost accounting system, it must function independently of the financial accounting and financial reporting systems, which are controlled by regulations and standards (in fact, he suggested that cost accounting used for decision making should be independent of financial accounting but both systems should be based on the same database).

A group of researchers from the London School of Economics (LSE) were continuators of Clark's work. They postulated the use of relevant costs for decision making, thus, they advocated against the use of costs calculated for the purpose of financial accounting in these situations. S.R. Edwards, one of the representatives of LSE, emphasized the utter uselessness of costs calculated for financial accounting purposes in the process of managerial decision-making, in particular for planning and profitability analysis (it was caused by the lack of distinction between fixed and variable costs). Ronald Coase, also associated with LSE, was, in turn, the author of the concept of opportunity costs. Opportunity costs in general are not measured in the system of financial accounting because they represent costs of activities which have not been undertaken (Szychta, 2007, p. 47). Therefore, the postulates of the LSE economists were a continuation and a considerable extension of the observations made by Clark. They can generally be summarized as follows: without the use of such concepts as distinction of costs into fixed and variable, sunk costs, differential, or opportunity costs, cost accounting cannot provide information for decision-making. Due to the fact that the only cost accounting systems functioning in practice are subordinated to objectives and principles of financial accounting and do not provide relevant information for decision-making, the only solution in terms of decision-making is to create cost accounting systems which are separate from financial accounting.

Only such systems can provide relevant information for planning, profitability analysis, and similar decisions.

William Vatter continued the concepts formulated by Clark, Edwards and Coase. It was Vatter who used the term "management accounting" for the first time (it was the title of his textbook) (Szychta, 2007, p. 52). Until the publication of this work, academic textbooks focused mainly on issues related to inventory pricing and marginalized the issues related to cost control and decision-making (Horngren, 1987). Vatter introduced to his textbook six chapters devoted to budgeting and management control, highlighting the differences between the use of information about costs for management and for the preparation of financial reports. Vatter suggested two accounting systems – one for the purposes of external reporting and the second one for decision-making. In his opinion, these systems had a different degree of completeness of data and when the results are presented, where the system providing information for management could be even less accurate if only it provided information essential for decision-making on time. The conclusion from Vatter's textbook was as follows: "accounting for management is not management, and should not be perceived in this way. Accounting can be used in the process of management control and can help managers perform duties better than without it" (Vatter, 1950).

In the late 1950s, academics put more emphasis on the use of information from the system of cost and management accounting for decision-making. At that time numerous methods of management accounting were developed, for example profitability analysis of products, transfer pricing, cost control, and performance evaluation of internal units. Perhaps the most important was the use of discounted cash flow for the purpose of investment appraisal (Szychta, 2007, p. 57; Sobańska, 2009, p. 77; Jaruga *et al.*, 2010, p. 43). The foundations of this method were created by Eugene Grant and George Terborgh. Even though the concept of time value of money was not new, it was only Grant who pointed out its use for evaluating the profitability of an investment. Terborgh, like Grant, believed that the use of time value of money for investment appraisal would enable investment decisions to be made in a more rational way.[14] Yet the work of Terborgh, due to complicated formulas and vocabulary, had a fairly limited impact on the practice. However, the work of Joel Dean, who analyzed different methods of investment appraisal with the use of discounted cash flows – DCF – used by leading American companies in the mid-twentieth century met with a better response (Kaplan, 1984, p. 402). It seems interesting that, initially, Dean was not a supporter of discounted cash flows, opting for discounted profits. In time, he changed his mind and supported

[14] It should be noted that the ROI method, which was used from the beginning of the 20th century, especially in its most popular form where the capital was net, discouraged managers from new investments (in general, after each investment ROI fell).

the concept of DCF, noting that in some cases the impact of discounted cash flow methods used for investment appraisal may be insufficiently large to justify the necessary effort put into applying them.

Apart from the emergence of such methods as DCF, the mid 20th century was a time when research in the field of managerial control was born. Robert Anthony made a significant contribution to the research on planning and control in decentralized organizations. Anthony proposed a hierarchical framework for planning and control within the organization (Anthony, 1965, p. 16): "strategic planning is the process of deciding upon objectives, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use, and disposition of these resources. Management control: the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives. Operational control: the process of assuring that specific tasks are carried out effectively and efficiently." Like many predecessors, Anthony also clearly separated two functions of accounting – one providing information for managerial decisions, and the other one oriented to the provision of information for the purpose of external financial reporting. Herbert Simons, like Anthony, also examined the functioning of managerial control processes in decentralized organizations and, like Anthony, he formulated three functions of management accounting in the process of control and managerial decision-making: scorekeeping, attention directing and problem solving. Anthony's views were also continued and developed in the works of John Dearden, Richard Vancil or David Solomons. These authors published many papers, in the form of case studies, analyzing the practice of the largest US companies in terms of methods of managerial control, such as transfer pricing, budgeting, ROI and residual income – RI.[15]

In the 1960s, representatives of operational research made a significant contribution to the development of management accounting methods. During this period, problems such as break-even analysis under conditions of uncertainty, the use of linear programming in the development of an optimal mix product, the use of regression methods for separating costs into fixed and variable components, or models of statistical variance analysis were widely presented and discussed in the literature.[16] The literature deriving from operational research can be seen as a continuation of scientific management from the turn of the 19th and 20th centuries, as it focused on improving internal efficiency, developing techniques supporting lower-level managers, and monitoring operations. According to Johnson and Kaplan, the literature based on operational research was not

[15] Many of these case studies can be found in Dearden's book (1988), *Management Accounting. Text and Cases*, Prentice-Hall International.

[16] Compare: Atkinson, Kaplan (1989, pp. 1–13) and Karmańska (2003, p. 35).

something qualitatively new, since the techniques and methods presented there were not original, they were already known and had been used before (Johnson & Kaplan, 1987, p. 171). In contrast to the representatives of scientific management, who were practitioners,[17] the representatives of operational research were mostly theoreticians. The models developed at that time, however, were not tested in practice, and they did not take into account the fact that collecting information can be extremely costly. Thus, practical use of the work of operational researchers was very limited (Karmańska, 2003, p. 35).

Since the late 1960s, the scope and value of cost accounting systems has been analyzed, stressing the fact that the demand for information from the accounting system should be based on the usefulness of this information for managers (Kaplan, 1984, pp. 403–404). This approach is known as information economics (see also: Szychta, 2007, p. 67). It seems hard to deny the basic thesis of this trend, according to which information systems, including, of course, cost and management accounting systems, should be evaluated in terms of the relationships between the cost of maintaining the system and the value of information they provide. The problem lies in the practical application of this approach, which is so complicated that it seems basically impossible to use – the only practical implication of this approach is to draw the attention of cost accounting system designers to the cost-benefit aspect of these information systems (bearing in mind that, in practice, these costs and benefits cannot be calculated in a reliable way) (Horngren, 1987).

In the 1980s, attention was drawn to the fact that an economic organization should not be perceived as a monolith but rather as a place where the interests of different groups intersect – owners, the board, mid and lower level managers, and finally the staff. This approach was defined as agency theory (see also: Szychta, 2007, p. 68). Agency theory provided the framework for modelling, although just in theory, demand for information along with the growth of business, an increase in its complexity and deepening decentralization (Baiman, 1982). The practical application of agency theory is mainly associated with huge difficulties in mathematical modeling of highly complex relationships within the company. The use of agency theory basically boils down to perceiving an organization as a set of different, often conflicting, interests and relationships rather than a monolith (Kaplan, 1984, p. 404; Johnson & Kaplan, 1987, pp. 174–175).[18]

As the above analysis shows, the vast majority of the literature from 1925–1980, in contrast to previous years (1800–1925), was authored by theoreticians.

[17] According to M. C. Wells, the analysis of innovations implemented in the cost accounting systems and forced by scientific management, reveals an intensive exchange of opinions between engineers-practitioners, and he indicates them as authors of these new methods (Wells, 1977).

[18] The criticism of agency theory's usefulness in the context of cost accounting systems was presented by Kaplan (1986).

Their work, usually based on simple theoretical models, did not take into account the complexity of real economic organizations which provided complex services to multiple customers, or which produced complex products in the course of complex production processes. In the words of Johnson and Kaplan (1987, pp. 175–176), "it would be easy for practicing executives to agree in principle with all the recommendations of academic researchers yet they still find it difficult to apply the recommendations in their much more complex organizations." Johnson and Kaplan thought that between 1925 and 1980, with the exception of the DCF method, there were no original ideas which would affect the design and use of management accounting systems in practice. The authors claimed that since the 1920s, cost accounting had been dominated by financial accounting, and that led to stagnation in the development of this discipline in the coming decades. It was only the discussion in the 1980s, initiated by Johnson and Kaplan, which made both practitioners and scientists realize that management accounting was going through a crisis.

An alternative approach to the history of management accounting

Apart from the conventional approach and the one represented by Johnson and Kaplan, there are other approaches to the history of management accounting. While Johnson and Kaplan, in their interpretation of the development of management accounting, paid attention to the constant improvement of efficiency as the main reason for this development, representatives of alternative views claimed that the main driver of this development was the desire to control workers in the production process, or the importance of management accounting as one of the techniques of control and disciplining employees and managers. These alternative views will be discussed below.

According to supporters of the first concept, the development of cost accounting and management accounting should be viewed from the perspective of the information system as a tool which makes personnel's control possible. Hopper and Armstrong (1991) are prominent representatives of this trend. In their opinion, the evolution of accounting systems should be seen as an aspect of overall changes in the governance and control in companies. Basic differences in the views on the history of cost and management accounting, on the one hand by Hopper and Armstrong, and on the other by Johnson and Kaplan, can be summarized as follows:

- 1800 to 1880 – Johnson and Kaplan (Johnson, 1972; Johnson & Kaplan, 1987) maintain that the development of specific techniques and methods of cost accounting in the period was a result of efforts to improve economic efficiency. Examples of manufacturing companies (Johnson, 1972; Livesay, 1975),

transport companies (Johnson & Kaplan, 1987) or trade companies (Johnson & Kaplan, 1987) cited by these authors illustrate the thesis that the primary role of cost accounting systems in this period was the need to monitor the work of personnel in order to increase the efficiency of the company. According to Hopper and Armstrong (1991), the development of tools of cost accounting was due to changes in the control processes of employees in the company. The authors argue that the growing profitability of companies during this period was largely due to the intensive exploitation of workers by owners (they achieved it by means of strict control of workers). Hopper and Armstrong argue that at least some of the information from accounting systems was primarily used to increase the exploitation of workers rather than improve the efficiency of the company.

- 1880 to 1925 – the turn of the centuries was a period of rapid development of new methods of cost accounting and management accounting. Johnson and Kaplan (Johnson, 1975a, 1975b, 1978; Johnson & Kaplan, 1987) associated this development with the need to measure the effectiveness of activities and the use of standards as a basis for comparing actual results with standards which also contributed to improving a company's efficiency and its individual units. Hopper and Armstrong (1991) noted that in this period highly skilled workers were replaced by workers with lower qualifications. The effect of these changes was the ease of replacing some employees, and thus more managerial control. The growing role of managers was additionally strengthened by the introduction of new cost accounting methods that provided information to managers and not employees, thus making it easier for managers to control their subordinates.
- 1925 to 1980 – by analyzing the use of techniques of management accounting such as budgeting or ROI, Johnson and Kaplan (1987) emphasized their important role in complex and constantly growing organizations. They stressed that these methods ensured that the benefits associated with the operation of large companies outweigh the administrative costs of their operations, and that owners' capital is used in an effective way. Hopper and Armstrong (1991) drew attention to the increasing mechanization of production processes and a further decline in the importance of highly skilled workers. The implementation of budgeting and ROI allowed senior management to have an even greater influence on mid-level managers. According to Hopper and Armstrong, the above-mentioned tools of managerial control enabled a company to better control the labor process and its employees.

Armstrong (2002) also emphasized the special role of accounting in Anglo--Saxon countries. In the 19th century and at the beginning of the 20th century, operational managers and engineers had the most important role in companies. However, along with the increase in size of companies, the influence of general managers increased, among them a group of specialists of accounting and finance. It was due to several factors, among them the growing role of accounting

in the management of organizations and making decisions about the allocation of capital, and the importance of accounting as a tool enabling owners' control over organizations. Armstrong thus concluded that it is impossible to understand the growing importance of accounting without linking it with the increase of the influence of accountants and financial specialists. Traditionally, the history of management accounting was perceived in such a way that, along with the development of a company, chief executives became aware of the usefulness of management accounting in decision-making, and this led to the development of cost accounting systems and hiring new specialists. Armstrong emphasizes the positive role of accountants in creating work and their important position in a company. The attention which has been paid to the relationship between the diffusion of specific methods and techniques (management accounting methods and techniques) and the position of people promoting these techniques is an important point worth considering when discussing the history of cost accounting and management accounting.

According to a slightly different perception of history of accounting which derived from Michel Foucault,[19] the development of cost accounting and management accounting should be seen as a development of an important technique of personnel control in a company. Loft, Miller and O'Leary were representatives of this trend.

Loft (1994) perceived cost and management accounting as tools of supervision and control in business organizations. In this sense, management accounting can be seen as a system that replicates a production process allowing it, in terms of money, to be shown on paper or in the form of computer records. In a company, accounting functions as a system of management and control of employees by managers, but also of managers at lower levels by higher-level managers. Management accounting, however, is far more important than just a tool of control over managers and employees, because it shows in financial terms all the activities performed in a company, thus allowing their detailed control.

Studying the beginnings of cost accounting and management accounting methods, Miller and O'Leary (1994) focused on the first three decades of the 20th century. Analyzing the development of methods such as standard costing or budgeting, they saw it as a small but important part of control over individuals within an organization. They emphasized the fact that this no longer was, as in the 19th century, control of an immediate supervisor but rather a control by means of standards and budgets that not only indicated what to do, but they also explained how to do it. Using planning, data collection, and the actual process

[19] Foucault never wrote about accounting, yet his works emphasized the importance of observation and control of individuals in the development of modern society. He claimed that the importance was not previously noticed (Loft, 1995, p. 34).

of control, supervising employees became depersonified – it was no longer done directly by a supervisor but by impersonal methods and tools of cost and management accounting, designed to ensure efficient operation. The above-mentioned methods of management accounting allowed, in monetary terms, the share of individuals (employees and managers) in the efficiency achieved by the company to be shown.

The views expressed by Hopper, Armstrong, Loft, Miller and O'Leary suggest that the development of cost accounting and management accounting should be considered as something more than just a simple economic necessity (as it was seen by Johnson and Kaplan). The history of cost accounting and management accounting can be analyzed in relation to the role of management accounting systems in the process of control over managers and employees within an organization, and the relationship between the diffusion of various cost accounting methods and techniques and the position of people who implement those methods and techniques. In general, the knowledge of cost accounting and management accounting history presented by traditionalists (Garner), neoclassicists (Fleischman, Parker), Johnson and Kaplan, or advocates of the cost accounting relationship with the employee control system (Hopper, Armstrong) or its relation to the processes of supervision and control over individuals in the organization (Loft, Miller, O'Leary), is necessary to understand the current practice of cost accounting and management accounting and the changes that have taken place since the 1980s. These issues are discussed in the next section.

1.3. The development tendencies in management accounting at the turn of the 20th and 21st centuries

At the turn of the 20th and 21st centuries, companies around the world underwent incredibly rapid changes. Companies from Asia, the US, and Europe, in response to greater access to information, technological development, and globalization of markets, implemented new management methods. To meet the pace of the changes, they took initiatives which enabled them to meet the needs of customers, modify organizational structures, and implement new technologies. Increasing competition resulted in providing diversified products of high quality, supplied to customers in an efficient way with high added value (Bromwich & Bhimani, 1994). The market at the turn of the century was characterized by uncertainty and constant radical changes. The survival of a company in such an environment depended on its ability to identify new perspectives and skills to adapt to the ever-increasing competition. In such conditions, companies implemented innovative production systems (total quality control – TQC, just in time – JIT, or computer integrated manufacturing – CIM), advanced technologies and new organizational and managerial techniques.

Along with technological changes, the practice of managing a company also changed, with the changes including alterations in information systems of management accounting.[20] Among the most important factors affecting the change in the scope and role of management accounting in this period, one can find (Burns & Scapens, 2000; Horngren *et al.*, 2005):

- global competition – increased competitiveness at the end of 20th century and in the early 21st century caused a greater interest of organizations in their market environment, competitors, and customers (in particular the problem of customer satisfaction);
- the development of information technology – access to information technology (widespread use of personal computers, the development of database technology, and integrated management support systems) affected the flow of information in organizations and the nature of their work (especially in areas other than operations, for example, in management accounting departments);
- organizational changes – orientation towards core competencies and outsourcing of other activities affected the process of business management (e.g. it triggered the transfer of some competences from functional departments in headquarters to operating departments).

All these changes, i.e., growing competition in the global market, rapid development of information technology, and organizational changes, had a significant impact on the change in the scope and importance of management accounting. On the one hand, they contributed to the implementation of innovative solutions, and on the other, they influenced the use of traditional methods of management accounting.

[20] Changes in internal processes of an organization, in particular the way management accounting is performed, may be generally affected by variables related to technology, competition, globalization, an uncertain economic situation, environmental and cultural factors, political initiatives, as well as the results of scientific research in management accounting and the operation of consulting firms. The internal processes of the company consist of interrelated functions of research and development, accounting and finance, human resources management, marketing and sales, manufacturing, logistics, etc. The change in the internal processes of the company, e.g. a change in management accounting, occurs as a result of an interaction between the environment and internal processes. When studying changes in management accounting, one can consider (Wickramasinghe & Alawattage, 2007, p. 10) why the change occurred, what factors have contributed to it, if these changes were fast or slow, what were managers' and employees' reactions to the change, or whether it had any impact on the social and economic situation of the group considered. Management accounting is designed to meet the information needs of companies operating in an environment which is characterized by: (a) a flattening of organizational structures; (b) the elimination of functional specialization; (c) blurring divisions between the company and its suppliers and customers; (d) looking for key competencies; (e) integrating information systems; (f) the creation of local control systems based on non-financial measures, and (g) the elimination of cultural divisions associated with traditional forms of organization and professional specialization (Horngren *et al.*, 2005).

In the late 1980s and early 1990s, the drive to improve the efficiency of business management, both in theory and practice, became evident. This led to the development and diffusion of such methods as:

- activity-based costing – ABC, activity-based management – ABM, which are studied in numerous works by Cooper and Kaplan (Cooper, 1987a, 1987b, 1988a, 1988b; Cooper & Kaplan, 1991; Kaplan, 1988);
- balanced scorecard – BSC, developed by Kaplan and Norton (1992);
- total quality management – TQM, see: Deming, 1986; Oakland, 1989;
- benchmarking (Bogan & English, 1994);
- life cycle costing – LCC, which was developed in the 1960s in the US Department of Defense (Bromwich & Bhimani, 1994).

The turn of the 1980s and 1990s brought more than just the development and diffusion of activity-based costing, balanced scorecard and life-cycle costing. In this period, one can see the increased interest of American and British companies in solutions of management accounting which were being used successfully in other countries, particularly in Japan. The increase of interest in management performed by Japanese companies (including methods of management accounting), was a result of the unprecedented success of these corporations in global markets (higher productivity and innovativeness of these companies meant financial success). The managers of Japanese companies introduced the strategy of cost reduction of products during their entire life cycle by using such methods as life-cycle costing, target costing – TC, kaizen, and total quality management. Japanese methods became more and more known, and gradually implemented more and more outside Japan; this was due to the diffusion of theoretical knowledge about them and due to the global expansion of Japanese companies which used these methods around the world. At the turn of the 1980s and 1990s, the internationalization of knowledge on management accounting was evident. The phenomenon even intensified over the following years.

The evolution of management accounting that took place at the turn of the centuries led to some controversy as far as its scope, methods, tools, and concepts are concerned. The system which was mainly to provide data on costs changed into a system that shapes economic information and plays a part in the management process. This concerns in particular those aspects of management accounting which are oriented towards strategic objectives on the border of management accounting, strategic management and marketing. A term that attempts to establish a framework for the concept and methods of strategically-oriented management accounting is strategic management accounting. The term was first used by Simmonds, who defined strategic management accounting as "the provision and analysis of management accounting data about a business and its competitors, for use in developing and monitoring business strategy" (Simmonds, 1981, p. 26). The introduction of the strategic dimension to management accounting

emphasized the importance of information about competitors, demand and the market. Simmonds argued that companies can use instruments that will be able to provide accurate information necessary for strategic decisions. In the literature one can find many definitions of strategic management accounting,[21] however, despite nearly thirty years since the introduction of this concept, there is no one generally accepted definition.[22]

Strategic management accounting is often contrasted with operational management accounting, sometimes also called conventional management accounting (Nowak, 2000). Operational management accounting is oriented to the past, individual decisions, individual reporting periods, as well as separate units. However, in contrast to operational management accounting, strategic management accounting is focused on the future, external relations, many periods, and strategic business segments (Sobańska, 2010a, p. 95). Despite the fact that in most companies management accounting focuses on the implementation of operational tasks, the situation may change in the future. Management accounting can and should change so that it takes the strategic conditions of the company into account.

The direction of management accounting development in subsequent years will be increasingly affected by the external orientation of companies. Modern companies will cooperate more closely with suppliers and customers, they will form strategic alliances, and will outsource more often. Further development of information technology, particularly the Internet, will enable companies to launch new channels of distribution and communication in terms of relationships between suppliers, manufacturers and customers. The development of information technology will also affect the way certain functions are performed, e.g. human resources management, accounting and finance, and IT, introducing greater outsourcing of these activities. The gradual blurring of boundaries between a company and its environment will be a result of greater external orientation and outsourcing of traditional functions. The information system of management accounting will have to change, and start providing, depending on the needs, internal and external information, which is balanced for effective decision-making and

[21] The analysis of 10 definitions of strategic management accounting by, inter alia, Simmonds, Bromwich and Shank, was carried out by Szychta (2007, pp. 167–168).

[22] The concept of strategic management accounting is not universally accepted. The research carried out in the form of a case study of Cyclemakers Group Ltd. by Lord (1996) argues that although elements of strategic management accounting are already present in the practice of businesses, they may be difficult to quantify, and that can be collected and analyzed outside the department of management accounting (in the studied company, the information was collected and used in operational departments). Dixon (1998) presents a similar view; he states that the collection and use of information about competitors for strategic goals does not require the formal implementation of strategic management accounting. He additionally points out that the costs of information collection and analysis may outweigh the benefits.

effective performance evaluation. Modern organizations will increasingly focus on the function of coordinating the allocation of resources between organizations operating in the market and will invest less and less in traditional physical assets. Intellectual capital will become a key asset of a company (Roberts, 2003). It will be increasingly important to measure intellectual capital, a key aspect in the long-term ability of a company, to create a competitive advantage (Dobija, 1999a, 2000). Due to the fact that companies will focus more on creating value by means of intellectual capital, managing this knowledge will become increasingly important. Along with the growing importance of knowledge and its effective management in an organization, the importance of management accounting as a tool for facilitating and supporting these processes will increase (Czubakowska, 1997; Sawicki, 1992; Sojak, 2002).

Modern companies will focus on coordinating resources (including knowledge), without owning them (the centralization of resources, processes and properties will not be necessary). The potential of virtual company will be based on the use of knowledge to electronically integrate the resources that corporate alliances will have. The organizational structures of companies, their priorities, and methods of operation will change, and with them the information systems of management accounting will change too (Kiziukiewicz, 2003; Turyna & Pułaska-Turyna, 2000). These changes will be mainly influenced by such factors as the external orientation of organizations, accelerating cycles of internal reporting, taking into account the complexity of processes, customer orientation, strategic integration and further dynamic development of e-business (Bhimani, 2003).

CHAPTER 2

THE SPECIAL ROLE OF A CONTROLLER IN MANAGING A MODERN ORGANIZATION

2.1. The role and functions of a controller in an organization

In current market conditions, the high position of a company does not guarantee that it will achieve long-term success. Success is only achievable in cases when the company is able to maintain this position. In order to do this, the unit should continually improve its business activities and reduce business risk. The proper response to changes taking place in the company's environment enables success. Nowadays, business information is an undeniable basis for management. Managers expect high-quality information which is always available, so that it can be used in the decision-making processes. This leads to a situation in which the significance of controlling (system of information) is continually growing. However, the system itself, as professional as it may be, seems useless without the people who are responsible for its creation and operation. Therefore, management accountants – controllers – play an extremely important role in the process of controlling.

A management accounting specialist (a controller) serves as an advisor to people who are in charge of the organization. Controllers also act as a "relay" of information between the management and the rest of the organization. They constitute a very important link between these two areas, because it is the controller who determines the extent and form of information which is supplied to other individuals. Controllers additionally influence the scope, type, and reception of management information, and that means that they have influence on the strategic decisions made by the management of a company. Controllers do not have decision-making powers, but they do provide advice for managers when they are making decisions. The functions of the management accountants in a company are as follow (Janik, 2003, p. 29):

- supporting the management in developing operating plans and long term plans, as well as supporting the managers in the current management by providing them with reliable information and opinions;
- coordinating overall goals and intermediate goals, so that the latter facilitate the achievement of the first ones;
- developing a transparent system of cost registration and performance evaluation of the organization and individual organizational units, which will enable the control and evaluation of tasks assigned to individual units;
- keeping track of economic results of the company, identifying emerging risks and recognizing opportunities to improve management efficiency;
- organizing a functional information system which is compliant with the needs of the management.

There have been numerous attempts to identify the role of a controller within the organization. One of the most popular and wide-spread images of controllers is their role as a navigator, ensuring that the ship does not lose its course. In accordance with this role, a controller is mainly responsible for searching for a way which guarantees that the chosen goals will be achieved by comparing tasks and objectives with the actual situation (Sierpińska & Niedbała, 2003, pp. 39–40). Management accountants were also compared to medieval jesters, as one of their typical roles is to tell the manager the truth about the business reality (Weber, 1995, p. 366). The controller was additionally portrayed as a pastor of a parish (Weber, 1995, p. 366). All those comparisons are imperfect, however, presenting the controller as a cleric seems fuller, as this role combines in its nature instruments as well as a type of behavior.

Generally, business practice developed four basic types of controllers. They vary depending on the business environment of the company. In a relatively stable environment, the controller is seen as a scorekeeper of past economic processes; this data is used for preparing future plans and managing their implementation. In a relatively changeable environment, the controller becomes a navigator, someone who seeks the best way to achieve company's goals. However, in a dynamic (turbulent) environment, the controller becomes an innovator, participating in the process of management to accelerate the response to permanent changes in the business environment. Sometimes the controller is perceived as the economic conscience of the company. This role is strictly related to an extremely dynamic business environment. The scope of tasks and orientation of controllers in specific types of environments are presented in Table 2.1.

The development of management accounting in the USA resulted in a different classification of management accountants; it distinguished two types of controllers: the corporate cop and the business counsellor (Szychta, 2005b, p. 84).

Table 2.1. The tasks of controllers in terms of their roles and business environment

Role of the controller	Environment	Tasks of a controller
Scorekeeper	Relatively stable	– providing information about past economic processes; – use of information from financial reports; – non-participation in decision making;
Navigator	Changeable	– integration of planning and control; – error prevention; – elimination of deviations; – participation in staff function or line function decision-making;
Innovator	Dynamic	– being conversant with implemented changes; – energetic innovations; – implementation of modern accounting solutions; – participation in management;
Economic conscience	Extremely dynamic	– strategic foresight; – corporate responsibility;

Source: Czubakowska, 1995, p. 86; Jarugowa, et al., 1997

Specialists who belong to the group of corporate cops are perceived as people who look after, supervise and execute existing procedures. They frequently perceive line managers and regulatory institutions as the most dangerous threat to the company. These specialists are knowledgeable about audits and accounting. They are mainly responsible for budgeting and variation analysis, but they are also competent in financial reporting. Practitioners who belong to this category of controllers can be further subcategorized into (Szychta, 2005a, p. 2): (a) employees who make the settling of internal responsibility possible, and (b) employees performing tasks for the purpose of the internal responsibility of the company.

Management accountants who belong to the second group of business counsellors perceive their job as support offered to the Board of the organization, so that it can achieve a competitive advantage by means of the unit's strategy integration with operational activities. They perceive competition as the main threat posed to the company's development. Controllers who belong to this group of specialists are knowledgeable about the economics of the enterprise, therefore, they actively participate in its business activities. They are mainly engaged in the development of economic analysis, they monitor operational and capital budgeting, and they support managers as well as different workgroups at various levels of management. Management accountants who act as business counsellors are divided into two groups (Szychta, 2005a, p. 3) (a) specialists from the first group help the internal unit they work for to increase its market share; (b) controllers from the second group are focused on the strategy of the company and the use of its economic resources. The role of management accountants who act as business counsellors is effective and constructive for the company.

2.2. A controller's tasks in a company

In a document entitled *The roles and domain of the professional accountant in business*, IFAC characterizes the key activities of management accounting in an organization which are the domain of management accountants[23] (IFAC, 2005, p. 4):

- the generation or creation of value through the effective use of resources (financial and otherwise) through the understanding of the drivers of stakeholder value (which may include shareholders, customers, employees, suppliers, communities, and government) and organizational innovation;
- the provision, analysis and interpretation of information to management for formulation of strategy, planning, decision making and control;
- performance measurement and communication to stakeholders, including the financial recording of transactions and subsequent reporting to stakeholders typically under national or international Generally Accepted Accounting Principles (GAAP);
- cost determination and financial control, through the use of cost accounting techniques, budgeting and forecasting;
- the reduction of waste in resources used in business processes through the use of process analysis and cost management;
- risk management and business assurance.

Such a wide range of tasks of modern specialists in management accounting requires from them extensive knowledge, in particular, in the field of economics, finance and accounting. Specialists in management accounting should apply different analytical tools, including strategic analysis, competitive analysis, benchmarking, ratio analysis, statistics and risk assessment. They must fully understand the organization, the market in which it operates as well as its competitive environment; management accountants should have communication skills and a charakterize of an honest and ethical attitude.

The role of management accountants mainly stems from the definition of management accounting. In 1981, the American Institute of Management Accountants issued a definition of management accounting which was defined as "…the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate,

[23] The role and function of management accountants were presented by Simon, a Nobel Prize Winner in economics in 1978. He distinguished (Jaruga, 2002, p. 10): "collecting reliable data and presenting of report to all levels of management; it is a systematic cost accounting, directing managers' attention by means of information from comparing budgets with performance, and essentializing variances showing positive opportunities or mismanagement which requires action, corrective actions etc., problem solving by means of presenting important information e.g. how to avoid cost overruns when working on a government project and other strategic or operational decisions." In this case, the efficiency and effectiveness of management is tested when it actually has a real influence on the quality of decisions made by managers and adding value to the organization.

and control an organization and to assure appropriate use of and accountability for its resources" (Wnuk-Pel, 2011, p. 25). This definition emphasizes the role of a management accountant as a provider of information, someone who collects, processes, analyzes and supplies information to managers who make decisions. This definition highlights the tasks that are now largely implemented by means of information technology tools, for example Enterprise Resources Planning (ERP) systems. It has been nearly 30 years since the publication of this definition. Over that time, the role of management accountants has significantly changed – management accountants have become business partners of managers in areas such as performance assessment, budgeting and forecasting, process management, risk management or cost management. Thus, the management accountant becomes a partner in all areas relevant to improving the competitiveness and success of the entire organization. In response to the change in the role of management accountants, the Institute of Management Accountants published an updated definition of tasks of management accountants (IMA, 2008, p. 1). This definition concentrates on the strategic aspect of management accounting: "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." In this definition, the emphasis is put on the participation of management accountants in making key strategic decisions in teams which include managers from different areas of the organization. The role of management accountants, as defined, is changing. They should, on the one hand, create the conceptual framework for organizations which would transform data into information, and, on the other hand, they should be strategic partners with other managers.

The second largest organization of management accounting professionals, Britain's Chartered Institute of Management Accountants (CIMA), treats management accounting as an integral part of management. Management accounting requires identification, generation, interpretation and use of information in order to (CIMA, 2005, p. V):

- formulate and implement an organization's strategy;
- plan short-term, intermediate and long-term operations;
- determine the capital structure and its sources;
- design the strategy of managers' and stakeholders' remuneration;
- make operational decisions;
- control the organization to enable the effective use of resources;
- measure and report financial and non-financial performance to managers and non-management;
- protect the tangible and intangible assets;
- implement the management procedures and risk management and internal control procedures.

The above-mentioned tasks require management accountants to develop profit-maximizing strategies (in companies which are profit-oriented) or strategies enabling the best possible performance (in organizations which are not profit--oriented).

The scope of the controller's tasks usually depends on the concept of controlling implemented in the company or solutions used by a strategic investor. The basic categories of controller's tasks were developed by the Financial Executives Institute. They are presented in Table 2.2.

Table 2.2. A controller's tasks according to the Financial Executives Institute

Category of tasks	Controller's tasks according to FEI
Planning	Developing, coordinating and planning for the purpose of controlling undertaken activities: – planning sales and profit, – budgeting standard costs, – planning programs in terms of finance and investment.
Reporting and interpreting	– formulating rules of bookkeeping and reporting, – developing the system of data processing, – preparing financial statements, – comparing results with plans and standards, – result analysis of all the units, – coordinating systems and procedures.
Evaluating and consulting	Advising managers *at all* levels of the company regarding rules and performance of processes they are responsible for, from the point of view of goal achievement in terms of policy, organizational structures and process organization effectiveness.
Tax administration	Applying rules and methods of tax.
Government reporting	Supervising and coordinating in terms of preparing information for the purpose of reporting to government institutions.
Protection of assets	Protecting the company's assets by ensuring internal control, internal revision and supervision over shields in the form of insurance.
Economic appraisal	Undertaking continuous research related to the economic, social and political conditions and evaluating their influence on the company.

Source: Nesterak, 2002, pp. 215–224

The International Group of Controlling (IGC, 1996) defined a modern controller as a person who performs functions for the management, and these functions include steering and planning. It thus means that a controller performs the following tasks (Nowak, 2013a, pp. 33–34):

- indicates methods and means that contribute to higher economic effectiveness;

- coordinates sub-targets and sub-plans in a holistic way and organizes a reporting-system that is oriented towards the future and covers the enterprise as a whole;
- moderates the process of management control so that every decision-maker can act in accordance with agreed objectives;
- provides all relevant controlling-information to managers;
- develops and maintains the controlling systems;
- advises the management and steers toward goal achievement.

Although there is no professional organization of management accountants in Poland, the scope of activities of management accounting was worked out in 2007 by the Accountants Association in Poland in the *Code of Professional Ethics in Accounting* (AAP, 2007, p. 20). Three types of activities have been identified – accounting activities, management support activities and activities related to tax calculations. According to this classification, management accountants are people who perform management support activities; the activities include (AAP, 2007, p. 20):

- delivering data to develop the entity's strategy;
- preparing the entity's operational plans and providing implementation advice;
- controlling current business operations and related costs;
- multi-faceted assessment of the entity's performance;
- business advisory or consulting services;
- designing, implementing and operating an entity's IT accounting systems;
- activities and analyses aimed at synchronizing operating activities of an entity with its strategy to support the entity's management in taking business decisions;
- tasks related to the internal reporting system and other management accounting activities.

Professional organizations put emphasis on the evolving role of management accountants in the organization. They are becoming advisors (AAP, 2007, p. 20; IMA, 2008, p. 1) and business partners in management decision-making (IMA, 2008, p. 1). To a lesser extent they get involved in the collection and processing of information, which until recently was their primary task. Today, the function of collecting and processing information is performed by integrated information systems, and management accounting professionals should focus on the design of management accounting information systems (AAP, 2007, p. 20; IMA, 2008, p. 1).

In Polish companies, the functions of a controller usually depend on the solutions adopted by a strategic investor. Due to the fact that German companies have a large market share in Poland, Polish companies quite commonly apply German models. This affects the functions of a controller, which may include the following (Nesterak, 2002, pp. 215–224):

- implementation of tools and instruments of controlling management;
- implementation of team management;
- control and improvement of organizational structure;
- identification of responsibility centers;
- verification of compliance of tasks, competences and responsibilities in the case of responsibility center managers;
- coordination as well as expansion of strategic and operational planning;
- implementation and development of a planning system, management system and control system which are based on the degree of assessment of planned results;
- definition of responsibility centers' goals in cooperation with their managers;
- implementation of a profitability-oriented way of thinking in responsibility centers;
- implementation of a reliable cost/result calculation system;
- creation of a contribution margin analysis and including it in calculations;
- construction of a reporting system which is compliant with the needs of the recipients;
- control carried out in individual responsibility centers (in cooperation with managers);
- analysis and interpretation of causes behind discrepancies between planned values and actual ones, and implementation of corrective means;
- elimination of weak points in responsibility centers (in cooperation with managers);
- carrying out specialist research.

Proper implementation of the above tasks is possible when the controller uses a wide range of economic instruments which have been adapted to the needs of controlling. Table 2.3 presents the tasks and instruments used by a controller. They were broken down into tasks that controllers implement in cooperation with various internal units, as well as those they are exclusively responsible for.

Table 2.3. Categories of tasks and instruments used by a controller

Tasks	Instruments
Participatory	
1. Analyses, forecasts	– early warning systems, scenario analysis;
2. Planning in the cross-section of projects/ products	– network planning; – value analysis and value in use analysis; – cost calculation in the cross-section of projects/ products; – profitability/efficiency accounting and investment accounting;

3. Planning in the cross-section of functional areas	– zero base budgeting; – general costs calculation and analysis; – cost center accounting; – value in use analysis; – profitability/efficiency accounting and investment accounting;
4. Planning the global business activity of the entity	– portfolio analysis; – break-even point analysis; – value in use analysis; – profitability/efficiency accounting and investment accounting; – gradual contribution margin analysis/accounting – simulation models, linear programming;
Individual	
1. Planning and verification of contribution margins, operational result, capital value, financial values	– system of economic indicators; – integrated instruments of financial and management accounting;
2. Coordination of the overall planning	– simulation models of the entire company;

Source: Major, 1998, p. 41

Performing the functions of a controller requires current control of processes that are implemented in the company. The processes should be performed in a way which enables them to avoid mistakes, prepare a comparative analysis of plans and their results, as well as search for the causes of variations that occur at present and those that are likely to occur in the future.

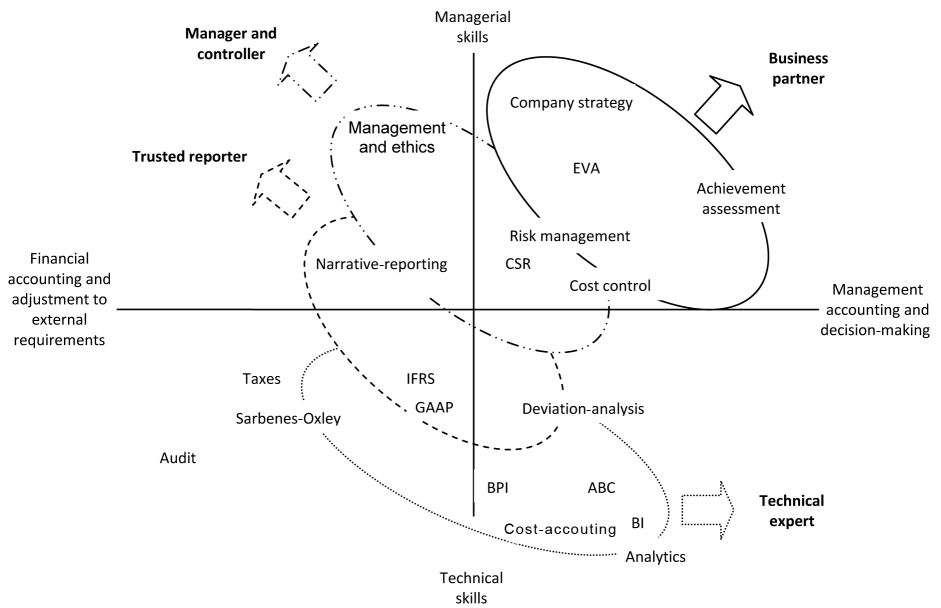
2.3. A controller as a business partner

The changes that occurred in the business environment, as well as within companies, have led to a situation in which management accountants are required to have excellent knowledge of business processes. Additionally, it is expected that management accounting itself should be deeply embedded in operational activities. Managers must have a set of operational measures and tools of management accounting which are adapted to the new business environment. It is required that management accounting professionals are a part of each team responsible for implementing innovative solutions in the processes performed in the company – this is the only way one can develop information systems of management accounting which are compliant with the changing business environment. Modern business requires perfection in its operational activity; information systems, including the information system of management accounting, must also be perfect. Growing competition, rapid technological development, and the necessity to implement innovative methods have resulted in the growing demand for information that

managers will be able to use in their decision-making processes and that will contribute to the company achieving a competitive advantage.

The changes in management accounting which occurred at the turn of the centuries were very large. This was a period in which emphasis was placed on financial control, risk management, or transparency of the reporting system. The changes in management accounting continue and are heading in the direction where management accountants are becoming leaders of change and management accounting itself is a more effective tool used to support decision-making. The directions of management accounting expansion by CIMA are shown in Figure 2.1.

Figure 2.1. The expansion of management accounting



Source: CIMA, 2008, p. 7

Controllers in modern organizations have become business partners. Controllers' activities as business partners are characterized by the following (CIMA, 2009):

- they are located at the heart of the organization's processes, enabling decision-making support in every element of the value chain (instead of being on the sidelines of the company);
- strategic orientation; it does not mean being exempt from the obligation to provide information necessary to make tactical and operational decisions; the idea is to perceive problems in terms of strategy (value maximization);

- encouraging managers to constantly improve the company's performance in line with expectations of stakeholders instead of delivering routine, detailed reports and analyses.

Such activities are the most advanced form of a business partnership, which can be understood as the ability to guide managers and other employees on the way to achieve long-term goals.

Despite some common features, the idea of a perfect business partner varies depending on the size of business, the industry, or the position of controllers in the organizational structure. Additionally, the extent of controllers' involvement in a business partnership is varied; it depends on the organization's characteristics and the employee's own abilities. The transition into the new role not only means that a management accountant must use new tools in his work, but it also involves some behavioral changes. The main tasks remain the same, however: one should take into account the obvious evolution of methods, techniques, and concepts. What is new is the need to convince other employees and make them respect and trust the new management accounting and persuade them that the partnership between accounting and other various functional areas of the unit will contribute to better decision-making, and that will increase the value of the entire unit.

The current development of the role of business partner indicates that the success of controllers in this role is affected to a much lesser extent by their knowledge of sophisticated systems and tools; it turns out that individual personality traits are much more important. What seems essential here is the controller's ability to persuade managers to their own ideas and gaining their approval with regard to proposals on how to conduct their business. A controller as a business partner should serve as a support for managers and have a close relationship with them. In other words, they should be the manager's right-hand man. Equally important is the ability to oppose, but of course in relevant situations. Controllers should have the courage to question the wrong ways of doing things, even if the executives and other employees think just the opposite. The ability to break down stereotypes and clichés as well as the controller's resistance to harmful influences is just as important (Sobańska & Kabalski, 2014, p. 21).

Of course, in order to become a good business partner, a management accountant should have specific qualifications and predispositions. A broad knowledge of finance and accounting is necessary, but not sufficient. For this role, such interpersonal skills as the ability to influence others, understand business, and strategic awareness are necessary. A passion for business, presentation and team building skills, as well as communication skills, also seem very important.

Nowadays, a business partnership is thought to be the essence of management accounting. It not only requires expert knowledge of accounting instruments and information technology, but it also involves the ability to incorporate

a comprehensive business insight of reality into the decision-making. Such a financial partner should be able to clearly communicate this insight to other members of the organization (Sobańska & Kabalski, 2014, p. 22). Thus, a significant predisposition to be a business partner is the knowledge of the cause and effect relationships that occur within processes carried out in different units.

The concept of a business partner in terms of the development of a management accountant's role is perceived as essential in today's economy, which has become highly competitive and innovative. This development is a response to the demand of managers for high quality financial and non-financial information and support in their decision-making. They need highly qualified specialists who understand business models and are able to integrate different areas of a company. This precisely reflects the function of management accountants as business partners.

2.4. A controller's professional qualifications and personal traits

A controller should have relevant qualifications which are compatible with his functions in an organization. This stems from the fact that controllers serve a very important role in a company, i.e., they are economic advisors of the Board. On the basis of information provided by controllers, managers make decisions which shape the whole enterprise. Thus, the demands on management accountants are very significant. Internationaler Controller Verein – ICV – worked out a detailed catalogue of requirements, which in particular accentuated the behavioral aspect of controllers. The demands are presented in Table 2.4.

Table 2.4. Demands on controllers according to ICV

Methodological demands	Behavioral demands
– multi-talented, – analytical skills, – holistic thinking, – ability to learn, – ability to abstract, – coaching skills, – ability to explain, – communication skills, – problem-solving techniques, – computer data processing skills, – presentation skills, – supervision over a reporting system.	– patience (e.g. to interpret reoccurring phenomena), – tolerance, – kindness, – ability to visualize things, – intuition, – sensibility and courage, – ability to accept criticism and ability to laugh at themselves, – endurance, – lack of self-importance.

Source: Janczyk-Strzała, 2008, p. 32

The role of controller evolves into the position of internal advisor. Therefore, qualities such as project work and presentations skills, analytical skills, assertiveness, and empathy, together with communication skills, and the ability to work in teams are increasingly important. Communication skills are crucial for gathering business information which is dispersed over processes, systems and organizational units.

CIMA defined a set of requirements that management accountants must meet. The demands include (Szarska, 2007, p. 41):

- a broad knowledge of financial management and management accounting;
- high-class communication skills;
- consulting skills together with team-building and team-work skills;
- a good knowledge of human resource management and leadership to maximize involvement and development of teams;
- the ability to manage information and use technological tools for the purpose of scenario analysis, identifying different business options, and solution recommendations;
- the ability to redefine business strategy due to rapid changes in the economy;
- the ability to manage financial risk and carry out financial control;
- a good knowledge of sales;
- qualities necessary for increasing shareholder value while maintaining expectations concerning the safety of long-term business success.

The requirements controllers must meet can be divided into hard and soft skills. Such a division can be applied to qualities of every person. Hard skills are self-acquired and teachable, whereas soft skills are inborn and relate to character traits. Both types of skills can be trained, yet not every person is able to do that. Among the hard skills of management accountants, one can find (Szarska, 2007, p. 41):

- qualifications related to financial management and management accounting;
- foreign languages;
- knowledge of business processes;
- technological knowledge enabling regular functioning of controlling;
- knowledge of the market;
- advanced knowledge of IT tools in controlling (spreadsheets, financial and accounting systems, data processing, presentation tools);
- knowledge of IT systems in terms of quality of information which is stored in these systems.

Knowledge of the business and professional competencies, or the above-mentioned "hard skills," are an essential basis for a high quality controlling system. The extent of knowledge, which mainly relates to acquired skills, primarily depends on personal talents. These talents play an important part in the process of exercising inborn skills, since they are inheritable. The "soft" skills of

a management accountant include (Szarska, 2007, p. 41): team working skills, analytical skills, integrity and objectivity, empathy, assertiveness, communication skills, the ability to conduct presentations, and training.

Management accountants, as well as other employees who deal with accounting and audit, are obliged to be ethical. The Institute of Management Accountants issued a Statement of Ethical Professional Practice (IMA, 2014); they emphasize confidentiality, competence, integrity and objectivity. These standards show that management accountants and financial management professionals have a duty to society, their profession, the organization they serve and themselves. They must commit to the highest standards of ethical conduct. The standards issued by the IMA are presented in Table 2.5.

Table 2.5. Statement of ethical professional practice

STATEMENT OF ETHICAL PROFESSIONAL PRACTICE Members of IMA shall behave ethically. A commitment to ethical professional practice includes: overarching principles that express our values, and standards that guide our conduct.
PRINCIPLES IMA's overarching ethical principles include: Honesty, Fairness, Objectivity, and Responsibility. Members shall act in accordance with these principles and shall encourage others within their organizations to adhere to them.
STANDARDS A member's failure to comply with the following standards may result in disciplinary action.
I. COMPETENCE Each member has a responsibility to: 1. Maintain an appropriate level of professional expertise by continually developing knowledge and skills. 2. Perform professional duties in accordance with relevant laws, regulations, and technical standards. 3. Provide decision support information and recommendations that are accurate, clear, concise, and timely. 4. Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.
II. CONFIDENTIALITY Each member has a responsibility to: 1. Keep information confidential except when disclosure is authorized or legally required. 2. Inform all relevant parties regarding appropriate use of confidential information. Monitor subordinates' activities to ensure compliance. 3. Refrain from using confidential information for unethical or illegal advantage.
III. INTEGRITY Each member has a responsibility to: 1. Mitigate actual conflicts of interest, regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts. 2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically. 3. Abstain from engaging in or supporting any activity that might discredit the profession.

IV. CREDIBILITY Each member has a responsibility to: 1. Communicate information fairly and objectively. 2. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations. 3. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
RESOLUTION OF ETHICAL CONFLICT In applying the Standards of Ethical Professional Practice, you may encounter problems identifying unethical behavior or resolving an ethical conflict. When faced with ethical issues, you should follow your organization's established policies on the resolution of such conflict. If these policies do not resolve the ethical conflict, you should consider the following courses of action: 1. Discuss the issue with your immediate supervisor except when it appears that the supervisor is involved. In that case, present the issue to the next level. If you cannot achieve a satisfactory resolution, submit the issue to the next management level. If your immediate superior is the chief executive officer or equivalent, the acceptable reviewing authority may be a group such as the audit committee, executive committee, board of directors, board of trustees, or owners. Contact with levels above the immediate superior should be initiated only with your superior's knowledge, assuming he or she is not involved. Communication of such problems to authorities or individuals not employed or engaged by the organization is not considered appropriate, unless you believe there is a clear violation of the law. 2. Clarify relevant ethical issues by initiating a confidential discussion with an IMA Ethics Counselor or other impartial advisor to obtain a better understanding of possible courses of action. 3. Consult your own attorney as to legal obligations and rights concerning the ethical conflict.

Source: IMA, 2014

Compliance with the standards of ethical conduct is an undisputed duty of controllers (Eldenburg & Wolcott, 2011; Horngren *et al.*, 2015), thanks to which the profession of controller is highly valued by economic organizations as well as the public. In addition to relevant technical skills, behavioral attributes, and cultural values, management accountants should have a degree in economics confirmed by relevant certificates. Professional organizations of accountants also play an important part in building a positive image of this profession. They hold examinations and issue certificates that prove the qualifications necessary in the work of a controller. The Institute of Management Accountants (IMA) issues two certificates (Szychta, 2005a, p. 5) – Certified Management Accountant (CMA), which is important for accountants who support managers in the process of management, and Certified Financial Manager (CFM), designed for accountants involved in formulating and supporting the implementation of a corporate strategy. Each of the exams which entitle someone to receive the CMA and CFM certificates is composed of four parts, including multiple-choice questions covering several fields. These fields include (Szychta, 2005a, p. 5):

- economics, finance and management;
- financial accounting, preparation and analysis of financial reporting (in the case of the CMA certificate) or company finance management (the CFM certificate);
- reporting and analysis for the purpose of management and dealing with behavioral issues;
- decision analysis, information systems and managerial control.

Fulfilling the requirements for management accountants and their appropriate competences and skills allows them to identify relationships that exist in the enterprise in order to overcome difficulties and problems. This is due to the systematic and methodical implementation and use of planning systems, as well as systems of management and control.

2.5. A controller in the organizational structure

The way in which the functions of controllers are performed largely depends on their position in the organizational structure. The location of a controlling unit in the organizational structure of a company depends primarily on the size and nature of the entity. Therefore, the position of management accountants can have an institutional or non-institutional character (Major, 1998, p. 38).

If the controlling unit is non-institutionalized, its functions are taken over by other, pre-existing organizational units. In this way, a separate department of controlling is not created, but its direct controlling tasks are performed by the management. It is also possible that management delegates these tasks to pro teams (Nowak, 1996, pp. 21–31). Controlling in this form is most common in small units that have a relatively simple organizational structure with centralized management. The controlling unit in this case consists of a single post. The controller's function is taken over by one of the deputy chief executives, whose scope of current responsibilities has been extended. If additional responsibilities make fulfilling current tasks difficult, then the implementation of controlling activities can be done by workgroups or outsourced. Workgroups include different teams, e.g., advisory, implementation, decision-making, and coordination. The composition and tasks of teams are flexible, adapting to emerging needs. When the workgroup has achieved its goal, it ceases to exist. The outside professional usually has a lot of experience, so the implementation of controlling in a company does not result in conflicts between managers of various centers (Surmacz *et al.*, 2010, p. 95).

When this post becomes institutionalized in the company, a separate organizational unit, which is intended to perform the functions of controlling, is isolated. It is responsible for supporting the Board in making managerial decisions.

There are two options for the location of a controlling unit in the organizational structure of a company: a linea position and a staff position (Wierzbicki, 1995). The diversity of controllers' positions is presented in Table 2.6.

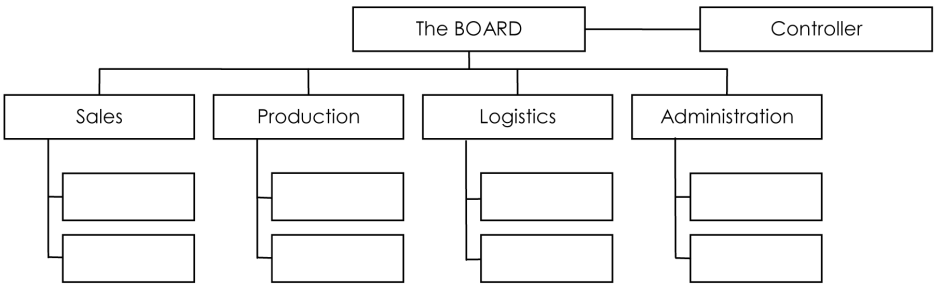
Table 2.6. The institutional and non-institutional character of a controller's positions

Elements of the characteristics	Controller's position	
	institutional form	non-institutional form
Size of company	– large	– small – medium-sized
Position in the organizational structure (organizational procedures)	– controlling unit (department)	– financial unit – accounting unit – task teams – manager of the company
Structural solutions	– staff structure – line and staff structure	– functional structure
Type (role of controller)	– coordinator – moderator – analyst – initiator – innovator	– supports the manager

Source: Nowak, 1996, p. 20

The staff structure (Eldenburg & Wolcott, 2011; Horngren *et al.*, 2015) means that the controlling unit is placed at the very top of a company's organizational structure and its form is that of a staff unit. Due to such a position, a controlling unit has functional authority over the remaining units. In this case, the position of a controller is high, yet it does not facilitate carrying out his tasks. The position is of an advisory nature and he helps in making decisions, although, he has no decision-making and management powers. The controller has no right to instruct or communicate directly with those who are responsible for the implementation of the company's objectives. This extends the flow of management information, thus making the proper response to emerging threats difficult. This considerably reduces the effectiveness and legitimacy of the controlling system which is perceived as a way of managing the company. In the staff structure, management accountants exist on the sidelines of a company. The controller's tasks are limited only to disclosing variations and analyzing their causes. The position of a controlling unit in a staff structure is shown in Figure 2.2.

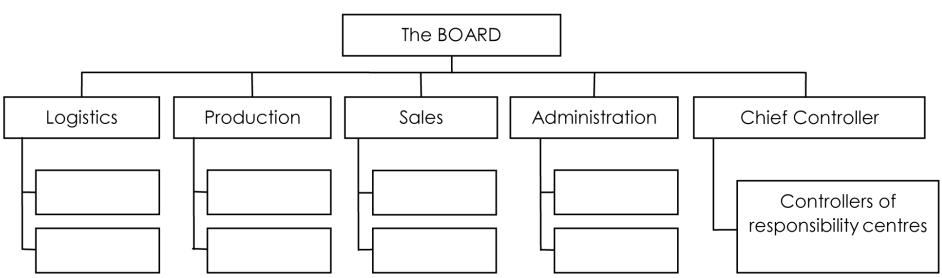
Figure 2.2. A controller's position in the staff structure



Source: own elaboration

The line position (Eldenburg & Wolcott, 2011; Horngren *et al.*, 2015) sees the controlling unit as a separate department positioned on a par with other departments, such as production, logistics, sales and administration. With a controller in such a position, it facilitates communication with other departments and creates the need for an exchange of information between them. Managers of individual units participate in meetings, communicate their opinions, inform others about emerging threats and suggest necessary changes. This increases the effectiveness of the controlling system. The line position gives the controller a comprehensive knowledge of the functioning of the entire company. In this case, the controller also has the power to advise, carry out orders and make decisions. As a result, quick decision-making is possible in the unit. An additional advantage of controllers being in such a position is the ease of determining the scope of competence and responsibility. All of the above make the line position of the controlling unit more effective. The location of controlling in the line structure is shown in Figure 2.3.

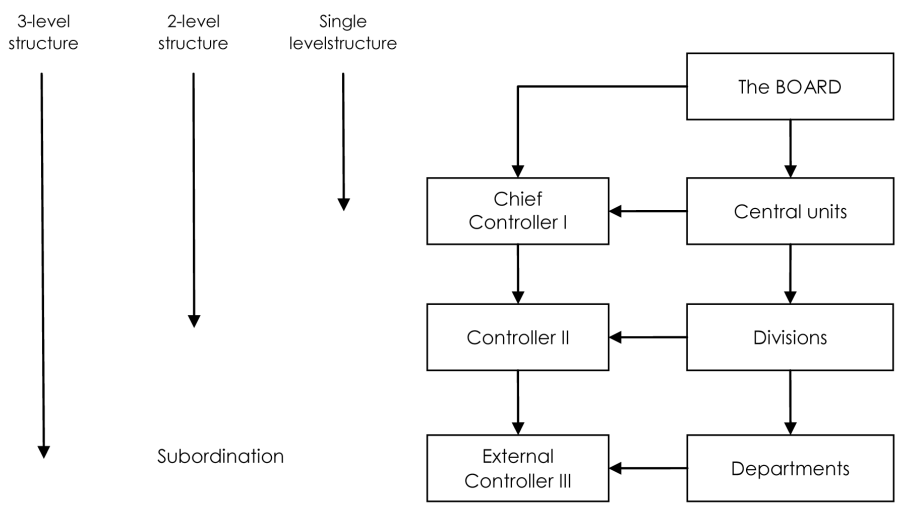
Figure 2.3. A controller's position in the line structure



Source: own elaboration

In the case of large units, the controlling unit very often has a hierarchical, multi-level structure. This confirms the need to create a team of controllers who are assigned to individual functional areas (Nesterak, 2004, p. 38). The first level of the organization of controlling in large enterprises is the Chief Controller, i.e., the Central Department for Controlling (grade I). The Chief Controller is subordinate to the Chief Executive, and his main task is to implement controlling and secure the use of unified systems, as well as tools and methods of management (Bielawski, 2011, p. 110). The second level is the controlling units, i.e., Controlling Units (grade II). They are located in the economic and financial division of a company. Controllers' tasks at this level include providing information to internal units in the company, which act as responsibility centers for costs and profits (Bielawski, 2011, p. 110). At the lowest level there are departmental controllers (department, unit). Their main task is to support the decision-making process, to participate in task planning, to conduct a comparative analysis of plans and results, as well as to participate in the preparation of corrective actions (Bielawski, 2011, pp. 110–111). The hierarchical structure of controlling is shown in Figure 2.4.

Figure 2.4. The structure of controlling in a large company



Source: Chalastra, 2000, p. 28

The position of management accountants is significant for the overall effectiveness of their work. In a line position, the controller directly communicates with other departments and managers of individual units, which facilitates the acquisition of information. This position is stronger and more effective from the

controller's point of view. The staff position makes the work of management accountant more difficult. Communication with other managers is limited; it obstructs the flow of information and lengthens the time of decision-making. As a result, the efficiency of controlling is lower.

In large companies, controlling has a multi-level (hierarchical) structure. Controlling units and management accountants are located at different levels of the organizational structure. Controllers' tasks are varied, and individual units isolated in the controlling department support both strategic management and operational decision-making.

Outsourcing of controlling is a good solution for small and medium-sized companies (Janik & Paździor 2012, pp. 134–135). The implementation of controlling usually involves large costs. Purchasing the right software and the use of specialized tools of controlling generates high expenses. Using the services of a professional organization that has experienced and qualified management accountants can considerably lower the costs.

CHAPTER 3

TASKS AND ATTRIBUTES OF CONTROLLERS BASED ON EMPIRICAL RESEARCH CONDUCTED IN POLAND

3.1. The tasks of controllers and their conditioning in Polish companies

The actual scope of controllers' work, their role, and their characteristics in Polish organizations can be analyzed on the basis of empirical research carried out in companies, by studying job advertisements, or on the basis of research conducted directly among management accountants. Most often, these studies are carried out by means of questionnaires or job advertisements posted by companies seeking employees for the position of controller.

One of the first studies which analyzed the tasks of management accountants in Polish companies was conducted in 2005 by Szychta (2006, pp. 134–151). The study included 90 companies based in central Poland; the companies were picked out of 320 companies which received the questionnaire. They were mainly medium-sized or large companies which employed more than 100 people (63.3% of companies). 21.1% of the companies employed more than 1,000 people. The questionnaire listed the basic tasks of controllers, whose importance was evaluated by the respondents according to a 1 to 5 scale. The respondents pointed out the most important tasks, which included cost and expenditure control, determining and evaluating the company's performance, preparing and interpreting results of short term decisions for the Board, as well as preparing and correcting budgets. The least importance was assigned to the design and implementation of new information systems in a company. Other tasks listed in the questionnaire, which according to the respondents were somewhat important, included (Szychta, 2006, p. 145):

- interpreting operational results;
- improving financial results;

- evaluating and controlling capital expenditures;
- providing information which supports lower-level managers in their decision-making;
- implementing the company's strategy.

The respondents additionally evaluated the influence of factors which condition the role and tasks of modern controllers in their companies. The factors included (from those with the most significant impact to the least significant ones) (Szychta, 2006, p. 146):

- the development of information technology;
- increasing orientation to customer needs;
- the implementation of a new information system for finance and accounting;
- new state regulations in terms of accounting;
- the implementation of a new management style;
- company restructuring;
- globalization processes in terms of the economy;
- recommendations of external consultants;
- new production technology;
- company ownership transformation.

Having analyzed the factors conditioning the role and tasks of management accountants, one can observe that the results obtained by Szychta are consistent with the results of research carried out between 1995 and 2000 by Scapens and other British researchers (Scapens *et al.*, 2003). Information technology has been recognized in both studies as the most important factor that shapes the tasks of management accountants in enterprises. A new information system for finance and accounting was listed as the third factor in terms of relevance in both studies. Increasing orientation to customer needs was second in the research by Szychta, while it was fourth in the British study. The second factor in terms of importance in British companies was the restructuring of an organization, although in Polish enterprises it was perceived as being of little importance. According to both studies, new production technology had little impact on the role and tasks of management accountants.

Another questionnaire research which aimed to analyze the tasks and role of controllers in Polish companies was carried out by Dynowska (2011, pp. 146–155). The research included 169 companies which were based in the Warmia-Masuria Province. The companies employed more than 50 people. Subsequently, 21 companies were chosen which implemented a system of controlling as well as isolated a controlling unit or a controller post in their organizational structure. According to the research, the controller's tasks in the studied companies included the development and coordination of planning and cost control, the determination and interpretation of economic results, as well as the preparation and interpretation of financial reports. Thus, controllers in the researched companies mainly dealt

with the practical service of controlling tools. In more than half of the units, controllers dealt with determining ratios adequate to the current information needs of the company. This means that they actively participated in the creation of budgets, analysis of emerging variations and finding ways to deal with them. In only one third of the companies were management accounting professionals asked to prepare environmental analysis, industry analysis, market and competitor analysis. The research showed that the main tasks of the controlling unit boiled down to reporting, planning, budgeting and performance control by means of comparison with plans. This means that controllers do not have decision-making powers, but only serve as advisors to managers in their decision-making.

The questionnaire research conducted by Łapińska and Dynowska (2010, pp. 318–327) involved 21 Polish companies which were chosen intentionally; they already had an implemented system of controlling, or at least some of its elements. The questionnaires were filled in by the Board members, finance directors, chief accountants, managers or staff of the controlling department. The scope of tasks performed by controllers in the studied companies is presented in Table 3.1.

Table 3.1. The scope of controllers' tasks in the researched companies

Controller's tasks	Number	%
Preparation and interpretation of reports and financial ratios	15	71.4
Internal reporting	19	90.5
External reporting	15	71.4
Preparation of budgets	16	76.2
Budgetary control	17	81.0
Budgetary adjustments	15	71.4
Cost control/management	18	85.7
Preparation of financial forecasts	17	81.0
Preparation of financial plans	15	71.4
Preparation of business plans	15	71.4
Strategic planning	7	33.3
Analyses of the industry, environment, competitors etc.	9	42.9
Evaluation and counseling for managers	14	66.7
Preparation of controlling tools base	16	76.2
Cooperation in implementation of IT applications	17	81.0
Current cooperation with accounting, logistics, HR, sales and marketing	1	4.8
Acquisition of EU funds	1	4.8
Tasks performed as a Quality Manager	1	4.8

Source: Łapińska & Dynowska, 2010, p. 325

The research carried out by Łapińska and Dynowska (2010) showed that the most common task of controllers in the researched companies was internal reporting, which supported managers in making better decisions. According to the questionnaire, another important task performed by controllers included cost control and management, as well as budgetary control, cooperation in the implementation of IT applications and preparing financial forecasts. Tasks that were rarely indicated by the respondents included strategic planning, current cooperation with other departments and tasks related to the acquisition of EU funds. This may stem from the fact that the controlling unit was a relatively new addition to the researched company. In general, the research by Łapińska and Dynowska (2010) indicates that although controllers participate in the decision-making process, they do not have decision-making powers.

Zarzycka (2016) conducted yet another questionnaire research which aimed to determine the role and scope of functions of management accountants in Polish companies. The survey took place between 2013 and 2015. The author chose at random 1,200 enterprises from the Tax Identification Number database (NIP), which later were requested to complete a survey. The questionnaires were completed by people from the relevant departments, e.g., finance and accounting or controlling/management accounting. Subsequently, the author classified for further analysis 116 correctly completed surveys, which constituted 9.67% of the total number of distributed questionnaires. Most of the returned questionnaires came from companies with foreign capital, and in terms of the type of business, they were mostly production companies. The financial controller was a dominant function among the respondents. However, one could additionally observe such functions as controlling specialist and financial analyst. All the respondents had a university degree, and 84% of the respondents had majored in finance and accounting or economics.

The respondents were asked to determine the tasks they perform in their work. Having received the answers, they were grouped into 11 categories. 90% of the specialists dealt with budgeting and budgetary control, supporting decision-making processes as well as cost control and financial control. According to the respondents, preparing analyses and reports as well as measuring the company's performance were very important tasks. The respondents also stated that they had played a part in implementing tasks aimed at developing management accounting in the company. These results are consistent with the conclusions of another study by the same author where she analyzed job advertisements[24]. The scope of tasks of more than 50% of the surveyed management accountants included conducting profitability analyses of investments and improvements and optimizations in the company. In 38% of responses, the task of generating and adding value to

[24] The research is described in the later part of the chapter (Zarzycka, 2016).

the organization could be observed, which is one of the most important tasks of a controller as a business partner. More than 30% were also involved in the implementation of the company strategy (Zarzycka, 2016). However, the respondents to a much lesser extent engaged in tasks related to financial reporting. The author also compared the range of tasks performed by these professionals in terms of their three most frequent positions (financial controller, controlling specialist and financial analyst). According to the study, there were no significant differences between the tasks at different positions.

The study also analyzed factors affecting the changes in the role and functions of management accountants. The respondents claimed that the introduction of new IT technologies has had relatively the greatest impact on their work. The average rating for this factor was 3.75 on a 5-point scale, where 1 meant no impact of a given factor, and 5 a very big impact. Other factors influencing the work of respondents included mergers and acquisitions, economic conditions and reporting requirements (Zarzycka, 2016).

A question concerning the tasks performed by staff of the controlling department was also included in a questionnaire designed for the purpose of empirical research carried out by a team from BDO, an international consulting company (Financial Controlling Summit, 2014). The study, involving 117 companies operating in Poland, took place between July and September 2014. Most of the companies (42%) were solely of foreign capital while 24% of the companies declared that they were solely of Polish capital. The majority of the surveyed organizations were production or service companies (40% and 35% respectively). In terms of size, 90% of the companies were defined as medium-sized or large.

All of the respondents' responses included four key tasks performed by controllers: strategic analysis, analysis of financial ratios, providing tools for the managers, budgeting and cost control. The responses included some non-standard answers, such as motivating employees, analysis of business indicators or accounting of EU-funded projects. Many of the companies involved in the study created controlling departments so that they could actively participate in management processes. In the case of 50% of the surveyed companies, the controlling departments at the time of the research dealt with exactly the same tasks as at the moment of their creation. Yet for 47% of respondents, controllers handled more duties than it was initially assumed they would have to deal with. The majority of the organizations taking part in the research (75%) declared further development of controlling departments by means of employing more staff, investing in new IT systems or improving the skills of the current team of controllers.

Sobańska (2010a) carried out a study which investigated the practice of management accounting in companies operating in Poland between 1990 and 2001. The author devoted a lot of attention to management accountants and their

functions. The study revealed that controllers working for foreign companies operating in Poland were seen as providers of information; in Polish companies they additionally acted as advisors in the decision-making process. Their main tasks included: budgeting, variance analysis, preparing internal reports and performing other analyses. Additionally, controllers devised new projects and monitored their implementation.

The research conducted by Sierpińska and Niedbała (2003) was based on an analysis of job advertisements. The authors analyzed 118 advertisements looking for controllers or staff related to controller's functions which appeared between 1998 and 2000 in the supplement "Pracuj w Krakowie" to *Gazeta Wyborcza* (the most widely read Polish national daily newspaper). The study shows that the key and most frequent requirements for controllers included reporting, budgeting, planning and performance control, as well as comparing the performance with the plan (Sierpińska & Niedbała, 2003, pp. 37–39). The tasks of controllers identified by the authors are presented in Table 3.2.

Table 3.2. Controllers' tasks

Controllers' tasks	Number	%
Financial reporting	50	42
Budgeting	41	35
Economic and financial analysis	35	30
Performance control and comparison with the plan	30	25
Planning and forecasting	26	22
Cost analysis and calculation	23	19
Maintaining financial liquidity	17	14
Implementing new models and methods of management	14	12
Coordinating departments, projects and contracts	12	10
Investment analysis	11	9
Information management	10	8
Supervision over accounting staff	5	4
Risk assessment	5	4
Internal audit	4	3
Tax management	3	3
Other	8	7

Source: Sierpińska & Niedbała, 2003, p. 38

Ignaszewska (2004) also investigated requirements for management accountants found in newspaper job advertisements. For the purpose of her study, the author analyzed 1,334 job advertisements from all over Poland. The adverts looked for controlling specialists, who were also referred to as Controllers,

Financial Controllers, Financial Analysts, Economic Analysis Specialists, Financial Planners, or Financial Managers. Employers who were seeking such professionals required them to have expert knowledge of economic analysis and financial reporting, cost management, budgeting and reporting as well as financial forecasting. The tasks of controllers identified in the job adverts and the frequency of their occurrence are as follows (Ignaszewska, 2004, p. 21):

- budgeting – 99%;
- economic analysis – 94%;
- cost management – 93%;
- reporting – 78%;
- preparing financial forecasts – 67%;
- price calculation – 45%;
- cash flow management – 8%.

Research into the development of controlling in Polish companies based on newspaper job adverts seeking controllers was also conducted by Goliszewski (2002a). The author analyzed job advertisements which appeared in *Gazeta Wyborcza*. The study covered the period between 1989 and 2001, however, the advertisements were analyzed every other year.

The scope of controllers' tasks which was presented in Goliszewski's empirical research was wide and diverse (Goliszewski, 2002a). The analysis of job adverts showed that preparing economic analyses was the most important task of a controller. It was mentioned most frequently, almost every year under investigation (from 16.67% of ads in 1991 to 33.33% in 1995). Another significant task of a controller involved budgeting, which included both preparing budgets and their control (from 11.35% in 1995 to 21.17% in 1999). Variance analysis turned out to be quite an important requirement for controllers, however, it was not frequently mentioned in the advertisements. Planning i.e., preparing forecasts and financial plans, was yet another important task of management accountants. It appeared quite frequently and remained at a similar level in subsequent years as reporting. The percentage of other responsibilities, such as cost control and management, creation controlling tools, internal control and management of cash flows, was not as significant.

Determining the scope of management accountants' tasks in Polish enterprises was also the aim of a study conducted by Zarzycka (2016). This study was based on an analysis of 499 job advertisements related to management accounting and controlling, which appeared on the *pracuj.pl* website. The analyzed advertisements were collected between 2014 and 2015. The author did not take into consideration advertisements which were looking for someone interested in internships, work experience or managerial positions, nor those who were interested in managing a department. The analysis helped the author to identify 31 specific tasks that candidates were supposed to perform. They were then grouped into 12 categories,

which allowed the author to examine the most important tasks carried out at different positions. For the purpose of the analysis, the author considered only the four positions which appeared most frequently, i.e. controlling specialist, financial controller, cost/business controller and financial analyst. The remaining positions mentioned in the analyzed advertisements were referred to as "other positions."

According to the study, the most important task for all the positions included budgeting and cost control, understood as participation in the budgeting process, subsequent budgetary control, and analysis of budget variance. Almost 80% of the ads were looking for specialists who would support other employees in the decision-making process, as well as advise them, which is related to the next responsibility – reporting. The responsibilities also included tasks related to cost control and calculation, management of working capital, supervision of inventory and assets, and other operating equipment (Zarzycka, 2016). In the case of almost 50% of positions, candidates were expected to measure the company's performance and support financial reporting, which involved contributing to the preparation of financial statements, but also involved their unassisted preparation and even consolidation. The development of management accounting in the company was found among other important tasks. Only 9% of the job offers sought a specialist who would develop and implement strategies. The analysis carried out by the author revealed that the scope of responsibilities for individual positions was very similar. The similarity between the responsibilities of a controlling specialist and financial controller was more than 87%, and in the case of other positions it exceeded 70% (Zarzycka, 2016).

The research which has been carried out so far also analyzes factors affecting changes in the role and responsibilities of management accountants in Polish enterprises; the research takes into account such factors as acquisition, privatization and implementation of an integrated ERP system.

The studies conducted by Zarzycka and Firkowska-Jakobsze revealed that processes such as acquisition or privatization have a great impact on management accounting in a company. The first was carried out in an international pharmaceutical company which was taken over by another organization operating in the same industry (2011, 2012a). The new owner increased the importance of management accounting, thus emphasizing the crucial role of controllers as people who provide information necessary for management. Management accountants supported managers in budgeting, analyzing financial information and making decisions, thus they acted as business partners. Controllers were also given more freedom in preparing analyses by implementing their own indicators and reports which measured performance. Controllers' tasks also changed greatly. Before the acquisition, controllers were mainly preoccupied with financial reporting. After the takeover, they focused on devising reports for managers and the Board.

Another study by Zarzycka and Firkowska-Jakobsze (2012b) was related to the impact of privatization on the management accounting system in a company and the role of controllers in an organization. The company included in the study was privatized using capital from an international organization. According to the study, in the case of privatization, the shape of the management accounting system and the tasks of controllers are mainly affected by the way the whole process is carried out. The acquiring company increased the role of management accounting and controllers in the process of management. These specialists supported managers by participating in the decision-making process. The controllers' status in the surveyed organizations was very high, and the other workers trusted them, which resulted in better cooperation. In the second case, the company was privatized by means of employee leasing. There was an attempt to implement a management accounting system, but the controllers were incorporated into the financial and accounting department and that led to a situation in which they were treated by other members of staff as regular accountants.

Zarzycka (2012a) conducted a study on the influence of the implementation of the ERP system on a company. The author analyzed six companies owned by international capital. The results of the study showed that implementation of the ERP system did not cause any significant changes in the system of management accounting. This implementation also did not introduce innovative and modern solutions in budgeting, cost accounting and performance measurement. However, respondents admitted that the role of controllers changed significantly and definitely strengthened (Zarzycka, 2012a). They became a very important link in the process of business management and information relay. After implementing the ERP system, management accountants gained extensive knowledge of the processes taking place in the organization, as well as relationships between these processes. They became essential partners of managers in making decisions, which resulted in a change of their role in the company. Some of the existing controllers' responsibilities were largely automated or taken over by the heads of responsibility centers. Controllers thus gained a lot of time which they could spend on in-depth analyses and participating in the process of management. The implementation of the ERP system also contributed to the professional development of the controllers.

All the above mentioned empirical studies (Szychta, 2006; Dynowska, 2011; Łapińska & Dynowska, 2010; Zarzycka, 2012a, 2012b, 2016; Financial Controlling Summit, 2014; Sobańska, 2010a; Sierpińska & Niedbała, 2003; Ignaszewska, 2004; Goliszewski, 2002a, 2002b; Zarzycka, Firkowska-Jakobsze, 2011, 2012a, 2012b) dealt with the subject of management accountants' responsibilities in their companies. The scope of their tasks is very wide and diverse, but there are some responsibilities that prevailed. Among the most common tasks of controllers one can find:

- planning and cost/expenditure control;
- determining company performance and its evaluation;
- preparing and interpreting results of short term decisions for the Board;
- preparing and correcting budgets;
- designing and implementing IT systems;
- providing managers with information necessary for decision-making;
- preparing and interpreting financial reports;
- analyzing the environment, industry and market;
- internal and external reporting;
- evaluation and advisory function for the purpose of management;
- preparing economic and financial analyses;
- performance control and comparison with the plan;
- variance analysis.

It should be emphasized that the four most common tasks recognized as being of the greatest importance in the Polish empirical research were also recognized by British management accountants (Scapens *et al.*, 2003). The tasks included control of costs and expenses, determining and evaluating company performance, preparing and interpreting decision calculus for the Board and preparing and correcting budgets. The only difference was that British research put evaluation of company performance in first place, with cost control and financial control in the second position. The survey also helped to identify the most important tasks carried out by controllers, which could be key tasks in their future work. The respondents assumed that the same tasks that are currently ranked as the most important would be still crucial in the controller's future work.

The tasks and roles of controllers according to foreign studies tend to be similar to those identified in Polish studies. For example, Siegel (1996) conducted a study on the tasks carried out by management accountants in the USA. The respondents indicated tasks which they performed most frequently. Their responsibilities included strategic planning, consultations with other members of the organization, customer profitability analysis and specific products profitability analysis, and process improvements. The respondents also mentioned tasks related to financial reporting, budgeting, and economic and financial analyses. Some of these tasks are consistent with those mentioned in Polish research.

Another study conducted among 300 specialists of management accounting in Finland by Malmi *et al.* (2001) also confirmed that the scope of tasks performed by controllers are similar regardless of the geographical location of the company. Among the ten most important tasks, the respondents mentioned budgeting and planning, responsibilities related to financial reporting, the development of management accounting and information systems, preparing

financial analyses, and budgetary control. All these responsibilities were indicated in the study by more than 80% of the respondents. The respondents also mentioned their advisory function to other employees, evaluating investment projects and strategic planning, and implementating the strategy (Malmi *et al.*, 2001).

A survey conducted by IMA and Ernst & Young shows that time does not affect the scope of tasks performed by specialists of management accounting (Clinton & White, 2012). The study was carried out on two occasions, in 2003 and in 2012. The most important tasks mentioned by practitioners of management accounting were the same on both occasions. These tasks included: internal reporting in support of decision-making, financial management and cost management and control. The respondents also mentioned budgeting, strategic planning and participation in the process of financial reporting. The respondents were also asked about their professional challenges. In 2003 it was providing significant information on costs, whereas in 2012 it was cost reduction. The vast majority of respondents considered cost reduction as the main way to improve financial results. Among other priorities, respondents listed the development of standards, contributing to the implementation of the company's strategy and risk reduction (Clinton & White, 2012).

In studies by Polish and foreign authors, one can predominantly find a traditional and unchanged scope of tasks performed by specialists of management accounting. The main responsibilities of controllers in most of the studies include budgeting, planning, cost control, measurement and evaluating the company's performance, as well as supporting management in decision-making.

3.2. A controller's attributes in the light of the empirical research

In order to become active participants of the management process in companies, management accountants need to be knowledgeable about management accounting and finance, law and management, and they also need to be able to foresee and think in terms of strategy. Therefore, the subject of professional requirements and personal qualities of controllers is often referred to in empirical studies.

The subject was explored by Sierpińska and Niedbała (2003, pp. 37–39). Due to the fact that the analyzed job advertisements were posted by companies with foreign capital, the ability to speak a foreign language was predominant. Additionally, controllers were expected to have a university degree in economics, several years' professional experience, and they needed to be computer literate, especially in terms of spreadsheets. All the requirements for controllers identified in the mentioned research are presented in Table 3.3.

Table 3.3. Requirements for controllers

Requirements for controllers	Number	%
Ability to speak a foreign language	101	86
University degree in economics	90	76
Computer literacy	88	75
Several years' professional experience	51	43
Knowledgeable about financial accounting	35	30
Analytical skills	28	24
Good communication and interpersonal skills	27	23
Team working skills	25	21
Self-reliant	24	20
Knowledgeable about management accounting	18	15
Knowledgeable about international standards of accounting	12	10
Leadership skills	11	9
Organizational skills	11	9
Strongly motivated	11	9
Initiative and creativity	8	7
Stress-resistant (deadlines)	6	5
Flexible	6	5
Knowledgeable about legal regulations	5	4
Other	17	14

Source: Sierpińska & Niedbała, 2003, p. 38

A large proportion of the advertisements analyzed by Sierpińska and Niedbała (2003) emphasized the fact that management accountants' reports are directly addressed to the Board. Only a few advertisements mentioned that the controller would have to satisfy the information needs of mid-level management. The analyzed adverts were mainly looking for future employees of a controlling department, and not managers, thus leadership skills were rarely required (only 9%).

As the analysis of advertisements shows, self-reliance and teamwork were also required. Those are typical characteristics of a controller's job. Management accountants should act as economic advisors in order to assess problems and solve them, but at the same time they must be able to analyze data on their own and suggest solutions which will be implemented once accepted by the Board (Sierpińska & Niedbała, 2003).

The analysis of job advertisements posted on the *pracuj.pl* website conducted by Zarzycka (2016) also allowed the author to identify the requirements for

management accountants. Zarzycka identified 50 specific requirements which were subsequently grouped into 15 more general categories. It helped the author to carry out more in-depth research and helped to determine the main requirements for individual job positions. The study isolated the most frequently advertised positions, i.e., controlling specialist, financial controller, cost/business controller, financial analyst as well as "other positions," which included the remaining positions being advertised.

Having at least two and a half years' work experience in a similar position was a very frequent requirement. Almost half of the advertisements looked for people with 2 to 3 years' experience in a similar position, and 30% of adverts required candidates to have at least one years' experience of working in management accounting. The analysis showed that companies are seeking specialists who understand economic and business environments, have previous experience, and who know how organizations function (Zarzycka, 2016). The requirement to have a university degree in finance and accounting, economics, or even sometimes econometrics and mathematics, was crucial, however, the advertisements did not mention whether the employers required a bachelor's or master's degree. The next group of requirements was related to computer skills and analytical thinking. In 84% of advertisements, candidates were required to have a good command of MS Office software, and 42% of future employees were expected to be familiar with the ERP systems. A large proportion of advertisements was posted by international companies, thus the ability to speak English was important. This skill was also frequently required by Polish companies. Employers additionally emphasized the need to have certain soft skills, including good communication skills, organizational skills, and team working skills. The work of a controller also requires people who are stress-resistant, who can organize their work well, as well as those people who can draw conclusions and who have presentation skills.

Only a few job advertisements addressed the requirement of the controller's ethical conduct. As it turned out, leadership and management skills were not crucial for the selected positions (Zarzycka, 2016). The analysis of requirements for different positions showed that there were no significant differences between the determined positions.

The subject of requirements for management accountants was also explored by Ignaszewska (2004). The author claimed that a controller's personal traits have a greater influence on their effectiveness at work. The study revealed that it is easier to change the professional skills required in a controller's job than their personal traits. The most frequently required personal qualities that were mentioned in job advertisements analyzed by Ignaszewska included (Ignaszewska, 2004, p. 22):

- analytical thinking – 20%;
- team working skills – 18%;
- leadership skills – 17%;

- communication skills – 16%;
- self-reliance – 11%;
- organizational skills – 6%;
- managerial skills – 5%;
- creativity – 4%;
- precision – 4%.

According to the advertisements analyzed in this study, employers seek management accountants who have good interpersonal skills, who are self-reliant and are capable of analytical thinking. Employers did not pay much attention to managerial skills (only 5%) nor the ability to relay information (6%).

The professional requirements for controllers were also studied by Goliszewski (2002a). In the studied period, he identified three predominant requirements (Goliszewski, 2002a, p. 24): a university degree in economics and finance (from 15.22% of advertisements in 1993 to 33.33% in 1991), several years of work experience (from 15.38% in 1995 to 33.33% in 1991), and a good command of English (from 17.44% in 2001 to 33.33% in 1991). The following years brought some change; the proportion of the above requirements decreased and new requirements emerged. The new requirements included computer literacy (mainly MS Office software) (from 0% of advertisements in 1991 to 19.23% in 1995), knowledge about accounting principles (from 0% in 1991 to 15.22% in 1993), experience in financial analysis (from 0% in 1991 to 10.67% in 1999) and a good command of other languages (from 0% in 1991 to 6.15% in 1995). Among personal traits, analytical thinking prevailed (from 13.10% in 1995 to 20.69% in 1997). Other requirements whose share in specific years was similar included (Goliszewski, 2002a, p. 25):

- organizational skills;
- interpersonal skills;
- communication skills;
- self-reliance;
- creativity;
- precision;
- team working skills;
- flexibility.

Requirements related to leadership skills and managerial skills were relatively rare in the advertisements analyzed by Goliszewski (Goliszewski, 2002a). Thus, it confirms the fact that managing is not one of the functions of controllers, they are expected to support managers.

In a study by Sobańska (2010a), one can also find the subject of attributes of management accountants. Only members of this profession took part in the study and all of them had a university degree. The respondents stated that in addition to knowledge of financial and management accounting, controllers need to have

a general knowledge of economics, as well as organization, finance, management and psychology. Management accountants participating in the study stressed the high importance of the knowledge of different areas of the enterprise and IT tools including Excel or financial and accounting systems. According to the respondents, analytical thinking and the ability to draw conclusions were also important. In terms of soft skills, the respondents most frequently referred to networking skills and negotiation skills.

Zarzycka (2016) attempted to determine the requirements for controllers in terms of their knowledge, skills and personal qualities. She carried out a questionnaire research in Polish companies between 2013 and 2015. The author asked the respondents to assess the suitability of their knowledge from different areas, individual skills and characteristics on a 5-point scale, where 1 meant lack of suitability and 5 was very high usefulness in their work.

In terms of knowledge necessary in the work of a controller, the respondents rated two areas highly – finance and accounting and IT. In both cases, the average rating exceeded 4. The study identified another four areas of knowledge. These included management and economics, ethics and corporate governance, auditing, and taxation and law. However, the respondents evaluated the usefulness of these areas in their work as average or even low. It shows that the role of management accountants in Polish companies has not yet evolved to the status of a business partner. Such specialists should have broad knowledge, not only in accounting, finance, and information technology (Zarzycka, 2016).

The study allowed the author to identify a very important quality which is extremely useful in the work of management accountants. This ability is resistance to stress. In studies conducted to date, this feature was extremely rare. The studied group of professionals feel the responsibility put on them; they work under pressure and are subject to pressure from other employees of the organization, thus, this skill seems very useful (Zarzycka, 2016). Another surprising aspect of the study was the high rating assigned to professional skills such as competence, integrity, confidentiality and credibility. These characteristics were little explored in previous studies. Other qualities listed in the questionnaire were also highly rated by the respondents. The surveyed experts claimed that analytical thinking, the ability to interpret and IT skills were highly useful in the work of a controller. They also drew attention to team working skills, as well as interpersonal and communication skills. What seems important is that the majority of respondents indicated the high usefulness of understanding business in controllers' work.

One of the questions which was included in a questionnaire study carried out by Szychta (2006, pp. 134–151) also related to the attributes of modern controllers. The respondents claimed that analytical and interpretive skills (an average rating of 4.6 on a scale from 1 to 5), as well as the ability to associate financial information with non-financial data (average rating 4.45) are the most

important qualities of management accountants. No less important for them was being knowledgeable about the external and internal conditioning of an organization (average rating 4.34), knowledge of legal regulations and principles of financial accounting (average rating of 4.17), strategic thinking (average rating 4.29), risk identification and assessment (average rating 4.25) and rapid adaptation to changes in the company (average rating 4.16).

Referring to the results of a study conducted by Scapens *et al.*, it can be noted that the majority of the respondents in the UK (81%) recognized analytical and interpretive skills as the most important attributes of a controller. It is consistent with the research carried out by Polish academics (Szychta, 2006). The opinions of the respondents involved in both studies do not differ in terms of other skills required in the work of management accountants. The British respondents indicated attributes such as vast knowledge of business and team working skills, in terms of importance. They also highly valued communication skills and the ability to persuade others, as well as high standards of ethical conduct. The study showed that, due to the development of information technology, the ability to use accounting information systems became increasingly important. Computer literacy became more important than verbal communication skills.

Partridge and Perren in their studies emphasized that specialists of management accounting should demonstrate their knowledge of accounting and finance, but they claimed that equally important was a broad knowledge of the business, the specifics of the organization in which the controllers work, and strategic focus while performing their tasks (cf. Szychta, 2005b, p. 96). Controllers should adapt their work and knowledge to the constantly changing environment of the company, and be active members of the strategic team in their company.

The qualities and skills of a management accountant that were most frequent in the research by foreign authors included analytical skills, interpersonal and communication skills, knowledge of IT systems, and a general understanding of the business. More than 80% of professionals surveyed by Burns and Yazdifar (2001) claimed that analytical skills and the ability to solve problems are the most important qualities in a controller's job. The respondents involved in the study by Siegel and Kulesza (1994) indicated that these skills are second in terms of importance in a controllers' work. Acquisition of information, both financial and non-financial, about the functioning of the units is currently much easier. However, due to the large amount and complexity of information, its analysis becomes quite difficult for management accountants. Therefore, knowledge of IT systems, which facilitates their analysis, became a very important aspect of controllers' work. The respondents participating in the study by Burns and Yazdifar (2001) emphasized that, regardless of the industry or type of business, the knowledge of spreadsheets, communication tools, integrated systems or basics of programming has become

indispensable in the work of a controller. A broad understanding of the business is yet another essential skill of a management accounting specialist which appeared in many foreign studies (Siegel & Kulesza, 1994; Burns & Yazdifar, 2001; Burns *et al.*, 1999). This skill is understood as knowledge of the specific environment the company operates in, but also a general understanding of the changes taking place in the global economy.

Apart from technical knowledge, management accounting professionals should also be characterized by some extremely important soft skills, as they complement the knowledge acquired by controllers. The most important are interpersonal and communication skills, including the ability to listen. This is confirmed by the results of studies conducted by, inter alia, Siegel and Kulesza (1994) and Burns *et al.* (1999). These qualities are also associated with the ability to work in a team, which is one of the top five most important skills of controllers (Siegel & Sorensen, 1999; Burns & Yazdifar, 2001; Burns *et al.*, 1999). Interpersonal and communication skills are, therefore, the most important features of modern management accountants.

3.3. Controllers in the organizational structure

The empirical studies carried out to date have often raised the subject of names given to positions occupied by controllers in Polish companies. The authors additionally paid attention to the structure of controlling departments in organizations.

The results of a study conducted in 2010 by Łapińska and Dynowska (2010, pp. 318–327) shed some light on the way controllers are perceived in a company. The majority of respondents (67%) thought that controllers were indispensable for the efficient functioning of their organization. However, there were also responses which perceived a controller's function in a negative way. 28% of respondents saw a management accounting specialist as a "controller", i.e., a person who controls everything, but in a negative aspect. Some respondents (5%) claimed that management accountants were neutral for the functioning of their company.

The perception of management accountants also depends on the ways they communicate with other employees in order to obtain necessary information. Therefore, the questionnaire contained one question that was related to the manner and methods of a controller's communication with other employees. In the majority of cases, a controller personally performed all the detailed analyses, limiting cooperation with other employees to a minimum. However, there were also companies in which they found all the necessary information and data in the company's IT system or received ready-made elaborations prepared by employees from other departments.

The survey also contained a question related to job titles referring to controllers' positions in companies. Most frequently the job title was referred to as a "controlling specialist." Other terms included (Łapińska & Dynowska, 2010, p. 323):

- financial controller;
- financial analyst;
- controller;
- management accounting specialist;
- economic and investment specialist.

The newspaper job advertisements analyzed for the purpose of empirical research carried out by Goliszewski (2002a) showed that a controller's job title was referred to in many different ways. In the early years of the study, the most common names included financial specialist, analysis and planning specialist, financial controller, finance manager, management accountant and financial planner. In subsequent years, these terms were used less often, giving way to new ones such as financial analyst, controlling specialist, management accounting specialist or economic analysis specialist. The term "financial controller" was common both in the initial and final years of the study. But it should be noted that the term "controller" was rarely used in the advertisements.

Zarzycka (2015) analyzed job advertisements posted on *www.pracuj.pl* – one of the most popular websites in Poland. The advertisements were related to positions in which the tasks and functions of management accounting/controlling were carried out. Between 1.03.2014 and 30.05.2014, 203 such job offers were posted. The most frequent terms referring to positions in the area of management accounting/controlling were: controlling specialist, financial controller, financial analyst, and business analyst (Zarzycka, 2015). It shows that companies who seek employees in Poland by means of online job advertisements look for experts on controlling, financial analysis and cost analysis. One can rarely encounter in the advertisements such term as a management accounting specialist. The situation is different at Polish universities. University courses related to the aspects of management accounting/controlling more often use the name of management accounting than controlling (Zarzycka, 2015).

A study conducted by BDO (Financial Controlling Summit, 2014) also focused on the evolution of controlling departments, as well as controllers themselves, in Polish companies. In 53% of the companies which participated in the study, the controlling department consisted of 1 to 3 people, in 37% it comprised of 3 to 10 people, and only in 10% of the surveyed companies did it employ more than 10 people. It seems surprising due to the fact that the group of surveyed companies was dominated by large and medium-sized companies (44% and 46% of respondents respectively). In the case of 96% of companies, the controlling department was an internal part of the organization. Only 4% of companies outsourced controlling services. The questions in the questionnaire additionally

referred to the most common problems faced by a management accounting specialist. Time pressure was the most common answer given by the respondents (73.5%). Communication within the company was another frequently reported problem (48.7%). The respondents also often mentioned difficulties in operating certain tools and the frequently changing regulations of accounting and tax. Only a few companies did not report any major problems.

Polish companies have gradually increased the number of employees who perform different tasks of management accounting. More and more organizations have created separate departments of controlling (Financial Controlling Summit, 2014). Depending on the needs of a company, its size and ownership structure (share of foreign capital), controlling departments have different sizes and structures. In the surveyed companies, they mostly consisted of one to three people. However, not all companies isolated such a department inside their structure. One of the studies conducted so far showed that in Poland there are companies which outsource controlling services (the percentage of such companies is very small).

3.4. Controlling awareness in Polish companies

The awareness related to the work of a management accounting specialist means the ability to determine yourself as a controller in terms of professional identity and the ability to perceive your responsibilities as controlling tasks. In this context, it means consistency between saying you work in the area of controlling and actually performing the tasks related to the system of controlling (Nowak, 2013b).

The study carried out by Nowak (2013b) aimed to analyze the awareness of controlling i.e., awareness of using controlling practices (Nowak, 2013b, pp. 481–497). The author of the study formulated two hypotheses (Nowak, 2013b, p. 481): (1) not every person performing a controller's tasks is aware of implementing controlling practices; (2) not every person who says they use controlling actually uses its practices. In order to verify these hypotheses, the author analyzed answers to a questionnaire which involved 102 respondents.

The first question was designed to isolate people who were working or have worked in controlling. Another question contained a selection of tasks and responsibilities, and respondents were asked to choose those they currently perform or those they have performed at any time in their career. It was a list of 24 controller's tasks, determined on the basis of job advertisements, literature studies and interviews with the heads of controlling departments. The tasks are presented in Table 3.4.

Table 3.4. The tasks of controllers

Tasks performed by controllers	
1	Coordinating plans
2	Help in setting the company's goals (in numerical form and in economic categories)
3	Preparing budgets
4	Updating budgets
5	Monitoring budget implementation
6	Budgetary control, variance analysis
7	Carrying out economic and financial analyses
8	Capital budgeting (capital budgeting, investment budgeting, long-term budgeting)
9	Operational analyses (e.g. bottleneck analysis, ABC analysis, XYZ analysis, profitability analysis, price calculation, ratio analysis etc.)
10	Strategic analyses (e.g. SWOT analysis, portfolio analysis, BSC analysis, strategic ratios analysis etc.)
11	Preparing financial forecasts
12	Unification, standardization of information
13	Providing advice to the Board and managers of different levels and organizational units (presenting variants of decisions and consequences in terms of economic categories)
14	Interpreting financial and accounting data
15	Internal reporting (preparing, interpreting reports for the purpose of internal recipients)
16	External reporting (preparing reports for the purpose of external recipients)
17	Investment appraisal, investment effectiveness evaluation
18	Cost management
19	Liquidity management
20	Internal control
21	Educating staff, conducting in-house or external training sessions in terms of any of the areas
22	Managing people and/or organizational units performing any of the above tasks
23	Designing systems or tools related to any of the above tasks
24	Implementing systems and solutions related to any of the above tasks
25	None of the above

Source: Nowak, 2013b, pp. 483–494

The first question was designed to identify people who actually performed the tasks of management accountants, i.e., they performed tasks related to controlling. It helped to verify respondents' declarations whether they work in controlling or not. Having analyzed the answers to those two questions, Nowak (2013b, p. 484) determined the following cases:

- the person declares that he/she performs the task of a controller and actually does it;
- the person declares that he/she performs the task of a controller, but actually does not perform those functions;
- the person declares that he/she does not perform and has not performed the task of a controller and actually does not do it;
- the person declares that he/she does not perform the task of a controller, but actually does it.

45 respondents declared that they are or were professionally involved in controlling. The remaining 57 people said they had never performed controlling tasks. However, when analyzing the responses in terms of number of controlling tasks performed by the respondents, it was found that 67 respondents performed at least 3 of the above-mentioned tasks of a controller. They were recognized by the author as people who are actually involved in controlling. Only 35 respondents were not really involved in controlling. They were individuals who performed only 1 or 2 tasks of a controller, or had never performed any of these tasks mentioned in the second question.

The study shows that the first hypothesis (not everyone who performs the tasks of a controller is aware that they implement controlling) was verified positively. The study showed that among the respondents there were people who, despite performing 3 or more controlling tasks, declared that they did not deal with controlling. This group accounted for as much as 33% of the respondents. Among the respondents, the author identified those who performed 10 or more of controlling tasks. She considered them as people who are involved in controlling in a particularly intense way. What seems interesting is the fact that as many as 13% of those respondents were not aware that they implemented controlling.

The second hypothesis (not everyone who declared that they use controlling actually uses it) was verified negatively. The study showed that people who do not perform controlling tasks are aware of the fact that they do not implement controlling. None of those people said they had ever dealt with controlling in their work.

The lack of awareness of controlling, i.e., the use of methods and tools of controlling, is conditioned by many factors. The two main ones include a variety of definitions and confusing terminology (Nowak, 2013b). The diversity of definitions results from the fact that the word "controlling" is translated and interpreted in many different ways. In addition, controlling is interwoven into many other areas e.g., accounting, management, and finance. Depending on the company, those people or departments that deal with the implementation of controlling/management accounting may have completely different names, e.g. financial controller, management accounting specialist, or financial analyst, and accounting department, controlling department, or budgeting department. It brings up a variety of terminology which often has a negative impact on the awareness of controlling among employees.

CHAPTER 4

THE ROLE AND TASKS OF CONTROLLERS IN THE LIGHT OF THE EMPIRICAL RESEARCH

4.1. The methodology and objectives of the empirical research

The research into the activities of management accountants which has been carried out so far in Poland and other countries mainly focused on controllers' tasks, and the factors that conditioned their functions. The research allowed the authors to analyze controllers' positions in the organizational structure and to determine their attributes. The subjects covered by the empirical research were continued by a questionnaire research conducted in 2015. Its results are presented in Chapter 4.

The main objective of this study was to determine the role of controllers in contemporary Polish companies. Despite its general evolution, the role of management accountants is perceived differently and its changes may head in different directions. Thus, the authors of this study decided to determine the general position and role of controllers in Polish companies by means of empirical research. The research also aimed to determine the tasks which controllers are responsible for, and the qualities, both professional and personal, they must possess. The scope of a controller's tasks usually depends on the concept of controlling adopted by the company as well as the position that management accountants hold in the company. Due to the specific character of controllers' work, they should have relevant professional qualifications and personal traits. Management accountants play an important advisory role in a company, and on the basis of a controller's performance, certain decisions are made that may have a crucial impact on the company's future. Thus, the requirements that controllers must meet are incredibly important.

The authors of this research conducted a study on the role and tasks of controllers in Polish companies by means of a questionnaire. The questionnaire was distributed among post-graduate students who studied management accounting and controlling as well as employees of controlling and accounting departments of Polish companies.

The questionnaires were given to the respondents personally by the authors. The research involved 190 people. 130 questionnaires were filled in correctly and qualified for further analysis. The authors rejected questionnaires which were incomplete or ambiguous. The percentage of correctly completed questionnaires was 68.4%. Such an outcome resulted from the direct and personal contact with the respondents.

The questionnaire was anonymous and consisted of 15 questions. Two basic groups of variables were used for the purpose of the research. These variables included those which characterized the respondents and the company they worked for, as well as variables which related to controllers and their responsibilities in the company. The choice of groups and individual variables was made in accordance with the research objectives and was intended to characterize the role and tasks of controllers in Polish companies in a reliable way.

The first part of the questionnaire was designed to present the general characteristics of the company where the respondents work, as well as to present some information about the respondents themselves. This section comprised 9 questions (questions 1 to 8 and question 13). The questions related to issues such as age, work experience and the education of the respondents, as well as their position in the company. The respondents were also asked to characterize general specifics of their company, i.e., the type of business, capital structure, number of employees, and the controller's position/controlling department characteristics.

The second part of the questionnaire characterized management accountants and their responsibilities in companies. This section included four questions. From the point of view of the study, it was the most important part of the questionnaire. In these questions the respondents were asked to indicate the extent of the personal qualities they possessed, and which were necessary in the work of controllers. Additionally, the respondents were asked to indicate the professional requirements that controllers must meet. The respondents were asked to specify the extent to which individual skills are useful in their work. They were also asked to indicate the tasks which are performed by controllers and to what extent. One of the questions concerned ways to improve controllers' professional skills.

The last two questions of the questionnaire were designed to determine the respondents' general opinion on controlling and controllers' activities. In the first question, the respondents were asked to indicate the most important function of controlling. This question aimed to present the respondents' views on controlling. In the second question, the respondents were supposed to determine the influence of management accountants on the company's functioning.

When preparing and carrying out the questionnaire, the authors applied a number of measures to guarantee the structural reliability of the survey, internal and external reliability, and the validity of testing. In terms of structural reliability, the research was preceded by extensive literature studies. It enabled the selection of relevant theoretical concepts and appropriate research methods which

were suitable for the analyzed phenomenon (research into the role and tasks of management accountants in Polish companies). In particular, the literature studies concerned the application of the questionnaire method in analyzing the roles and responsibilities of controllers, and the changes in their role in companies in Poland and around the world. Structural reliability was ensured by means of discussions conducted with employees of the Department of Accounting at the Faculty of Management at the University of Łódź.

To ensure internal reliability of the research, the authors made sure that the respondents were knowledgeable about the subject matter being analyzed, i.e., the functions of management accountants in Polish companies. Such a design of the research was to prove that there were some cause-effect relationships between the data and the conclusions. External reliability was ensured by comparing the results with conclusions reached by other authors, both in Poland and around the world. Due to the non-random selection of the sample, the test results cannot be generalized in a statistical manner to all companies in the studied population. In order to ensure validity, prior to the research, certain procedures and ways of documentating (amassing reviewed surveys, entering data into a database etc.) were determined. All of the above activities implied in the research aimed to improve the quality of the present research.

Data analysis and the evaluation of the questionnaires constituted the last stage of the empirical research conducted. The amassed documentation was verified in terms of cross-compliance. The surveys were verified for internal compatibility. Descriptive analysis and correspondence analysis were used in the research. The results of the present study are presented in sections 4.2–4.5.

4.2. Characteristics of the respondents

The survey included questions which allowed the respondents, as well as their organizations, to be characterized. Some questions (1–8 as well as 13 and 15) referred to the respondents' age, work experience and education, and their position in the company. These questions additionally provided information about the company's operation, capital structure and number of employees, as well as the controlling position/department in an enterprise.

The first question of the survey concerned the type of company where the respondents worked. They could choose between two options: production or non-production. Out of 130 respondents, 84 people responded that they worked in a non-production company (64.6%). The remaining 46 people worked for a production company (35.4%).

The next question allowed the authors to estimate the approximate size of the company on the basis of the number of employees. The response indicating

more than 500 employees was the most frequent, with 40 respondents (30.8%) indicating that option. Other replies were characterized by a similar frequency and constituted from 15.5% to 19.2% (Table 4.1). The average number of employees in the researched companies was between 101 and 250 people. However, the diversity of replies was significant; it is reflected in the high value of standard deviation (1.49) and coefficient of variation (45.88%). Most responses indicated that the number of employees was above the mean value.

Table 4.1. Number of employees in the surveyed organizations

Number of employees	Number of responses (N)	Cumulative number of responses	%	Cumulative %
Up to 50 people	23	23	17.7	17.7
51–100 people	22	45	16.9	34.6
101–250 people	25	70	19.2	53.8
251–500 people	20	90	15.4	69.2
More than 500 people	40	130	30.8	100.0
Total	130	130	100.0	100.0

Source: own elaboration based on empirical research

The third question was designed to determine the capital structure of the enterprise. In the case of 81 companies (62.3%), a partial share of foreign capital was identified. Only 37.7% of respondents (49 people) stated that they worked for a company which was financed solely by Polish capital.

The next questions helped to characterize the respondents. The first of these questions allowed the authors to determine the approximate age of the respondents. Two types of responses prevailed. The respondents indicated two age groups i.e., under 30 and 31–40. These responses were indicated by 58 and 53 people, respectively, which constituted 85.4% of all the replies. Only two people who were over 50 years old took part in the survey. The mean age, calculated on the basis of the research, was consistent with one of the age groups which was indicated most frequently i.e., 31–40. Due to the high age diversity of the respondents, their responses did not concentrate around the mean value. The age structure of respondents is presented in Table 4.2.

Table 4.2. Age of the respondents

Age	Number of responses (N)	Cumulative number of responses	%	Cumulative %
Under 30	58	58	44.6	44.6
31–40	53	111	40.8	85.4

41–50	17	128	13.1	98.5
Over 50	2	130	1.5	100.0
Total	130	130	100.0	100.0

Source: own elaboration based on empirical research

Another question concerned the length of the respondents' work experience. The average work experience of the respondents, calculated on the basis of the responses, was 6–10 years. However, the deviation from the mean value was very large, as it is reflected by the high value of the coefficient of variation (52.1%). The analysis of the responses shows that a greater part of the replies indicated length of work experience below the mean value. The diversity of responses was considerable. The most frequent reply of the respondents was less than 5 years. This may stem from the fact that the survey was conducted largely among participants of postgraduate studies. All the results regarding this question are presented in Table 4.3.

Table 4.3. The length of respondents' work experience

Number of years	Number of responses (N)	Cumulative number of responses	%	Cumulative %
Less than 5 years	50	50	38.5	38.5
6–10 years	32	82	24.6	63.1
11–15 years	25	107	19.2	82.3
More than 15 years	23	130	17.7	100.0
Total	130	130	100.0	100.0

Source: own elaboration based on empirical research

The questionnaire sheet also included a question concerning the education of the respondents, who were asked to determine whether they had a university degree in economics. The vast majority of the respondents, i.e., 99 people (76.2%), had such a degree. However, among the respondents were 31 people who did not have such a degree, which may be surprising as the survey was conducted among employees of controlling and accounting departments and postgraduate students.

Question number seven concerned the position of the respondents in their company. They had to determine whether they are controllers (cost analysts, management accountants etc. at least in some scope of their work) or other employees in the unit. It was a very important question from the point of view of the empirical research, since only answers given by employees occupying the position of a controller could outline the real and complete picture of management accountants' work. The answers were diverse, but the majority of respondents indicated that they worked as controllers. These individuals accounted for 57.7% of all respondents (75 out of all 130 respondents). 42.3% of respondents occupied other positions.

The following questions allowed the authors to determine the position and influence of controlling departments or individual controlling posts on the functioning of an enterprise. In one of the questions, the respondents were asked to define the position of controller in the organizational structure of their company (possible replies included line position or staff position). In the line structure, a controller operates at the same level as other managers and they can give orders. However, in the staff structure, management accountants are subordinates to the company's management, and they act as advisors with no executive powers. The majority of respondents (90 people) indicated staff structure. Only 30.8% of the respondents (40 people) specified line structure. These indications may prove that the role of management accountants in Polish companies is still limited.

The next question in the questionnaire allowed the respondents to specify the number of people working in the controlling department. They most often replied that 2–3 people worked there (42 observations, which constituted 32.3%). The number of responses for individual options was similar, which indicates significant diversity in the number of people employed in controlling departments in Polish companies (Table 4.4).

The research carried out by BDO in 2014 (Financial Controlling Summit, 2014) showed that the controlling department in 53% of Polish companies comprised of 1–3 people. When we compare the results obtained in the present study, i.e., the number of responses indicating a one-person controlling unit or a controlling department made up of 2–3 people, it turns out that more than 49% of respondents gave such an answer, and that is in compliance with the other study. In the case of 37% of companies surveyed by BDO, their controlling departments consisted of 3 to 10 people. There were also companies (10%), which employed more than 10 people in this department. In the vast majority of organizations (96%), the department of management accounting was located inside the company, while 4% of the surveyed enterprises outsourced controlling services (Financial Controlling Summit, 2014).

Table 4.4. Number of employees in controlling departments

Number of employees in a controlling department	Number of responses (N)	Cumulative number of responses	%	Cumulative %
1 person who deals with controlling as a part of their responsibilities	30	30	23.1	23.1
Single, separate position	22	52	16.9	40.0
2–3 people	42	94	32.3	72.3
4 people and more	36	130	27.7	100.0
Total	130	130	100.0	100.0

Source: own elaboration based on empirical research

The study by Zarzycka (2016) showed that the number of staff in controlling departments was very different. On average, they employed 7 people. 70% of enterprises employed from 1 to 5 people in this department. There were also some organizations among those surveyed that employed more than 40 people in the controlling departments. Those companies had centralized departments of management and financial accounting, in the form of shared services centers which function within the capital group.

The survey which was created for the purpose of this empirical study also included a question where respondents were asked to determine the influence of the controller on their company. Exactly half of the respondents (65 people) stated that this person has a moderate impact on the functioning of a unit. 35 people found, however, that the position of controller is necessary in the enterprise, as it has a significant impact on the business (Table 4.5).

Table 4.5. Impact of a controller on a company

Impact of a controller	Number of responses (N)	Cumulative number of responses	%	Cumulative %
No impact	4	4	3.1	3.1
Little impact	26	30	20.0	23.1
Moderate impact	65	95	50.0	73.1
Significant impact	35	130	26.9	100.0
Total	130	130	100.0	100.0

Source: own elaboration based on empirical research

Only four people claimed that a controller has no influence on their company. In conclusion, the results showed that respondents had significantly different opinions with regard to this question.

Łapińska and Dynowska (2010) also investigated the way controllers are perceived in Polish companies. A significant proportion of respondents (67%) felt that management accountants have a very large impact on the company. According to them, a controller is necessary for the efficient and effective functioning of an organization. Among the respondents, however, there were people who negatively evaluated the position of a controller. 28% of respondents indicated that a management accounting specialist is perceived as a "controller" i.e., a person who controls everything in a negative meaning. The remaining respondents (5%) thought that a controller was a neutral person, not affecting the company's operations.

The research carried out by Sierpińska and Niedbała (2003) showed that management accountants in Polish companies are mainly perceived as providers of information for managers. Controllers were less often seen as support in decision making.

4.3. The tasks and skills of controllers in Polish organizations

The most important questions in the questionnaire referred to the tasks of management accountants, as well as the personal qualities and professional skills required in the profession. On the basis of these questions, one can characterize a contemporary controller. The first of these questions required the respondents to indicate to what extent the personal qualities mentioned in the question were useful. The respondents marked their answers on a 5-point scale, where 1 meant no impact of a given characteristics on controller's work, while 5 meant that a mentioned feature was very useful in implementing controlling practices. The results, together with the indications for the 12 features listed in the questionnaire, are shown in Figure 4.1.

According to the respondents, the most important character feature was commitment, which was recognized as very important by almost 55% of the respondents. Only two people described their committment as slight, and six people regarded it as moderate, allowing a very high mean value of 4.47.

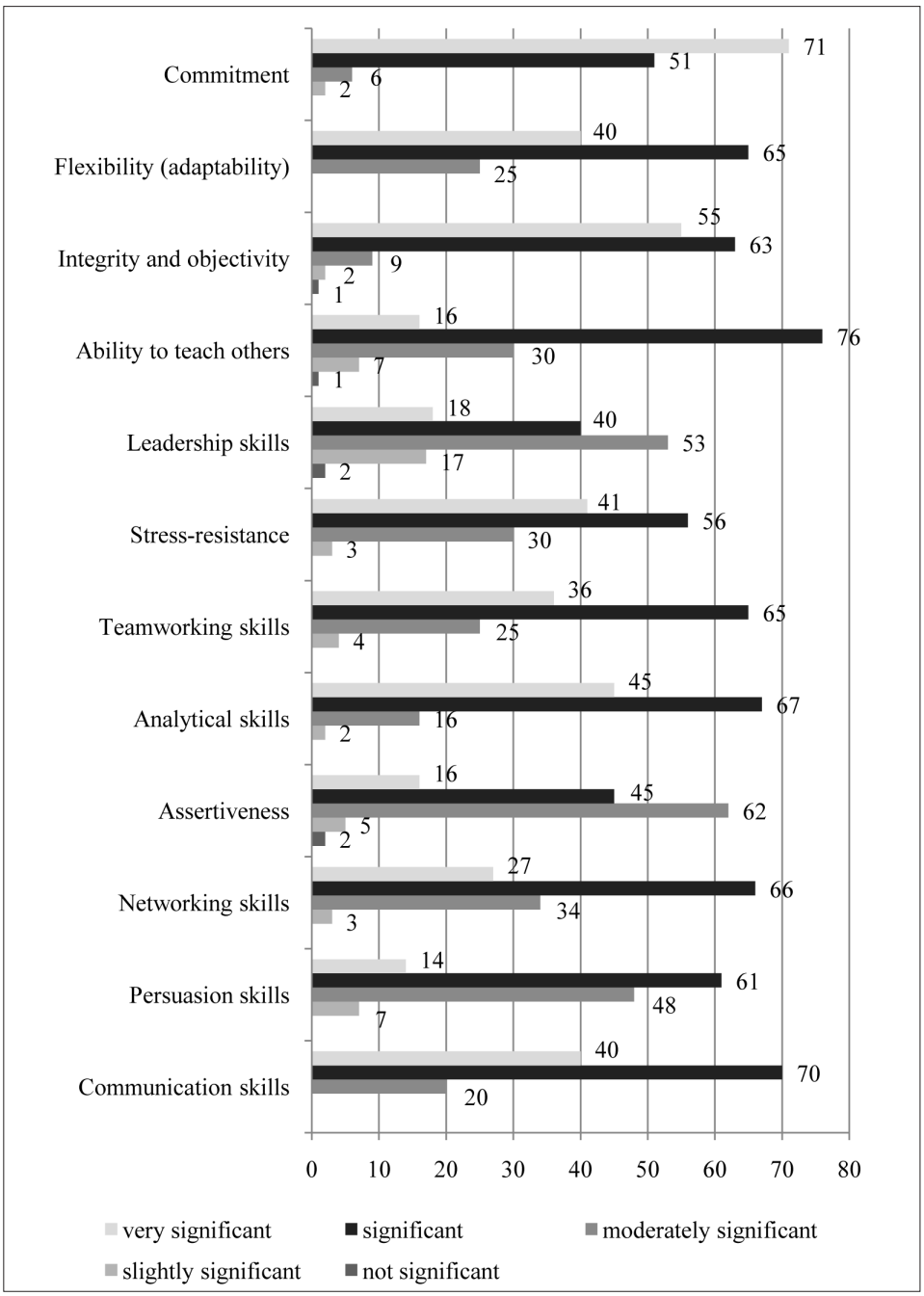
Integrity and objectivity were regarded as significant by 48.5% of the respondents, while 42.3% thought that these qualities have a very significant influence on their work. This feature had a mean value of 4.3. Analytical skills turned out to be yet another very significant quality (mean value 4.19). 51.5% of the respondents thought that this feature is significant in a controller's job, and almost 35% of the respondents perceived it as very significant.

Communication skills were also considered to be very important; the respondents gave this feature a mean of 4.15. As the responses showed, this quality characterized most of the respondents (53.8%). Diversity in the significance of this quality was not great. None of the respondents thought that communication skills have no or a slight significance. Another feature – flexibility (adaptability) – was regarded by the majority of respondents as important and very important. 50% of the respondents thought it was significant. The mean value for this quality was 4.12.

The next two features (stress-resistance and ability to work in a team) were regarded by the respondents as significant, constituting 43.1% and 50% of responses, respectively. None of the respondents thought that these features were insignificant in their work, while only a few individuals indicated that the qualities were of little significance. The mean values for these qualities were 4.04 and 4.02, respectively.

The ability to teach others was an attribute which characterized a significant portion of the respondents (76 people). Only one person stated that this feature is of no significance. The average score was 3.76. One of the main functions of controllers is to provide managers with information they use in decision-making. This is a very important feature of management accounting professionals.

Figure 4.1. Respondents' personal qualities



Source: own elaboration based on empirical research

In the case of persuasion skills, most respondents also felt that this feature applied to them to a large extent (61 out of 130 respondents). There are, however, some respondents who thought this quality was of little importance in a controller's work (5.4%). The moderate importance of this quality was indicated by 48 respondents. A similar situation occurred in the case of another feature, networking skills, however, the average rating was higher (3.9) in the case of this quality, since almost twice as many respondents as in the case of persuasion skills indicated the very high significance of this feature.

According to the respondents, assertiveness had a moderate significance in the work of a controller. Such a response was provided by almost 48% of respondents. There were also indications which suggested that this feature does not have any significance in a controller's work. The diversity of responses was very high in this case. Leadership skills were considered by the practitioners of management accounting as the least important in their work. The mean value for this skill was 3.42.

Integrity and objectivity were regarded by the respondents as one of the most significant qualities. More than 90% thought that this feature has a significant or very significant influence on the work of management accountants. What seems interesting is the fact that the ethical conduct of controllers was a rare subject in other studies. Only some of the job advertisements analyzed by Zarzycka (2016) mentioned this quality as a requirement.

One of the most frequently mentioned qualities of management accountants was analytical thinking (Zarzycka, 2016; Sobańska, 2010a; Ignaszewska, 2004; Szychta, 2006). The authors of the present study also found out that analytical skills were regarded as significant in controllers' work, reaching a very high mean of 4.19 on a 5-point scale. The results are consistent with the results obtained by other authors of empirical studies (Siegel & Kulesza, 1994; Burns & Yazdifar, 2001). More than 80% of management accounting practitioners surveyed by Burns and Yazdifar (2001) claimed that analytical skills and problem solving skills were the most important in the work of a controller. Scapens *et al.* (2003) came to the same conclusion.

Communication and team working skills are often mentioned in different studies (Zarzycka, 2016; Sobańska, 2010a; Ignaszewska, 2004). Foreign research carried out by Siegel and Kulesza (1994) and Burns *et al.* (1999) also confirm this. Interpersonal and communication skills, including the ability to listen, were recognized in these studies as one of the most important qualities in management accountants' work. Flexibility (adaptability) was also recognized as very important. In the research carried out by Szychta (2006) the mean for this quality was 4.16 on a 5-point scale, which is consistent with the results obtained in the present study (mean value 4.12).

Research carried out to date recognized leadership skills and managerial skills as the least important in the profession of management accountants (Sierpińska &

Niedbała, 2003; Goliszewski, 2002a). It may confirm the fact that management is not one of the functions of a controller, their function is management support. The authors of the present study came to the same conclusion. Leadership skills were recognized by the respondents as a feature which is only moderately important in the management accounting profession.

The next question was related to the professional requirements which controllers should meet. The respondents were asked to determine to what extent specific requirements are useful in the profession of management accountants. As in the previous question, the respondents marked their responses on a 5-point scale (1 – not important, 5 – very important). All the requirements and responses included in this question are shown in Figure 4.2.

The respondents agreed that knowledge of financial accounting and management accounting is very important in the management accounting profession, as in both cases there were no negative responses. Knowledge of management accounting was recognized by the respondents as the most important requirement. 70% of respondents thought that this requirement has a very important influence on the work of controllers. The diversity of responses was not large, with the majority of responses focusing around indications which appeared most frequently. Just over 6% of respondents claimed that a controller should meet this requirement to a slight or moderate degree, which resulted in obtaining a mean of 4.62.

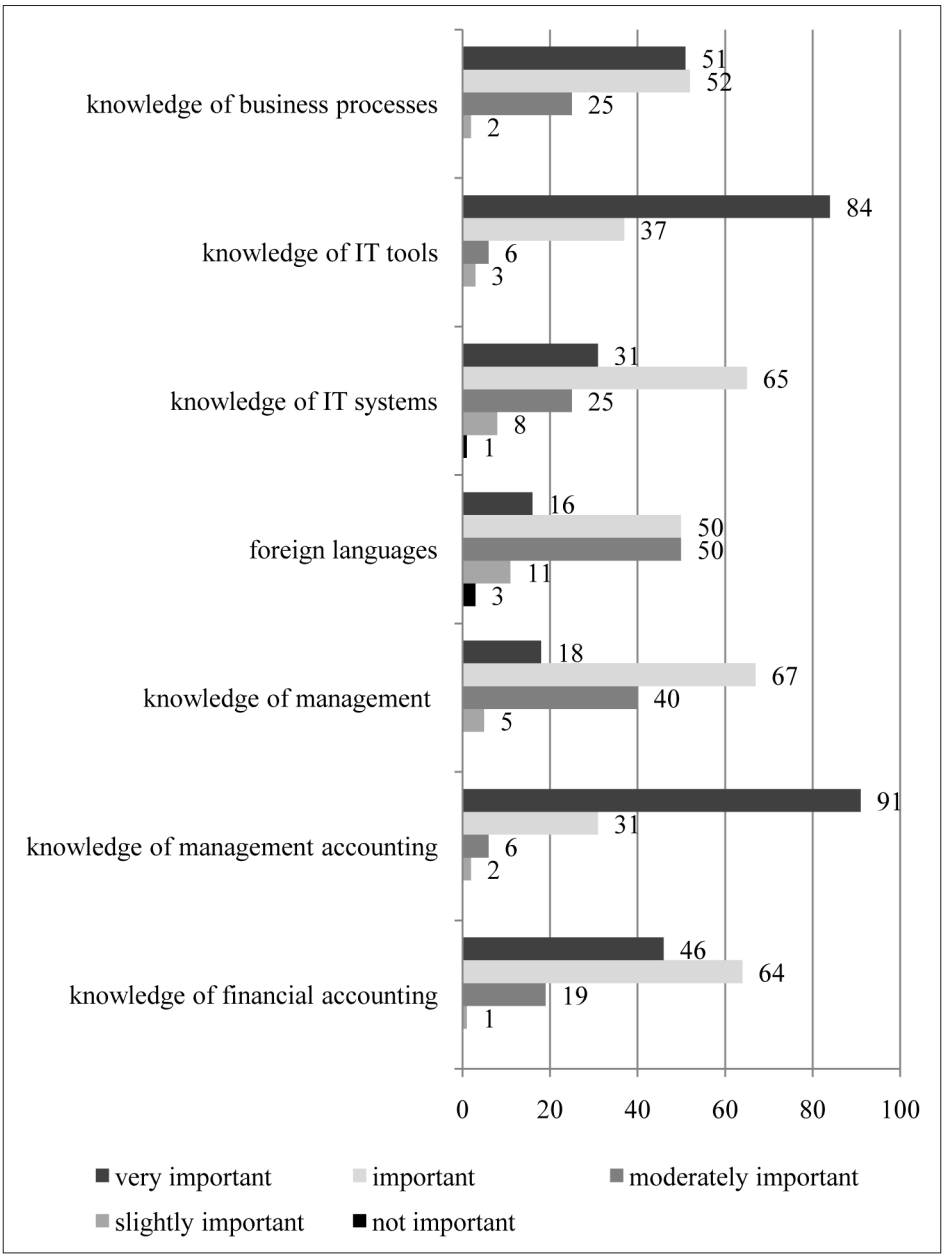
Knowledge of IT tools such as spreadsheets, databases, or PowerPoint was rated slightly lower by the practitioners of management accounting (mean 4.55). 84 people (64.6%) indicated that this knowledge has a very significant influence on a controller's work. Few people claimed that this requirement has a slight or moderate importance.

Diversity in terms of responses related to the knowledge of financial accounting was great, however, the majority of respondents recognized the importance of this requirement (49.2%). 35.4% of people claimed that it is very significant. The mean value for this requirement was 4.19.

Another requirement which was important (40%) or very important (39.2%) for the majority of respondents was knowledge of business processes. The diversity of responses in the case of this requirement was significant, but none of the respondents considered this knowledge unimportant for management accountants, which resulted in a mean value of 4.17.

The respondents recognized the knowledge of IT systems such as Enterprise Resources Planning (ERP), business intelligence (BI) and financial and accounting systems as important requirements (mean 3.9). They constituted 50% of respondents. In the case of this requirement, the diversity of responses was very high. Only one respondent signaled that this requirement is unimportant. It seems surprising since these systems are indispensable to the work of controllers.

Figure 4.2. Requirements for controllers in Polish companies



Source: own elaboration based on empirical research

According to the respondents, knowledge of management was no longer as crucial as the knowledge of management accounting and financial accounting. 51.5% of them felt this requirement largely affects the work of controllers, but a large group of the respondents (30.8%) indicated its moderate importance. In the case of this requirement, no one thought it was insignificant in their work. However, the average rating assigned by the respondents was much lower than in the case of knowledge of management accounting, and reached 3.75.

When analyzing the responses related to the knowledge of foreign languages, one can observe significant diversity. Among the respondents were people who claimed that this requirement is insignificant (2.3%), as well as those who assigned great importance to foreign language skills (12.3%). The respondents most frequently assigned moderate and general importance to this requirement. Both responses were indicated by 50 people, i.e., 38.5% of the respondents. This requirement was recognized by respondents as the least important in their work (mean 3.5).

These conclusions are partially consistent with the results of previously conducted empirical research. In research carried out by other authors, one could often come across a requirement for computer literacy, especially in terms of such tools and systems as MS Office (Goliszewski, 2002a; Sobańska, 2010a; Sierpińska & Niedbała, 2003; Zarzycka, 2016), and financial and accounting systems (Sobańska, 2010a) or ERP (Zarzycka, 2016). The requirement regarding the knowledge of IT tools is also confirmed by foreign research (Siegel & Kulesza 1994). Regardless of the type of company or the industry it operates in, knowledge of spreadsheets, integrated systems, and even the basics of programming has become obligatory for management accountants (Burns & Yazdifar, 2001).

The knowledge of management accounting and financial accounting is a requirement that has not appeared too often in research or it was regarded as insignificant (Král & Šoljaková, 2014; Sobańska, 2010a; Sierpińska & Niedbała, 2003). In the study by Sierpińska and Niedbała, the requirement for the knowledge of management accounting was mentioned in only 15% of the analyzed job advertisements. However, one could frequently find in previous studies the requirement to have a university degree, especially in areas such as finance and accounting, management, or economics (Goliszewski, 2002a; Sierpińska & Niedbała, 2003; Zarzycka, 2016), which, in a sense, implies being knowledgeable in these areas. In addition, specialists of management accounting were expected to have several years of work experience in a similar position (Sierpińska & Niedbała, 2003; Zarzycka, 2016).

Foreign studies frequently referred to another requirement, a general understanding of the business, which involves knowledge of the environment the enterprise operates in and a general understanding of the changes taking place in the global economy (Siegel & Kulesza, 1994; Burns & Yazdifar, 2001; Burns

et al. 1999). This is consistent with the results of the present study where the respondents assessed the knowledge of business processes as important.

Interestingly, the requirement of foreign languages was one of the most frequently encountered in other studies (Goliszewski, 2002a; Sierpińska & Niedbała, 2003; Zarzycka, 2016). The respondents of the research conducted by the authors of this monograph considered this requirement to be the least important in the profession of controllers.

The following question focused on the tasks controllers perform in their enterprises. The survey listed eight basic tasks assigned to specialists of management accounting. The respondents were asked to assess the extent to which these tasks were performed by controllers. As with the previous questions, a 5-point scale was applied, where 1 meant that a controller does not perform such a task, and 5 meant that this task is solely performed by them. The list of tasks and respondents' answers are shown in Figure 4.3.

According to the study, data analysis is a controller's most important task (mean value 4.22). The respondents claimed that the management accountants in their companies perform this task to a large or very large degree. This was stated by 48.5% and 37.7% of respondents, respectively. Only two people claimed that a controller performs this task in their enterprise to small degree. This indicates the high importance of data analysis in the profession of controllers.

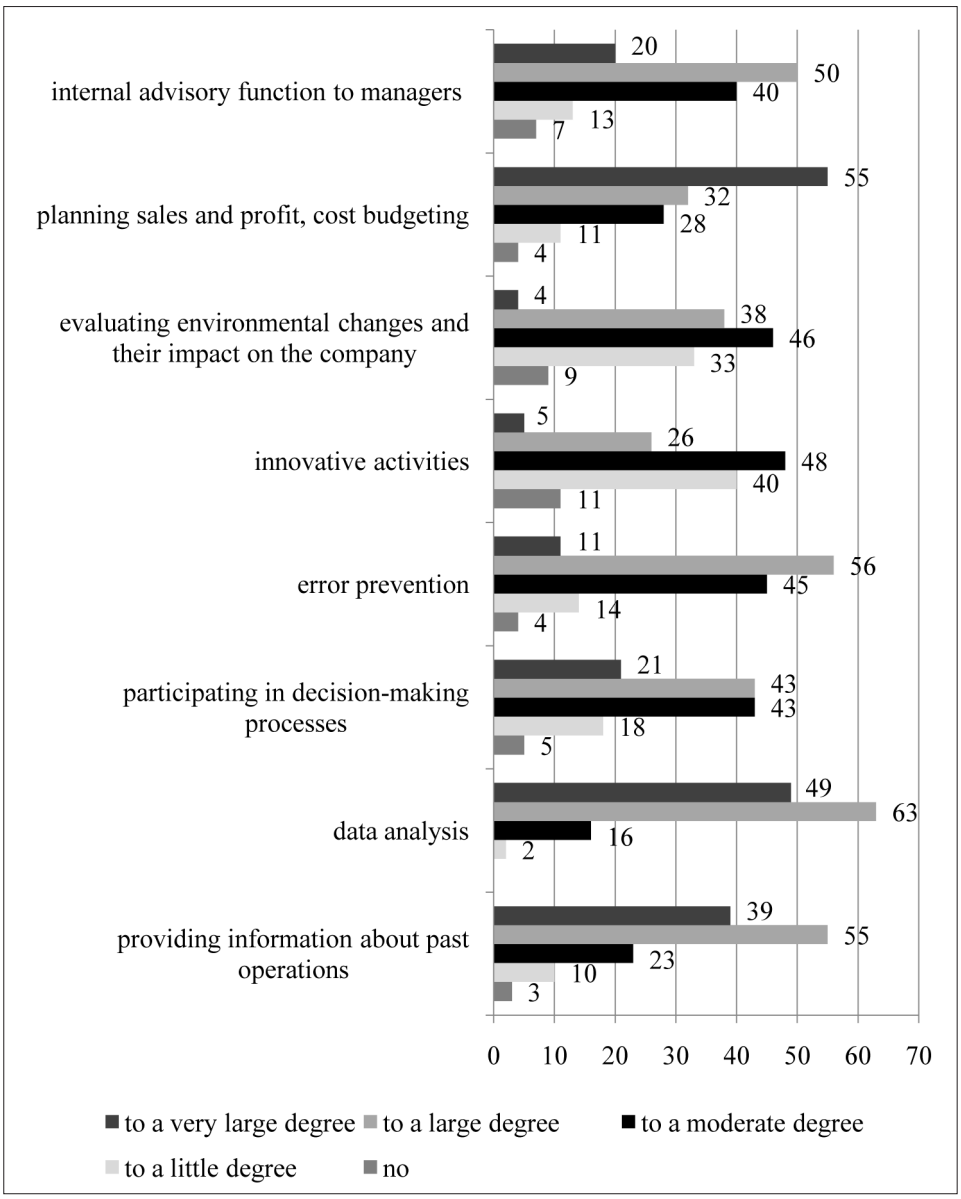
Planning sales and profits and cost budgeting was the task which was performed by controllers in Polish companies to a very large degree. It was indicated by 42.3% of respondents. Almost 25% of respondents claimed that this task is of great importance in management accounting, which resulted in a mean value of 3.95. Despite the high importance of this issue for the company's functioning, 3.1% of people involved in the study concluded that controllers in their enterprises do not perform such tasks.

Providing data about past business operations was rated almost the same by the respondents (3.9). The diversity of responses was in this case quite large. The majority of respondents (42.3%) claimed that controllers in their companies perform this task to a large degree while 30% said that this task was very important. However, among the respondents there were also people who claimed that a controller does not perform this task (2.3%).

The internal advisory function to managers is a very important task of controllers. However, this was not reflected in the respondents' replies. Only 38.5% of respondents thought that this task was important, and almost 31% of them claimed that controllers perform this function to a moderate degree. 5% of respondents said, however, that the management accounting professionals in their companies do not perform such a task.

In the case of the next task, participating in decision-making, there was a large diversity in the responses. Most responses were clustered around a moderate and

Figure 4.3. Controllers' tasks in Polish companies



Source: own elaboration based on empirical research

high degree of performance. However, in the case of each of these answers, it was only by 33.1% of respondents. 3.8% of respondents claimed that controllers do not perform such a task in their companies, and 16.2% indicated a very high involvement of management accountants in the decision-making processes. The average rating for this task was 3.44. The responses related to the issue of error prevention were similar (a mean value of 3.43). Most often, the respondents recognized the large involvement of controllers in this function (43.1% of respondents).

In terms of evaluating environmental changes and their impact on the company, most respondents rated it as being of moderate importance (35.4% of respondents). 25.4% and 29.2% of respondents believed that controllers perform this task to a little and large degree, respectively. It helps to observe that the responsibilities of management accountants rarely involve this task, although it is very important for organizations.

Innovative activities were considered by the respondents to be the least important task of management accounting professionals. 36.9% of respondents assigned this task moderate importance, and 30.8% little importance, thus the average rating of this task was only 2.8.

The results of the study indicate that the respondents thought that data analysis was regarded as the most important task of management accountants. More than 86% of the respondents claimed that controllers perform this task to a large or very large degree. As the results of studies carried out by other authors show, the scope of a controller's responsibilities included analysis of financial ratios or economic analysis (Ignaszewska, 2004; Financial Controlling Summit, 2014; Goliszewski, 2002a; Siegel, 1994). These specialists often were engaged in evaluating the company's performance based on available data which had to be assessed and interpreted by management accountants (Scapens *et al.*, 2003; Szychta, 2006; Dynowska, 2011; Zarzycka, 2016).

As Polish and foreign studies show, preparing, correcting and controlling budgets was the most frequently assigned task to management accountants (France, 2008; Quinn & Rochford, 2013; Scapens *et al.*, 2003; Siegel, 1996; Malmi *et al.*, 2001; Szychta, 2006; Dynowska, 2011; Łapińska & Dynowska, 2010; Zarzycka, 2016; Sobańska, 2010a; Sierpińska & Niedbała, 2003; Ignaszewska, 2004; Goliszewski, 2002a). The study by Zarzycka (2016) showed that more than 90% of controllers performed the task, while in the study by Ignaszewska it was as high as 99% of specialists. Another equally important task of controllers mentioned in the studies of other authors was planning and control of costs and expenses (Scapens *et al.*, 2003; Clinton & White, 2012; Szychta, 2006; Dynowska, 2011; Łapińska & Dynowska, 2010; Zarzycka, 2016; Ignaszewska, 2004; Financial Controlling Summit, 2014). These conclusions are consistent with the results obtained by the authors of the present study. According to the respondents, planning sales and

profits and cost budgeting was the second task in terms of importance. More than 67% of respondents stated that management accounting professionals perform this task in their organizations to a large or very large degree.

Providing information about past business operations was equally important in the respondents' opinion. The studies conducted to date in terms of controllers' responsibilities very often mentioned participating in financial reporting, which involved preparing and interpreting financial reports (Malmi *et al.*, 2001; Clinton & White, 2012; Dynowska, 2011; Łapińska & Dynowska, 2010; Sierpińska & Niedbała, 2003).

The responsibilities of management accountants also involve internal reporting, aimed at advising managers (Sobańska, 2010a; Łapińska & Dynowska, 2010; Ignaszewska, 2004). The fact is also confirmed in foreign studies carried out by Malmi *et al.* (2001), Král, Šoljaková (2014), Clinton & White (2012) and Siegel (1996). The results of these studies suggest that advising other employees of the company is an extremely important aspect in the management of an organization. The respondents of this study also indicated that the internal advisory function is very significant.

Participating in the decision-making processes is yet another responsibility of controllers. As the present study shows, the diversity of responses in terms of this task was very large. According to research carried out by other authors, management accountants are responsible for preparing and interpreting results for short term decision making (France, 2008; Quinn & Rochford, 2013; Krell, 2011; Scapens *et al.*, 2003; Clinton & White, 2012; Zarzycka, 2016). They only participate in the decision-making processes, but they do not have decision-making powers in terms of business operations (Dynowska, 2011; Łapińska & Dynowska, 2010). Participation in decision-making and advising managers attest to the fact that the role of controllers in companies increases to position of a business partner. The fact is also confirmed in foreign studies carried out by Burns *et al.* (2014), Civichiono (2013), Brito, Oliveira (2014), Ahid, Augustine (2012), Cooper, Dart (2009) and Goretzki *et al.* (2013).

One task which was rarely mentioned by respondents surveyed by Polish authors involved strategic planning and implementing the company's strategy (Szychta, 2006; Zarzycka, 2016; Łapińska & Dynowska, 2010). The study by Zarzycka (2016) showed that only 30% of management accounting practitioners dealt with implementing corporate strategy. Other conclusions can be drawn from studies conducted by foreign authors. These studies show that strategic planning and implementation of corporate strategy are the most important responsibilities of controllers (Zainuddin *et al.*, 2014; Siegel, 1996; Malmi *et al.*, 2001; Clinton & White, 2012).

In the present study, the respondents evaluated innovative activities as well as evaluating environmental changes and their impact on the company as the least

significant in the work of a controller. These responsibilities are also very rarely mentioned in other studies. According to a study by Dynowska (2011), only in one third of the surveyed companies were controllers responsible for analyzing the business environment, the industry, or competitors.

The questionnaire applied in this research also included a question referring to management accounting professionals improving their knowledge and skills. The respondents could select a few options listed in the questionnaire. Self-education was indicated by 70 of the 130 respondents (53.85%). Post-graduate studies were another option for improving a controller's skills, with almost 51% of respondents claiming that management accountants choose this option. However, courses and training sessions were the most common response chosen by the respondents. This option was indicated by more than 100 people, i.e., 77.7% of respondents. It shows that it is the most commonly chosen method by controllers to improve their skills.

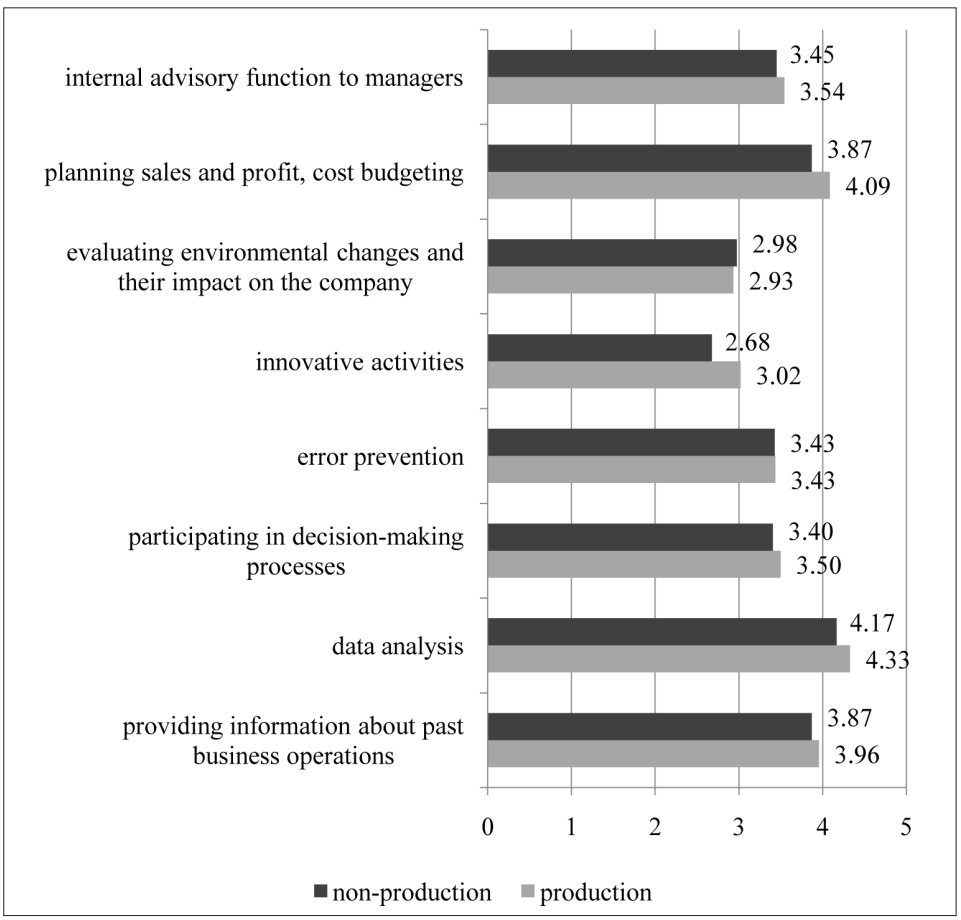
4.4. Differentiation of controllers' tasks according to independent variables characterizing the respondents and their companies

The scope of tasks performed by controllers in Polish companies was also examined in terms of the differences based on individual independent variables. The variables were identified in the questionnaire and characterized the respondents and the companies they worked for. This analysis aimed to examine whether the opinions of the respondents regarding the scope of controllers' responsibility differed in terms of length of the respondents' work experience or the type of company they worked for. The questionnaire listed four variables describing organizations and the position occupied by management accountants. These variables included the type of company, size of company, capital structure of the organization, and the position of individual controllers in the organizational structure. The questionnaire also included variables which described the respondents, i.e., their age, work experience, education and the position occupied by respondents.

The first correlation tested was the influence of the type of company on the scope of tasks performed by management accountants. The respondents could characterize the enterprise they worked for as either production or non-production. 64.6% of respondents stated that they work for a non-production company. The average scores which respondents attributed to particular tasks of management accountants were similar to those indicated by people working in manufacturing companies as well as non-manufacturing organizations. These indications are shown in Figure 4.4. The respondents assessed controllers' responsibilities on a 5-point scale, where 1 meant that the controller does not perform this task, and 5 meant that he was solely responsible for this task.

Figure 4.4 shows that respondents working in manufacturing companies attributed to the listed tasks a slightly higher significance than those in non-production companies. Both groups claimed that data analysis was the most significant responsibility of management accountants. Almost 48% of people working for manufacturing companies indicated that controllers perform this task to a very large degree, and an additional 39% claimed that controllers perform tasks related to data analysis to a large degree. In the case of respondents working in non-manufacturing companies, the ratio was the reverse. Most respondents (53.6%) claimed that controllers perform this task to a large degree, and 32% of the respondents indicated that they perform this task to a very large degree.

Figure 4.4. The significance of the controller's tasks in production and non-production companies



Source: own elaboration based on empirical research

The respondents attributed great significance to the task related to planning sales and profit and cost budgeting. The mean value for this task indicated by the respondents from manufacturing companies was 4.09. The respondents from non-manufacturing companies evaluated this task slightly lower (3.87), yet it was one of the three most significant tasks performed by management accountants. In terms of both groups of respondents, the largest proportion of respondents (54.3% – manufacturing companies; 35.7% – non-manufacturing companies) claimed that controllers should perform this task to a very large degree. The respondents from production companies indicated that evaluating environmental changes and their influence on the company was the least significant task, whereas people working for non-production companies indicated innovative activities.

Company size (number of employees) was yet another variable which shaped the responsibilities of controllers that was analyzed in the questionnaire research. More than 30% of respondents worked in units employing more than 500 people. Indications of other respondents were distributed evenly across the remaining sizes of companies listed in the questionnaire. The scope of management accountants' tasks determined by the number of employees in the organization did not differ significantly. In this case, the tasks related to data analysis, planning sales and cost budgeting, as well as providing data about past business operations were considered the most important.

It seems interesting that in the case of "data analysis" almost all respondents indicated at least moderate significance of this task. The relationship between company size and the task of "data analysis" is presented in Table 4.6. Only in the case of small (under 50 employees) and large (251–500 employees) companies did a few people claim that management accountants perform this task to a small degree. Respondents working in medium-sized, large and very large companies unanimously stated that controllers should deal with data analysis to a large or very large degree. They constituted 90% of the respondents in each of these cases.

Table 4.6. The relationship between company size and the significance of the "data analysis" task

	Number of employees					Total
	under 50 people	51–100 people	101–250 people	251–500 people	more than 500 people	
No performance	0	0	0	0	0	0
To a small degree	1	0	0	1	0	2
To a moderate degree	4	4	3	1	4	16
To a large degree	12	11	13	10	17	63
To a very large degree	6	7	9	8	19	49
Total	23	22	25	20	40	130

Source: own elaboration based on empirical research

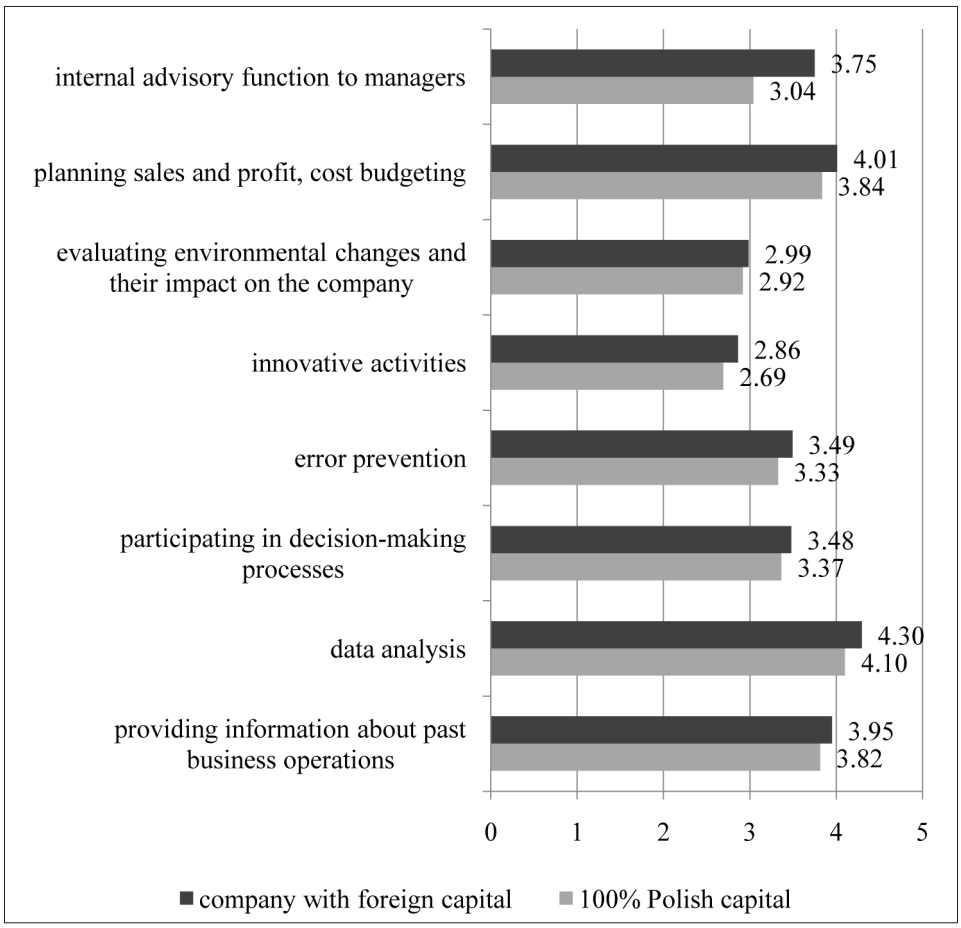
Planning sales and profit and cost budgeting was yet another task of controllers which was highly rated by the respondents. For respondents working in companies employing more than 250 people and more than 500 people, this task was of very high importance. More than 75% of them claimed that controllers should be responsible for this task to a large or very large degree. In the case of smaller companies, the respondents' indications were less unequivocal. As an example, employees of medium-sized companies evaluated the importance of planning and budgeting as moderate.

Equally interesting are the indications of respondents working in very large companies (over 500 people) in terms of the task related to the internal advisory function to managers. 95% of respondents from these companies determined that management accounting professionals perform this task at least to a moderate degree, and more than 50% of them rated the importance of this task as high. Only two people claimed that the controllers in their organizations do not perform such a task.

The differences in the tasks of management accountants as determined by the respondents were also analyzed in terms of the structure of the company's capital. The respondents were asked to indicate whether the capital of their companies is 100% of Polish origin or whether they are financed by foreign capital. 62.3% of the companies which the respondents worked for were at least partially financed by foreign capital, while 37.7% of companies were only of Polish capital. For the majority of the tasks listed in the questionnaire, the average ratings of the respondents were similar and did not differ significantly depending on whether the respondent worked in a Polish organization or in a company financed by foreign shareholders. These relationships are shown in Figure 4.5.

As Figure 4.5 shows, the mean evaluations of the significance of all tasks are higher in the case of respondents from companies with foreign capital. However, these differences are slight. Analyzing the respondents' answers regarding the relevance of controllers' internal advisory function to managers, one can observe significant differences in their opinions. It is reflected in the evaluations given by both groups of respondents. Respondents from companies financed by Polish capital rated this task as moderate (a mean rating of 3.04), while respondents working in organizations with foreign capital decided that management accounting professionals should perform this task to a much greater extent (a mean score of 3.75). This difference stems from the fact that most respondents from companies financed by foreign capital indicated that controllers perform this task to a large degree (more than 53% of the respondents in this group), or to a very large degree (16% of respondents). Only two people indicated that the controller does not perform such a task. Respondents working in organizations with Polish capital mostly said that management accountants deal with internal counseling to a moderate degree (almost 43% of respondents in this group). The differences in respondents' opinions on this task are shown in Table 4.7.

Figure 4.5. The significance of the controller's tasks in companies with Polish and foreign capital



Source: own elaboration based on empirical research

Table 4.7. The relationship between the structure of the company's capital and the significance of the "internal advisory function to managers" task

	100% Polish capital		Company with foreign capital	
No performance	5	10.20%	2	2.47%
To a small degree	9	18.37%	4	4.94%
To a moderate degree	21	42.86%	19	23.46%
To a large degree	7	14.29%	43	53.09%
To a very large degree	7	14.29%	13	16.05%
Total	49	100.00%	81	100.00%

Source: own elaboration based on empirical research

The results of this analysis clearly show that management accountants in companies financed by foreign capital are more involved in the management of their company, and they become business partners.

The study also analyzed how the significance of individual tasks of management accountants changes depending on their position in the organizational structure of their company. The respondents were asked to indicate whether a controller in the organization they worked for occupied a line or staff position. The line position in the organizational structure means that controllers are on the same level as managers of other departments and are entitled to issue orders. In the staff position, controllers are subordinates to the management of the company, and they act as advisors with no right to issue orders. It shows that management accountants in line positions have far greater freedom of action in the organization. Over 69% of respondents (90 people) indicated that the controller occupies a staff position in their company. Only 30.8% of respondents defined the position of controller in the organizational structure as line. The differences in respondents' evaluations regarding controllers' tasks depending on their position in the company are shown in Figure 4.6.

Figure 4.6. The significance of the controller's tasks depending on their position in the organizational structure

Source: own elaboration based on empirical research

It is clearly evident that greater freedom of controllers' action in the line position means they perform their tasks to a larger degree. The biggest differences occurred in the assessment of tasks concerning management accountants participating in tasks such as decision-making, planning sales and cost budgeting, as well as error prevention. In terms of other tasks, differences were apparent, however, they were not large. Controllers in the line position performed virtually all their tasks to a larger degree.

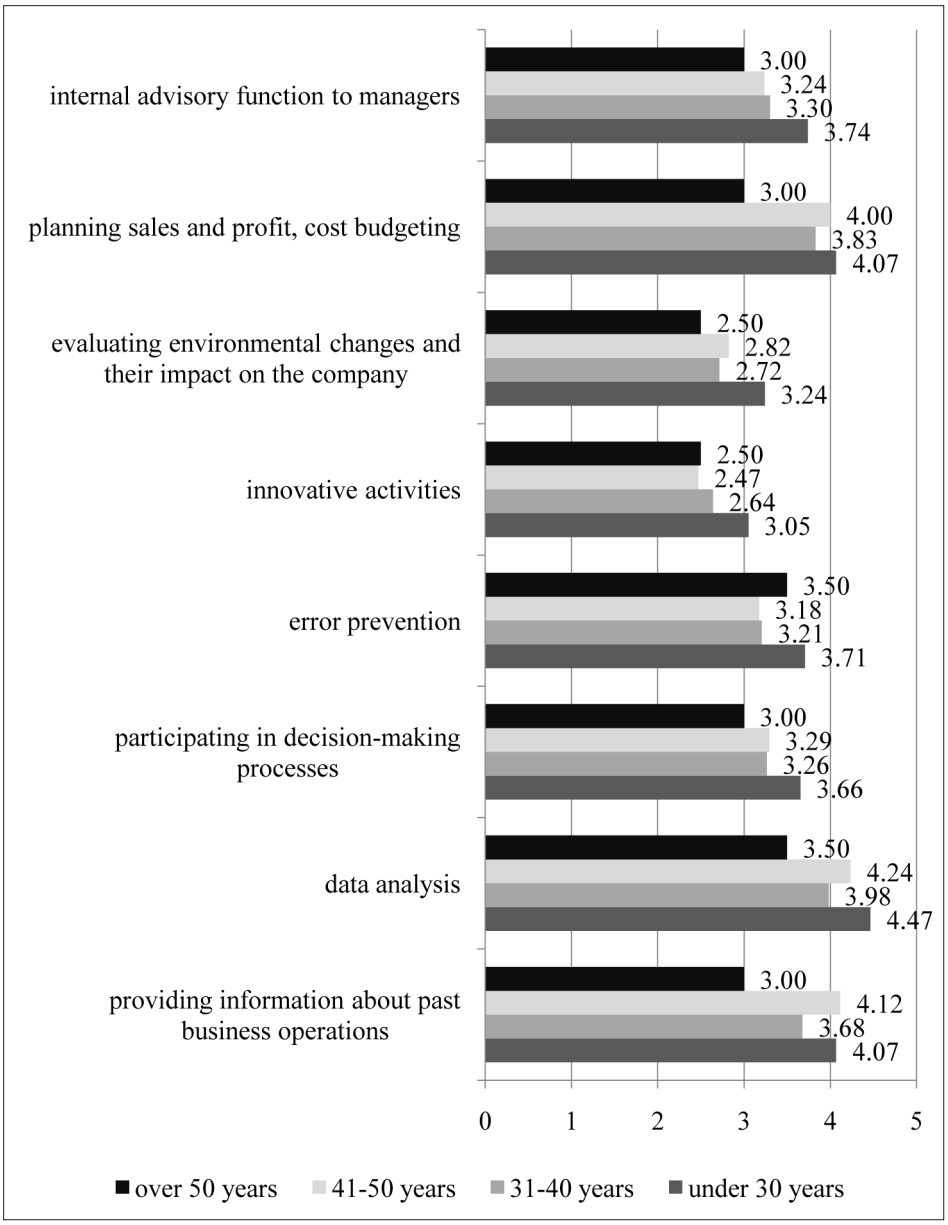
According to the respondents, the task of "participating in decision-making" revealed the most significant differences. The average rating of respondents who specified the position of management accounting specialist as line was 3.83, whereas in the case of the second group of respondents it was only 3.27. This disparity results from the fact that controllers in the line position, according to 65% of respondents, performed this task to a large or very large extent. In the case of staff position, controllers participated in the decision-making processes mainly to a moderate or large degree (respectively 34.4% and 28.9% of responses). There were also responses (5.5%), which showed that controllers in the staff position do not perform such a task.

In the case of error prevention, a significant difference in mean evaluations could also be observed (3.68 – controller in a line position; 3.32 – controller in a staff position). According to the majority of the respondents, management accountants in a line position performed this task to a large degree (62.5% of responses) while those in a staff position focused their attention on error prevention only to a moderate degree (37.8% of responses in this group).

The respondents also attributed great importance to planning sales and profit and cost budgeting. In terms of this task, a large discrepancy in mean values could be observed. 52.5% of the respondents who indicated line position of controllers in their organizations said that these specialists performed these tasks to a very large degree, while 27.5% indicated a high degree of significance of planning and budgeting. These responses allowed the authors to obtain an average rating of 4.28. In the case of controllers in a staff position, the average rating of this task was only 3.8. This was caused by large inconsistencies in the respondents' opinions.

The differences in respondents' opinions on the responsibilities of management accountants were also examined in terms of individual variables describing the respondents. The first of these variables was the age of the respondents. Most were aged under 30 or between 31 and 40 (44.6% and 40.8% of respondents, respectively). There were only two respondents who were older than 50, which may have contributed to the lowest ratings of controllers' tasks in this group of respondents. All the mean ratings obtained during the analysis of this relationship are shown in Figure 4.7.

Figure 4.7. The significance of the controller's tasks depending on the age of the respondent



Source: own elaboration based on empirical research

The Figure shows that the respondents under 30 rated the significance of the tasks performed by management accountants the highest. This may prove that people of this age are more aware of the tasks of controlling and have knowledge of the significance of controllers in the management of an organization. Only in the case of the task "providing information about past business operations" was the score slightly higher in the group of respondents aged between 41 and 50. This is due to the fact that in this group of respondents more than 58% of people claimed that controllers should perform this task to a large degree, with an additional 29.4% indicating a very high degree of significance.

The highest scores given by respondents from each age group were related to the task of data analysis. Among people under 30 this task had a mean value of 4.47. More than 94.8% of respondents in this age group claimed that management accountants perform this task to a large or very large degree. The response rate in the age group between 41 and 50 amounted to 94.1%. Only some respondents between 31 and 40 claimed that controllers perform this task to a small degree.

What seems interesting is that the respondents aged 31 to 40 gave relatively low ratings to the tasks listed in the questionnaire. The highest score was related to the task of data analysis, which was 3.98. The remaining responsibilities of management accountants were rated by this age group of respondents as moderate. It suggests that respondents from this age group do not perceive controllers as people who are necessary for the effective management of the company.

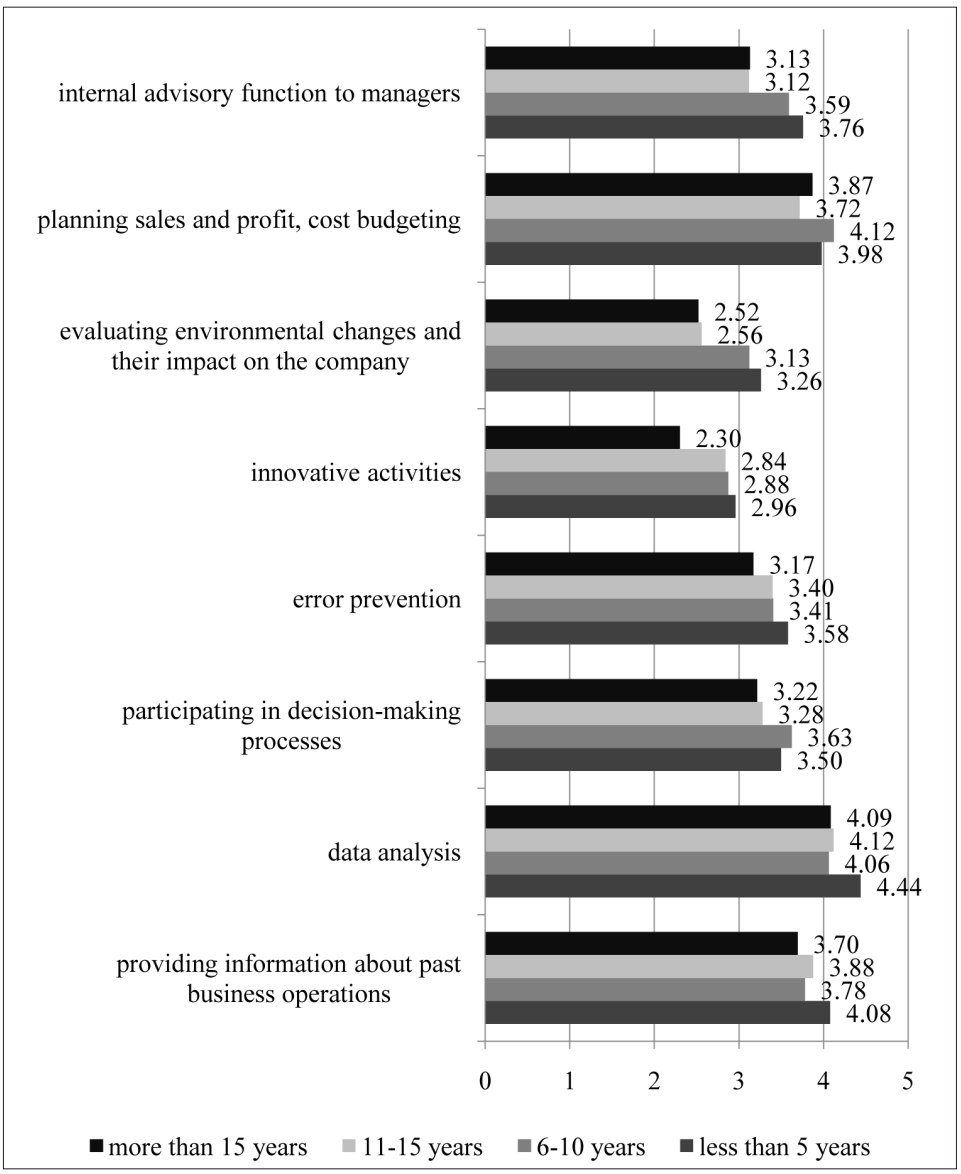
The study also analyzed how the significance of controllers' individual tasks changes depending on the work experience of the respondents. 63.1% of respondents had worked less than five years or between 6–10 years. 17.7% of the respondents had been employed for more than 15 years. The mean values for the individual tasks of controllers in all groups are presented in Figure 4.8.

The differences in the evaluation in each group were slight. The biggest differences can be observed in the case of the task "evaluating environmental changes and their impact on the company." Despite the overall mean scores being low across all groups, people working in the profession less than 10 years rated the importance of this task significantly higher than respondents with higher seniority. Among the respondents working more than 10 years, most of them thought that controllers perform this task to a moderate degree (47.8% of respondents with work experience over 15 years) or to a small degree (44% of people with work experience of 11–15 years).

According to the respondents, the most important tasks of controllers include data analysis, providing information about past business operations, and planning sales and cost budgeting. With regard to the first two responsibilities, they were rated the highest by respondents whose work experience was less than 5 years. As indicated by 96% of people from this group, management accounting professionals were engaged in data analysis to a large or very large degree. There were no

responses indicating that controllers do not perform such tasks or implement them only to a small degree. In the case of the responsibility related to "providing data about past business operations" the percentage of respondents who defined the importance of this task as high or very high amounted to 84%.

Figure 4.8. The significance of the controller's tasks depending on the seniority of the respondent



Source: own elaboration based on empirical research

Planning sales and profit, cost budgeting and data analysis were the tasks which got the highest ratings from respondents who had been in the profession from 6 to 10 years. As far as the first of the tasks is concerned, nearly 47% of respondents from this group believed that controllers should be responsible for this task to a very large extent. 25% of people indicated that planning and budgeting are of high significance in the management accounting profession. More than 52% of respondents with work experience over 15 years also attributed this task with very high importance.

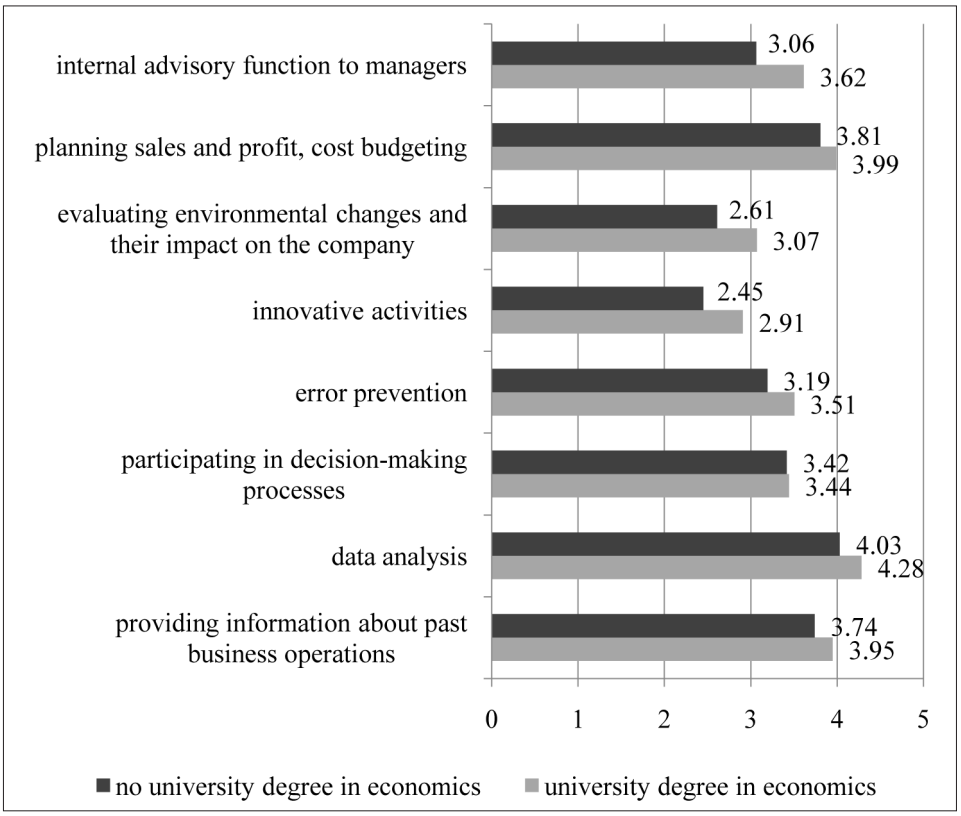
The education of controllers was yet another variable which was taken into account during the variance analysis conducted for the purpose of the study. The respondents were asked to indicate whether they had a university degree in economics or not. Out of 130 respondents, the overwhelming majority (76.2%) said they had such a degree. The remaining 23.8% of respondents did not have such a university degree, which may be surprising considering the fact that the survey was carried out among accounting and controlling staff and as well as among postgraduate students. All the tasks of controllers which were included in the questionnaire were given higher ratings by the respondents with a degree in economics. This may imply that improving professional skills and broadening expertise and knowledge increases awareness of controlling and makes the respondents more aware of the greater significance of the management accounting profession. The mean values for all the controlling tasks are presented in Figure 4.9.

The most significant differences in the evaluation of the respondents can be observed in the case of tasks such as internal counseling to managers, innovative activities and evaluating environmental changes and their impact on the company. In other cases, the mean values do not differ in a significant way.

Although in both groups of respondents over 38% indicated the high significance of the task "internal advisory function to managers," the difference between assessments of this task was very significant. Among those with a university degree in economics, more than 19% specified that management accounting professionals perform this task to a very large extent, while only one person without a degree gave such a response.

Large differences in the evaluations of the respondents were also evident in the case of tasks that were considered to be the least significant in the profession of controllers. With regard to the task "innovative activities," 45.2% of respondents without a university degree in economics indicated that controllers perform this task only to a small degree, and another 38.7% claimed they perform it to a moderate degree. Only two respondents associated "innovative activities" with a high or very high significance in the work of a controller. 29.3% of respondents from the second group provided such a response (Table 4.8).

Figure 4.9. The significance of the controller's tasks depending on the education of the respondent



Source: own elaboration based on empirical research

Table 4.8. The relationship between respondents' education and the significance of the "innovative activities" task

	A university degree in economics		No university degree in economics	
No performance	8	8.08%	3	9.68%
To a small degree	26	26.26%	14	45.16%
To a moderate degree	36	36.36%	12	38.71%
To a large degree	25	25.25%	1	3.23%
To a very large degree	4	4.04%	1	3.23%
Total	99	100.00%	31	100.00%

Source: own elaboration based on empirical research

A similar situation occurred in the case of the task "evaluating environmental changes and their impact on the company." 48% of respondents without a university degree in economics responded that experts in management accounting do not perform such a task or deal with it to a small degree. The vast majority (69.7%) of respondents holding a degree in economics agreed that this task is performed by controllers to a moderate or even a large degree.

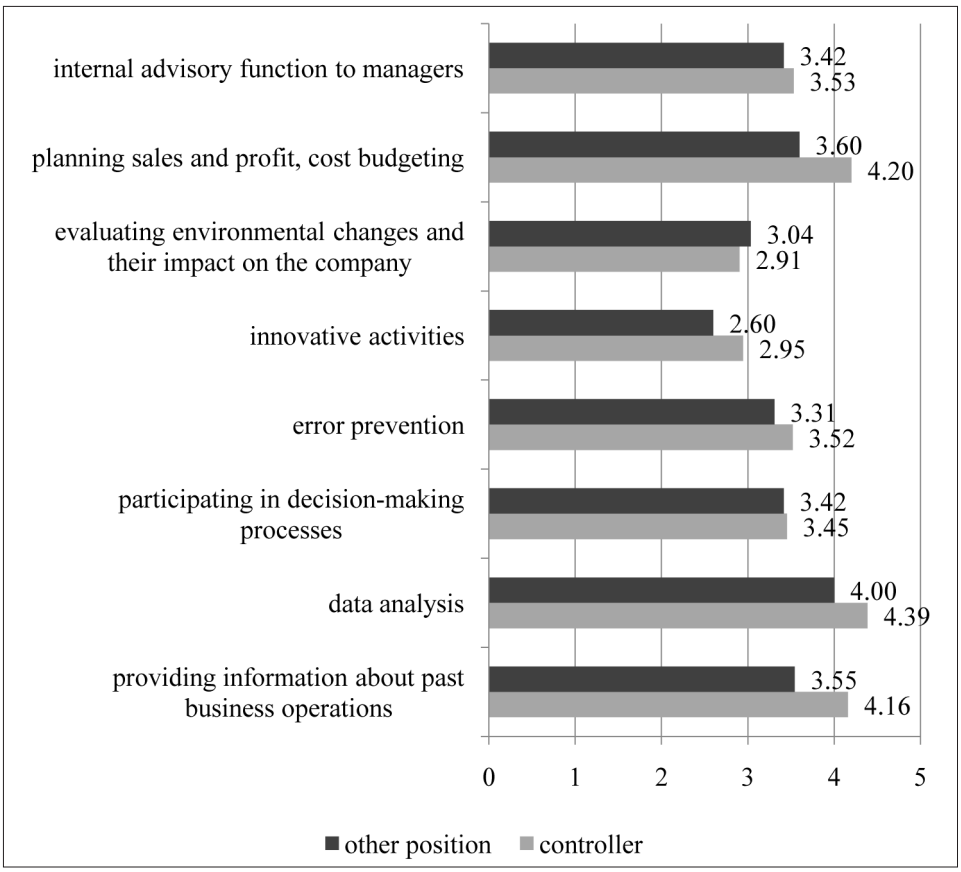
The position occupied by controllers was the last variable which was taken into account during the variance analysis of a controller's tasks. The respondents had to indicate whether they occupied the position of controller or some other position. The term "controller" included such positions as a cost analyst or management accounting specialist, i.e., those employees who implement controlling practices at least as a part of their responsibilities. This is due to large discrepancies in the terminology referring to the positions of specialists in management accounting. 57.7% of the respondents said that they occupied the position of a controller, while the remaining 42.3% occupied other positions. Some of the tasks performed by controllers and identified in the survey differed slightly in terms of the respondents' ratings (participating in decision-making processes, internal advisory function to managers, evaluating environmental changes and their impact on the company). In other cases, the mean values assigned by controllers were much higher than in the case of people holding other positions in the organization. All evaluations are presented in Figure 4.10.

The biggest difference in the evaluation occurred when respondents were asked to express their opinions on the task "providing information about past business operations." Controllers on average rated it 4.16, whereas the opinions of other employees resulted in it obtaining an average rating of 3.55. 84% of respondents who hold the position of controller claimed that they perform this task to a large or very large extent. By comparison, other employees who just observe the work of controllers assessed that these professionals perform such task only to a moderate or large degree (almost 60% of responses). Among these respondents, there were also opinions that controllers do not perform such a task.

A similar inconsistency in ratings was observed in the case of planning sales and profit and cost budgeting. Controllers rated the task at 4.2. Other employees rated it at only 3.6. 56% of respondents who were controllers thought that this task is performed by them to a very large degree. Other employees' opinions on this task were very diverse. Almost 62% of respondents from this group indicated that management accountants deal with this task to a large or moderate degree.

Analyzing the diversity of tasks of controllers in terms of independent variables which characterize the respondents and their companies, it can be noted that there are no significant discrepancies between the indications of

Figure 4.10. The significance of the controller's tasks depending on the position occupied by the respondent



Source: own elaboration based on empirical research

respondents. It is clear that people with a university degree in economics, with longer work experience, and occupying the position of management accountant, are far more aware of the significance of controlling tasks in the management of an organization, which has been partly proved by the analysis. Significant differences in the opinions of respondents who were characterized by different features were only evident in the case of a few tasks. Not surprisingly, the respondents who work in companies financed at least in some part by foreign capital were more aware of the importance of management accounting tasks, in particular internal counseling, for the needs of decision-making processes. In the case of such companies, the acquisition of foreign capital often means changes in the methods and tools of management, and thus in the perception of specialists in management accounting.

4.5. The relationship between the functions of controlling and the influence of controllers on an organization

For the purposes of data interpretation, correspondence analysis was conducted. It provided information about the structure of relationships between the influence controllers have on an organization and the most important functions of controlling defined by the respondents. The data from surveys was a starting point for further analysis. It is presented in a 2 × 2 contingency table (Table 4.9).

Table 4.9. The relationship between the functions of controlling and a controller's influence on an organization

The function of controlling	Controller's influence				Total
	no influence	slight influence	moderate influence	significant influence	
Planning	2	1	6	1	10
Control	0	7	25	11	43
Furnishing information	2	14	25	13	54
Steering and regulation	0	1	4	6	11
Coordination	0	3	5	4	12
All together	4	26	65	35	130

Source: own elaboration based on empirical research

The diversity of respondents' replies in terms of a controller's influence on a company was significantly large. 50% of respondents thought that controllers have a moderate influence on the functioning of a company but there were 4 people who claimed that they do not have any influence on the company they work for.

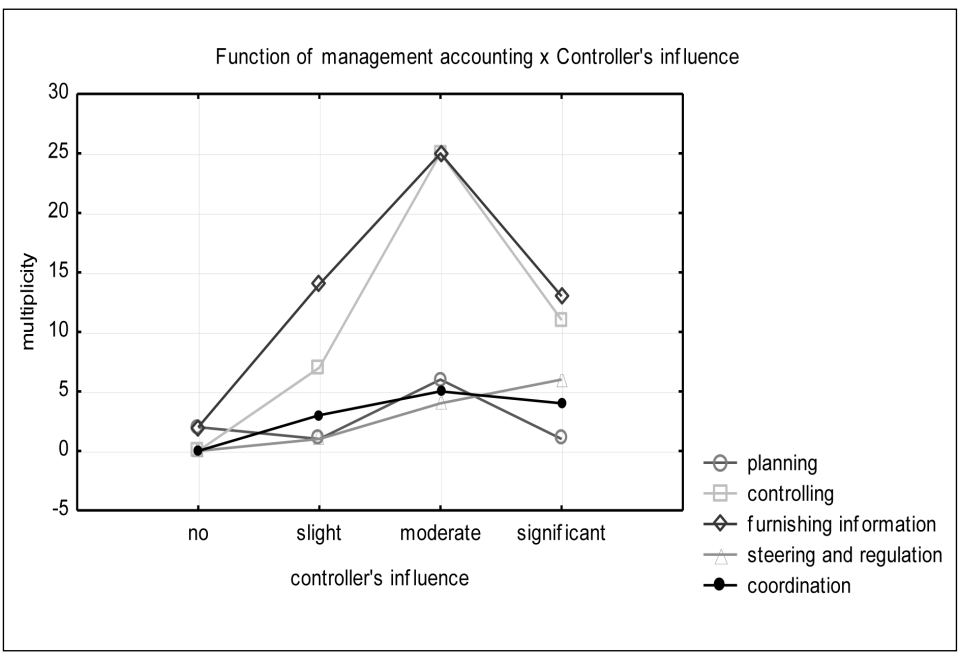
Half of the respondents who evaluated a controller's influence on a company as slight (14 out of 26 people) believed that furnishing information was the most important function of controlling. 7 respondents from this group claimed that control was a predominant function of controllers. Only one respondent stated that planning as well as steering and regulation were the most important functions of controlling in their company.

The respondents who indicated a moderate influence of management accountants on a company claimed that control and furnishing information were equally the most significant functions of controlling. Each of the functions was indicated by 25 respondents. The remaining respondents from this group, with a similar frequency (from 4 to 6 people), indicated planning, coordination, as well as steering and regulation as the most important functions of controlling.

The respondents from the last group claimed that controllers had a significant influence on a company. The diversity of responses with regard to this group was quite large. Furnishing information was the most frequently mentioned function of controlling. Control was second in terms of the number of indications. Only one respondent from this group claimed that planning was the most significant function of a controller.

The relationships between the functions of controlling and a controller's influence on a company are presented in Figure 4.11.

Figure 4.11. The relationships between the functions of controlling and the controller's influence on a company

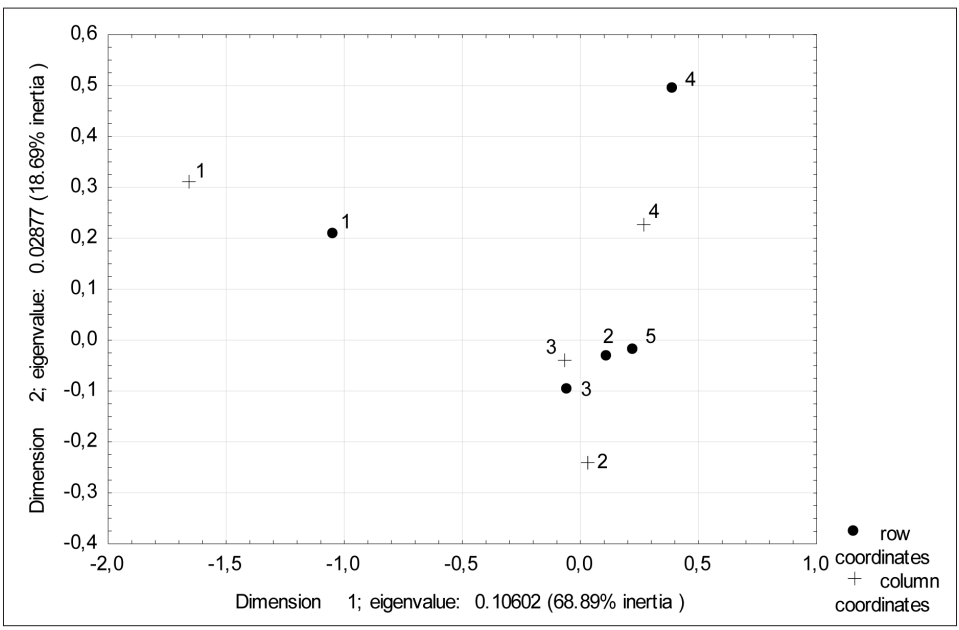


Source: own elaboration based on empirical research

Correspondence analysis allowed the authors to place points in a coordinate system corresponding to various functions of controlling and the influence that controllers have on a company which were previously defined by the respondents. The purpose of this analysis is to determine the distances between points. These distances provide information allowing the authors to show similarities between the relative frequencies of responses in terms of both issues (various functions of controlling and the influence that controllers have on a company) presented in the 2 × 2 contingency table.

The results are presented in a coordinate system (Figure 4.12). It can be observed that the points corresponding to the functions of control, furnishing information and coordination, are quite close to each other. This means that the distribution of responses in terms of these functions, taking into account the influence of controllers indicated by the same respondents, is similar. The coordinate columns, corresponding to the controller's influence on an organization, are very scattered, which means lack of similarities.

Figure 4.12. Coordinate system of columns and rows



Source: own elaboration based on empirical research

Row coordinates correspond to individual functions: 1 – planning, 2 – control, 3 – furnishing information, 4 – steering and regulation, 5 – coordination. Column coordinates correspond to controller's influence on a company: 1 – no influence, 2 – slight influence, 3 – moderate influence, 4 – significant influence.

Looking at the above relationships, it can be concluded that, regardless of the controllers' influence on a company as evaluated by the respondents, furnishing information was seen to be the most important function of controlling. The system of controlling supports functions of management by providing assistance in the decision-making process. However, one needs certain information for that which will allow managers to see the pros and cons of different options. So it is not surprising that the respondents considered this function to be the most important.

The respondents attributed very high importance to yet another function of controlling, i.e., control. The answer was indicated by more than 33% of respondents. Control is a critical operation as it involves comparing the actual condition with the desired one, which results in discrepancies being determined. However, the high percentage of respondents who consider it to be the most important function may stem from the fact that respondents associate "control" with "controlling", which are similar words. Yet, controlling is definitely something more than just control. It is a subsystem of management, while control is just one of its elements.

Planning, steering, regulation, and coordination are functions which were rarely indicated as the most important. Planning is a function that allows a company to meet the challenges of the future. It involves defining goals and identifying ways and means of implementing them. This function was most frequently indicated by respondents who determined the influence of controllers as moderate. The low level of importance of planning may stem from the fact that in the respondents' companies, controllers are mainly oriented to providing data about past business operations, and they do not use this information in the process of determining future goals of the company.

Steering and regulation were indicated as the most important functions by a few respondents who claimed that controllers had a significant impact on the business. It is a very important function of controlling, because it involves actions undertaken to eliminate or reduce existing deviations which were found in the course of control. When management accounts perform this function, they stabilize the business activity and strive to achieve a desired condition. Thus, it seems surprising that such a small group of respondents indicated the high importance of this function.

Coordination is a primary function of controlling. Planning, control, steering and regulation, as well as furnishing information, are only subordinate functions to coordination. When analyzing the responses obtained in the course of the empirical research, one can observe, however, that the respondents did not attribute great importance to this function. Only 12 out of 130 respondents claimed that this is the most important function of controlling.

CONCLUSIONS

In these times of a global economy, the system of management accounting, which provides necessary information for decision-making and management, has become particularly important. Management accountants have become one of the most important employees in the company; without them it is difficult for managers to manage the organization effectively. The changes that are constantly taking place in the business environment and in the organizations themselves, as well as in their systems of controlling, largely determine the role and responsibilities of management accountants. Despite continuous development of management accounting and the general trend of attributing controllers with a greater significance in companies, the role and tasks of these professionals vary significantly in different companies. Studies on management accounting practices which have been conducted so far in Poland mainly focused on the methods and tools of controlling used in companies. The subject of controllers' activities was mainly an addition to such research. Companies are increasingly choosing to implement a system of management accounting, therefore, there is the need to continuously expand knowledge in this field. The main objective of this monograph was to determine the role of management accountants in contemporary Polish companies and outline the tasks performed by controllers and their attributes related both to their personality traits as well as vocational training.

To achieve the main objectives of the study, empirical research in the form of a questionnaire was conducted. The questionnaires were filled out by staff of controlling departments and accounting departments in Polish companies, as well as postgraduate students. The respondents were mainly people working in non-manufacturing companies with foreign capital, which on average employed 101–250 people. More than half of the respondents declared that they occupied the position of controller.

On the basis of the obtained responses, it can be stated that departments of controlling in Polish companies vary in terms of structure and size. The controlling departments in the surveyed companies usually consisted of 2–3 people. The vast majority of respondents claimed that the department/position of a controller is

positioned in the staff structure of the organization, which reflects the limitations in the role of management accountants. The question which aimed to define the impact of controllers on the company also confirms that. The majority of respondents thought that these specialists have a moderate impact on the enterprise.

The respondents also determined the extent to which specialists of management accounting performed certain tasks in their companies. Having analyzed the answers, it can be noted that only the tasks of planning sales and profit, and cost budgeting were performed by most controllers to a very large degree. A high degree of significance in the work of controllers was attributed to tasks such as providing information about past business operations, data analysis, error prevention, internal counseling to managers and participation in decision-making processes. Innovative activities and the evaluation of environment changes and their impact on the company were performed by controllers to a moderate degree.

One of the stages of the study was to analyze the relationship between respondents' indications concerning the scope of controller's tasks and independent variables characterizing respondents and their company. The analysis proved that there are no significant differences in the scope of controller's responsibilities depending on the type of company, its capital structure and its size. The functions of management accountants did not change significantly depending on the respondent's seniority or age. Slight differences appeared in relation to specific tasks and related only to the degree of their significance.

The respondents indicated the most important functions of controlling, which included control and furnishing information. It might suggest that a controller is still perceived as a person who controls other employees in the company, or as a provider of information, not as a business partner or a right hand man of the board. Despite the changes in the roles of management accountants, which, in theory, are evolving into one of the most important functions focused on achieving success in the future, in practice, controllers in Polish companies are still employees with a limited scope of action who do not make full use of their potential.

The questionnaire study which was carried out on a sample of 130 people cannot constitute a comprehensive source of knowledge about the role and tasks of management accountants in Polish companies. It should be emphasized that the study sample is not representative and therefore it can't constitute the basis for conclusions about the scope of controllers' activities in all Polish companies which have implemented a system of controlling. Limitations of questionnaire research also seem important in this regard. The questionnaires do not provide an accurate or detailed analysis of the responsibilities attributed to management accounting professionals and their role in management. Limitations of the study were partially reduced by comparing its results with the conclusions of other authors who conducted research in the same field, as well as the subject literature.

The conclusions of the study are important in terms of theory and practice. In terms of theory, the study confirmed that some of the tasks performed by contemporary controllers in Polish companies are the same as those performed by their counterparts around the world. When comparing the conclusions of foreign empirical research in this field, one can observe that the role of management accountants in Polish companies seems different. In terms of practice, the conclusions of the study may affect the diffusion of knowledge about the current position of controllers in Polish organizations. Educating practitioners of management accounting, managers, and employees of Polish companies on the significance of management accountants' work and the directions of the evolution of their role, as well as their tasks, can contribute to the development of controlling departments in organizations and improve the results of controllers' work, and thus increase the competitiveness of Polish companies on domestic and international markets. Comparing the current role of controllers in Polish organizations with their role in foreign companies can contribute to improving the controller's image in the organizational structure, and change the attitude of other employees to management accountants. This may lead to better cooperation between individual departments and controllers, and therefore to the more efficient functioning of the company.

The subject of this study, which related to the role and tasks of management accountants in Polish companies, should undergo further analysis, especially in terms of the directions of changes in the role and responsibilities of these professionals. It seems important to determine whether these aspects change along with global trends or whether they evolve in a different direction. A study investigating the causes of following trends might also be of interest. In terms of the development of management accounting systems, it might be interesting to carry out research which would compare the views of managers and management accountants on the functioning of controlling processes in Polish organizations.

REFERENCES

AAP (2007), *Kodeks zawodowej etyki w rachunkowości*, Warszawa.

Ahid M., Augustine A. (2012), *The Roles and Responsibilities of Management Accountants in the Era of Globalization* "Global Journal of Management and Business Research", Vol. 12, Issue 15, Version 1.0, pp. 43–53.

Anastas M. (1997), *The Changing World of Management Accounting and Financial Management*, "Management Accounting", October, pp. 48–51.

Anthony R. N. (1965), *Planning and Control Systems: A Framework for Analysis*, "Harvard Business School, Division of Research", pp. 16–18.

Armstrong P. (2002), *The Costs of Activity-Based Management*, "Critical Perspectives on Accounting", Vol. 11 (4), pp. 383–406.

Atkinson A. A., Kaplan R. S. (1989), *Advanced Management Accounting*, Prentice-Hall, Upper Saddle River (NJ), pp. 1–13.

Baiman S. (1982), *Agency Research in Managerial Accounting: A Survey*, "Journal of Accounting Literature", Spring, pp. 154–213.

Bender P. (2009), *Controlling – prawa ręka prezesa*, „Monitor Rachunkowości i Finansów", No. 5, pp. 35–41.

Bender P., Adamczyk A. (2008), *Controlling i raportowanie zarządcze*, „Serwis Monitora Rachunkowości i Finansów", No. 1, pp. 2–17.

Bhimani A. (2003) (ed.), *Management Accounting in the Digital Economy*, Oxford University Press, Oxford.

Bielawski R. (2011), *Umiejscowienie komórki controllingu w przedsiębiorstwie*, Studia i Materiały "Miscellanea Oeconomicae", No. 2, pp. 110–111.

Błoch H. (1994), *Controlling, czyli rachunkowość zarządcza*, Centrum Informacji Menedżera, Warszawa.

Bogan C., English M. (1994), B*enchmarking for Best Practices: Winning Through Innovative Adoption*, McGraw Hill, New York.

Brito S. M., Oliveira J. (2014), *The controller's role and characteristics: an analysis of their evolution*, Artigo em Livro de Atas de Conferência Internacional.

Bromwich M., Bhimani A. (1994), *Management Accounting: Pathways to Progress*, Chartered Institute of Management Accountants, London.

Brzezin W. (2001), *Controlling. Modele teoretyczno-normatywne do zastosowania w warunkach polskich*, Częstochowskie Wydawnictwo Naukowe, Częstochowa.

Brzezin W., Dziewiątkowski A. (2001), *Rachunkowość zarządcza a controlling*, Częstochowskie Wydawnictwo Naukowe przy Wyższej Szkole Zarządzania, Częstochowa.

Burns J., Scapens R. W. (2000), *Conceptualizing management accounting change: an institutional framework,* "Management Accounting Review", Vol. 11 (1), pp. 3–25.
Burns J., Ezzamel M., Scapens R. (1999), *Management Accounting Change in the UK*, "Management Accounting", March, pp. 28–30.
Burns J., Warren L., Oliveira J. (2014), *Business Partnering: Is It All That Good?*, "Controlling & Management Review", No. 2, pp. 114–119.
Burns J., Yazdifar H. (2001), *Tricks or Treats*, "Financial Management", March, pp. 33–35.
Chalastra M. (2000), *Zadania i organizacja controllingu w przedsiębiorstwie*, "Controlling i Rachunkowość Zarządcza", No. 2, p. 28.
CIMA (2005), *Management Accounting Official Terminology*, Chartered Institute of Management Accountants, London.
CIMA (2008), *Improving Decision Making in Organizations. Unlocking Business Intelligence,* Chartered Institute of Management Accountants, London.
CIMA (2009), *Improving Decision Making in Organisations. The Opportunity to Reinvent Finance Business Partners*, [as cited in:] I. Sobańska, P. Kabalski (2014), *Partner biznesowy – nowa rola specjalisty rachunkowości zarządczej*, „Przegląd Organizacji", No. 7, pp. 19–24.
Civichiono A. (2013), *Financial steward or business partner? The changing role of management accountants*, "CMA Magazine", March/April, pp. 16–20.
Clinton B. D., White L. R. (2012), *The role of management accountant 2003–2012*, "Management Accounting Quarterly", Vol. 14 (1), pp. 40–74.
Cooper R. (1987a), *The Two-Stage Procedure in Cost Accounting: Part One*, "Journal of Cost Management", Summer, pp. 43–51.
Cooper R. (1987b), *The Two-Stage Procedure in Cost Accounting: Part Two*, "Journal of Cost Management", Fall, pp. 39–45.
Cooper R. (1988a), *The Rise of Activity-Based Costing – Part One: What is an Activity-Based Costing System?*, "Journal of Cost Management", Summer, pp. 45–54.
Cooper R. (1988b), *The Rise of Activity-Based Costing – Part Two: When do I Need an Activity-Based Costing System?*, "Journal of Cost Management", Fall, pp. 41–48.
Cooper P., Dart E. (2009), *Change in management accountant`s role: drivers and diversity*, University of Bath, School of Management, Working Paper Series 2009.06, pp. 1–26.
Cooper R., Kaplan R. (1991), *The Design of Cost Management Systems. Text, Cases and Readings*, Prentice-Hall International Edition, Englewood Cliffs.
Czubakowska K. (1995), *Funkcje i zadania kontrolera w przedsiębiorstwie*, „Prace Naukowe AE we Wrocławiu", No. 698.
Czubakowska K. (1997), *Idea controllingu a funkcje controllera*, „Zeszyty Teoretyczne Rady Naukowej", No. 43, pp. 115–122.
Czubakowska K. (2000), *Controlling jako instrument zarządzania*, „Zeszyty Metodyczne Rachunkowości", No. 14.
Deming W. E. (1986), *Out of the Crisis: Quality, Productivity and Competitive Position*, Cambridge University Press, Cambridge.
Dixon R. (1998), *Accounting for Strategic Management: a Practical Application*, "Long Range Planning", No. 1, pp. 272–279.
Dobija M. (1999a), *Koncepcja pomiaru kapitału intelektualnego w aspekcie rachunkowości społeczno-ekonomicznej*, „Zeszyty Teoretyczne Rady Naukowej", No. 51, pp. 44–55.
Dobija M. (1999b), *Rachunkowość zarządcza i controlling*, Wydawnictwo Naukowe PWN, Warszawa.
Dobija M. (2000), *Modele pomiaru i analizy produktywności pracy w aspekcie ekonomii i rachunkowości*, „Zeszyty Teoretyczne Rady Naukowej", No. 56, pp. 72–79.
Dobroszek J. (2014), *Pomiar kosztów i wyników w systemie controllingu w przedsiębiorstwach usług logistycznych*, Łódź.

Dobroszek J., Szychta A. (2009), *Koncepcyjny i ewolucyjny wymiar controllingu*, „Zeszyty Teoretyczne Rachunkowości", Vol. 52 (108), pp. 21–47.

Drury C. (2008), *Management and Cost Accounting*, 7th edition, South-Western, London.

Drury C., Braund S., Osborne P., Tyles M. (1993), *A Survey of Management Accounting Practices in UK Manufacturing Companies*, Chartered Association of Certified Accountants, Glasgow.

Dynowska J. (2011), *Zadania controllera w przedsiębiorstwie w świetle badań ankietowych*, „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu", No. 181, pp. 146–155.

Eldenburg L.G., Wolcott S. K. (2011) *Cost management*, 2nd edition, John Wiley & Sons, Inc.

Financial Controlling Summit (2014), *Ewolucja roli kontrolera: od raportowania do partnera biznesu*, I Ogólnopolskie Badanie Działów Controllingu w Przedsiębiorstwach, „Rzeczpospolita", Warszawa, pp. 6–31.

Fleishman R. K., Parker L. D. (1992), *The Cost Accounting Environment in the British Industrial Revolution Iron Industry*, "Accounting, Business and Financial History", Vol. 2 (2), pp. 141–160.

France A. (2008), *Management Accounting Practices Reflected in Job Advertisements*, "Journal of New Business Ideas & Trends", Vol. 8 (2), pp. 41–57.

Gabrusewicz W., Kamela-Sowińska A., Poetschke H. (2000), *Rachunkowość zarządcza*, Polskie Wydawnictwo Ekonomiczne, Warszawa.

Garner S. P. (1954), *Evolution of Cost Accounting to 1925*, University of Alabama Press, Alabama.

Goliszewski J. (1990), *Controlling – system koordynacji przedsiębiorstwa*, „Przegląd Organizacji", No. 8–9, pp.16–18.

Goliszewski J. (2002a), *Rozwój controllingu w Polsce na podstawie ogłoszeń o pracę*, „Controlling i Rachunkowość Zarządcza", No. 6, pp. 21–26.

Goliszewski J. (2002b), *Rozwój controllingu w Polsce na podstawie ogłoszeń o pracę – controlling funkcjonalny*, "Controlling i Rachunkowość Zarządcza", No. 8, pp. 18–22.

Goretzki L., Strauss E., Weber J. (2013), *An institutional perspective on the changes in management accountants' professional role*, "Management Accounting Research", Vol. 24, pp. 41–63.

Hansen D. H., Mowen M. M. (2003), *Cost Management. Accounting and Control*, 4th edition, Thomson, Australia–Canada–Mexico.

Hopper T., Armstrong P. (1991), *Cost Accounting, Controlling Labor and the Rise of Conglomerates,* "Accounting, Organizations and Society", Vol. 16 (5–6), pp. 405–438.

Horngren Ch. T. (1987), *Cost and Management Accounting: Yesterday and Today*, [in:] M. Bromwich, A. Hopwood (eds.), *Management Accounting: Current Issues and Research*, Pitman Press, London, pp. 31–43.

Horngren Ch. T., Bhimani A., Datar S. M., Foster G. (2005), *Management and Cost Accounting*, 3rd edition, Prentice Hall, Upper Saddle River (NJ).

Horngren Ch. T., Datar S. M., Rajan M. V. (2015), *Cost accounting*, 15th edition, Pearson.

Hoskin K., Macve R. (1994), *Writing, Examining, Disciplining: the Genesis of Accounting's Modern Power*, [in:] A. G. Hopwood, P. Miller, *Accounting as Social and Institutional Practice*, Cambridge University Press, Cambridge, pp. 67–97.

IFAC (2005), *The Roles and Domain of the Professional Accountant in Business*, IFAC Professional Accountants in Business Committee, New York.

IGC (1996), *Formulierung Controller – Leitbild*, Stuttgart, [as cited in:] Sawicki K. (2001), *Controlling a system informacyjno-sprawozdawczy – zagadnienia wybrane*, „Zeszyty Teoretyczne Rachunkowości", Vol. 2 (58), p. 81.

Ignaszewska E. (2004), *Controller a główny księgowy*, „Controlling i Rachunkowość Zarządcza", No. 11, pp. 20–23.

IMA (2008), *Definition of Management Accounting*, Statement on Management Accounting, Montvale, New York.

IMA (2014), *Statement of Ethical Professional Practice*, Montvale, New York.
Janczyk-Strzała E. (2008), *Controlling w przedsiębiorstwach produkcyjnych*, Wydawnictwo CeDeWu, Warszawa.
Janik W. (2003), *Podstawy controllingu*, Wydawnictwo Politechniki Lubelskiej, Lublin.
Janik W., Paździor M. (2012), *Rachunkowość zarządcza i controlling*, Wydawnictwo Politechniki Lubelskiej, Lublin.
Jaruga A. A. (2001), *Rola rachunkowości zarządczej*, [in:] A. A. Jaruga, W. A. Nowak, A. Szychta, *Rachunkowość zarządcza. Koncepcje i zastosowania*, WSPiZ, Łódź.
Jaruga A. A. (2002), *Rachunek kosztów, rachunkowość zarządcza – wprowadzenie*, [in:] A. A. Jaruga (ed.), *Rachunek kosztów i rachunkowość zarządcza*, SKwP, Warszawa.
Jaruga A., Kabalski P., Szychta A. (2010), *Rachunkowość zarządcza*, Wolters Kluwer, Warszawa.
Jarugowa A., Nowak W. A., Szychta A. (1997), *Zarządzanie kosztami w praktyce światowej*, Ośrodek Doradztwa i Doskonalenia Kadr, Gdańsk.
Jędralska K., Kosiń P. (2007), *Zarządzanie przez controlling w sieci wartości*, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego, Katowice.
Johnson H. T. (1972), *Early Cost Accounting for Internal Management Control: Lyman Mills in the 1850's*, "Business History Review", pp. 466–474.
Johnson H. T. (1975a), *Management Accounting in an Early Integrated Industrial*: *E.I. duPont de Nemours Powder Company, 1903–1912*, "Business History Review", Vol. 49, Summer, pp. 184–204.
Johnson H. T. (1975b), *The Role of Accounting History in the Study of Modern Business Enterprise*, "Accounting Review", pp. 448–449.
Johnson H. T. (1978), *Management Accounting in an Early Multidivisional Organizations: General Motors in the 1920s*, "Business History Review", Vol. 52, Winter, pp. 490–517.
Johnson H. T. (1980), *Markets, Hierarchies, and the History of Management Accounting*, Paper presented at the Third International Accounting Historians Congress, London.
Johnson H. T. (1981), *Toward a New Understanding of Nineteenth-Century Cost Accounting*, "Accounting Review", pp. 510–518.
Johnson H. T. (1983), *The Search for Gain in Markets and Firms: a Review of the Historical Emergence of Management Accounting Systems*, "Accounting, Organizations and Society", pp. 139–146.
Johnson H. T. (1986) *The New Approach to Management Accounting History*, Garland Publishing, New York.
Johnson H. T. (1992), *Relevance Regained*, Free Press, New York.
Johnson H. T., Kaplan R. S. (1987), *Relevance Lost. The Rise and Fall of Management Accounting*, Harvard Business School Press, Boston.
Kaplan R. S. (1984), *The Role of Empirical Research in Management Accounting*, "Accounting, Organizations and Society", Vol. 11 (415), pp. 429–452.
Kaplan R. S. (1986), *The Evolution of Management Accounting*, "The Accounting Review", July, pp. 390–418.
Kaplan R. S. (1988), *One Cost System Isn't Enough*, "Harvard Business Review", Vol. 88 (1), pp. 61–66.
Kaplan R. S., Norton D. P. (1992), *The balanced scorecard – measures that drive performance*, "Harvard Business Review", January–February, pp. 71–79.
Karmańska A. (2003), *Rachunkowość zarządcza ubezpieczyciela. Modelowanie na podstawie rachunku kosztów działań*, Wydawnictwo Naukowe PWN, Warszawa.
Kiziukiewicz T. (2003) (ed.), *Zarządcze aspekty rachunkowości*, PWE, Warszawa.
Král B., Šoljaková L. (2014), *Requirements on controllers in the Czech Republic. An empirical study*, „Zeszyty Teoretyczne Rachunkowości", Vol. 78 (134), pp. 151–175.

Krell E. (2011), *Forecasting the Future Role of the Management Accountant*, The Society of Management Accountants of Canada, Ontario.
Kubalańca L. (2005), *Controlling w polskiej praktyce*, „Monitor Rachunkowości i Finansów", No. 4.
Kwiecień M. (1993), *Zintegrowany system informacyjny (narzędzie controllingu)*, „Prace Naukowe Akademii Ekonomicznej im. O. Langego we Wrocławiu", Wrocław.
Leszczyński Z., Wnuk-Pel T. (2006), *Controlling w praktyce*, Ośrodek Doradztwa i Doskonalenia Kadr Sp. z o.o., Gdańsk.
Lewandowska A. (2005), *Komunikacja pomiędzy działem controllingu a managementem*, „Monitor Rachunkowości i Finansów", No. 6.
Livesay H. C. (1975), *Andrew Carnegie and the Rise of the Big Business*, Little, Brown, Boston.
Loft A. (1994), *Accountancy and the First World War*, [in:] A. G. Hopwood, P. Miller, *Accounting as Social and Institutional Practice*, Cambridge University Press, Cambridge, pp. 116–137.
Loft A. (1995), *The History of Management Accounting: Relevance Found*, [in:] D. Ashton, T. Hopper, R. W. Scapens (eds.), *Issues in Management Accounting*, Prentice Hall, Upper Saddle River (NJ), pp. 21–44.
Lord B. (1996), *Strategic Management Accounting: the Emperor's New Clothes?,* "Management Accounting Research", No. 7, pp. 347–366.
Łada M. (2007), *Zakres współczesnej rachunkowości zarządczej i controllingu*, „Monitor Rachunkowości i Finansów", No. 2.
Łapińska A., Dynowska J. (2010), *Zakres zadań i oznaczenia stanowiska controllera w przedsiębiorstwie w świetle badań ankietowych,* Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, No. 123, pp. 318–327.
Major A. (1998), *System Controllingu w Przedsiębiorstwie, studia przypadków zastosowań w warunkach polskich*, Wydawnictwo Naukowe Semper, Warszawa.
Malmi T., Seppälä T., Rantanene M. (2001), *The practice of management accounting in Finland – a change?*, "LTA", 4/01, pp. 480–501.
Marciniak S. (2001), *Controlling. Filozofia, projektowanie*, Centrum Doradztwa i Informacji Difin Sp. z o.o., Warszawa.
Marciniak S. (2008), *Controlling. Teoria. Zastosowania*, Centrum Doradztwa i Informacji Difin Sp. z o.o., Warszawa.
Miller P., O'Leary T. (1994), *Governing the Calculable Person*, [in:] A. G. Hopwood, P. Miller, *Accounting as Social and Institutional Practice*, Cambridge University Press, Cambridge, pp. 98–115.
Nesterak J. (2002), *Controller w strukturze organizacyjnej przedsiębiorstwa*, [in:] E. Urbańczyk (ed.), *Zarządzanie wartością przedsiębiorstwa. Teoria i praktyka*, Vol. 1, Wydawnictwo KREOS, Szczecin.
Nesterak J. (2004), *System oceny centrów odpowiedzialności*, ANVIX, Kraków.
Nowak E. (1996) (ed.), *Podstawy controllingu,* Wydawnictwo Akademii Ekonomicznej im. O. Langego, Wrocław.
Nowak E. (2000), *Rachunkowość zarządcza strategiczna i operacyjna*, „Controlling i Rachunkowość Zarządcza", No. 5, pp. 18–20.
Nowak E. (2003)(ed.), *Controlling w przedsiębiorstwie. Koncepcje i instrumenty*, ODDK, Gdańsk.
Nowak E. (2004) (ed.), *Rachunkowość zarządcza i controlling w warunkach integracji z Unią Europejską*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław.
Nowak E. (2011) (ed.), *Controlling w działalności przedsiębiorstwa*, PWE, Warszawa.
Nowak M. (2013a), *Controlling w zarządzaniu. Uwarunkowania psychologiczne*, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław.

Nowak M. (2013b), Świadomość wykonywania zadań controllera. Deklaracje dotyczące pracy w controllingu a rzeczywista realizacja zadań z jego zakresu, „Zeszyty Naukowe Uniwersytetu Szczecińskiego", No. 765, pp. 481–497.

Oakland J. S. (1989), *Total Quality Management*, Heinemann Press, London.

Ossowski M. (2005), *Jakie umiejętności powinien posiadać specjalista od rachunkowości zarządczej*, „Controlling i Rachunkowość Zarządcza", No. 10.

Quinn M., Rochford D. (2013), *What management accountants do?*, "Accountancy Ireland", Vol. 45 (1), pp. 58–60.

Roberts H. (2003), *Management Accounting and the Knowledge Production Process*, [in:] A. Bhimani (ed.), *Management Accounting in the Digital Economy*, Oxford University Press, Oxford, pp. 260–282.

Saunders E. J. (1996), *Kontrola wewnętrzna w bankowości*, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.

Sawicki K. (1992), *Controlling a rachunkowość podmiotów gospodarczych*, „Zeszyty Teoretyczne Rady Naukowej", 21, pp. 23–33.

Sawicki K. (2001), *Controlling a system informacyjno-sprawozdawczy – zagadnienia wybrane*, „Zeszyty Teoretyczne Rachunkowości", Vol. 2 (58), pp. 78–90.

Scapens R. W. (2006), *Understanding Management Accounting Practices: a Personal Journey*, "British Accounting Review", Vol. 38 (1), pp. 1–30.

Scapens R., Ezzamel M., Burns J., Baldvinsdottir G. (2003), *The Future Direction of UK Management Accounting Practice*, CIMA Publishing, Elsevier, Amsterdam, Boston, London, [as cited in:] A. Szychta (2006), *Kierunki rozwoju praktyki rachunkowości zarządczej w Polsce*, „Zeszyty Teoretyczne Rachunkowości", Vol. 35 (91), pp. 123–156.

Sharman P. A. (2003), *The Case for Management Accounting*, "Strategic Finance", October, pp. 43–47.

Siegel G. (1996), *The Practice Analysis of Management Accounting*, Institute of Management Accountants, Montvale, New York.

Siegel G., Kulesza C. S. (1994), *The 1994 Practice Analysis of Management Accounting, A research project of the Institute of Management Accountants*, Institute of Management Accountants, Montvale, New York.

Siegel G., Sorensen J. E., (1999), *The 1999 Practice Analysis of Management Accounting, A research project of the Institute of Management Accountants*, Institute of Management Accountants, Montvale, New York.

Sierpińska M., Niedbała B. (2003), *Controlling operacyjny w przedsiębiorstwie*, Wydawnictwo Naukowe PWN, Warszawa.

Simmonds K. (1981), *Strategic Management Accounting*, "Management Accounting (UK)", Vol. 59 (4), pp. 26–29.

Sobańska I. (2009), *Rachunkowość zarządcza*, [in:] I. Sobańska, J. Czarnecki, T. Wnuk-Pel, *Rachunek kosztów. Podejście operacyjne i strategiczne*, C.H. Beck, Warszawa.

Sobańska I. (2010a), *Rachunkowość zarządcza*, [in:] I. Sobańska (ed.), *Rachunkowość zarządcza. Podejście operacyjne i strategiczne,* C.H. Beck, Warszawa.

Sobańska I. (2010b), *Rozwój rachunkowości zarządczej w Polsce po 1990 r.*, [in:] I. Sobańska (ed.), *Rachunkowość zarządcza. Podejście operacyjne i strategiczne*, C.H. Beck, Warszawa.

Sobańska I., Kabalski P. (2014), *Partner biznesowy – nowa rola specjalisty rachunkowości zarządczej,* „Przegląd Organizacji", No. 7, pp. 19–25.

Sobańska I., Szychta A., Świderska G. K., Kabalski P. (2010), *Rachunkowość zarządcza a controlling*, „Rachunkowość", No. 3, pp. 59–62.

Sojak S. (2002), *System rachunkowości*, [in:] S. Sojak, J. Stankiewicz, *Podstawy rachunkowości*, Dom Organizatora, Toruń.

Solomons D. (1968), *The Historical Developments in Costing*, [in:] D. Solomons (ed.), *Studies in Cost Analysis*, Richard D. Irwin, Homewood Ill., pp. 40–42 and 46–47.

Surmacz A., Brojak-Trzaskowska M., Porada-Rochoń M., Lubomska-Kalisz J. (2010), *Budżetowanie i controlling w przedsiębiorstwie*, Wydawnictwa Fachowe CeDeWu Sp. z o.o., Warszawa.

Szarska E. (2007), *Wymagania wobec profesjonalistów controllingu*, „Controlling i Rachunkowość Zarządcza", No. 4, pp. 40–44.

Szychta A. (2005a), *Atrybuty współczesnych praktyków rachunkowości zarządczej*, *ABC Controllingu,* „Controlling i Rachunkowość Zarządcza", No. 11, pp. 1–10.

Szychta A. (2005b), *Rola współczesnych specjalistów do spraw rachunkowości zarządczej w świetle ewolucji jej zakresu i metod*, „Zeszyty Teoretyczne Rachunkowości", Vol. 25 (81), pp. 80–107.

Szychta A. (2006), *Kierunki i czynniki rozwoju praktyki rachunkowości zarządczej w Polsce*, „Zeszyty Teoretyczne Rachunkowości", Vol. 35 (91), pp. 123–156.

Szychta A. (2007), *Etapy ewolucji i kierunki integracji metod rachunkowości zarządczej*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Świderska G. K. (2004a) (ed.), *Rachunek kosztów i rachunkowość zarządcza*. *Definicje, podstawowe problemy, pytania testowe i zagadnienia sytuacyjne z rozwiązaniami*, Stowarzyszenie Księgowych w Polsce, Warszawa.

Świderska G. K. (2004b), *Rola rachunkowości zarządczej w podejmowaniu decyzji*, [in:] G. K. Świderska (ed.), *Rachunek kosztów i rachunkowość zarządcza*, Stowarzyszenie Księgowych w Polsce, Warszawa.

Turyna J., Pułaska-Turyna B. (2000), *Rachunek kosztów i wyników*, FINANS-SERVIS, Warszawa.

Vatter W. J. (1950), *Managerial Accounting*, Prentice-Hall, [as cited in:] H. T. Johnson, R. S. Kaplan (1987), *Relevance Lost. The Rise and Fall of Management Accounting*, Harvard Business School Press, Boston.

Vollmuth H. J. (2007), *Controlling. Planowanie, kontrola, kierowanie*, Wydawnictwo PLACET, Warszawa.

Ward K. (1996), *Strategic Management Accounting*, Butterworth-Heinemann, Oxford.

Wasiak I., Karmowska G. (2012), *Funkcje rachunkowości zarządczej i controllingu w procesie zarządzania firmą,* [in:] E. Nowak, M. Nieplowicz (eds.), *Rachunkowość a controlling*, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław, No. 251.

Weber J. (1995), *Einführung in das Controlling*, 6th edition, Schäffer-Poeschel Verlag, Stuttgart, [as cited in:] M. Sierpińska, B. Niedbała (2003), *Controlling operacyjny w przedsiębiorstwie*, Wydawnictwo Naukowe PWN, Warszawa.

Weber J. (2001), *Wprowadzenie do controllingu*, Profit Doradztwo i Rzeczoznawstwo Sp. z o.o., Katowice.

Wells M. C. (1977), *Some Influences on the Development of Cost Accounting*, "Accounting Historians Journal", Fall, pp. 44–61.

Wickramasinghe D., Alawattage Ch. (2007), *Management Accounting Change*. *Approaches and Perspectives*, Routledge, London–New York.

Wierzbicki K. (1995), *Controlling w strukturze przedsiębiorstwa*, „Ekonomika i Organizacja Przedsiębiorstwa", No. 7, pp. 14–15.

Wnuk T., Leszczyński Z. (2000), *Controlling*, Wydawnictwo Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.

Wnuk-Pel T. (2011), *Zastosowanie rachunku kosztów działań w przedsiębiorstwach w Polsce*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Zainuddin Z. N., Sulaiman S., Hamid S. F. A. (2014), *Transformation of the roles and tasks of management accountants in a Malaysian organization*, "Asia-Pacific Management Accounting Journal", Vol. 9 (2), pp. 1–18.

Zarzycka E. (2012a), *Implementation of an ERP Package and its Effect on the Management Accounting System* – Author's Own Research into Enterprises in Poland, „Finansowy Kwartalnik Internetowy eFinanse", Vol. 8 (3), pp. 85–96.

Zarzycka E. (2012b), *Management accountant's role and functions in the ERP environment – focus on internal reporting and performance measurement*, "Comparative Economic Research. Central and Eastern Europe", Vol. 15 (2), pp. 47–64.

Zarzycka E. (2015), *Rola międzynarodowych kwalifikacji w procesie rozwoju i kształcenia specjalistów ds. rachunkowości zarządczej w Polsce*, „Zeszyty Teoretyczne Rachunkowości", Vol. 81 (137), pp. 137–154.

Zarzycka E. (2016), *Koncepcje i tendencje rozwoju zawodu specjalisty rachunkowości zarządczej/ controllingu – wymiar krajowy i międzynarodowy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Zarzycka E., Firkowska-Jakobsze Z. (2011), *Wpływ przejęcia przedsiębiorstwa na kształt jego systemu rachunkowości zarządczej – analiza studium przypadku firmy farmaceutycznej*, „Acta Universitatis Lodziensis", Folia Oeconomica, Vol. 261, pp. 567–578.

Zarzycka E., Firkowska-Jakobsze Z. (2012a), *Integracja systemów rachunkowości zarządczej przedsiębiorstw w warunkach fuzji i przejęć*, [in:] S. Sojak (ed.), *Rachunkowość. Dylematy praktyki gospodarczej*, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń, pp. 663–677.

Zarzycka E., Firkowska-Jakobsze Z. (2012b), *Wpływ metod prywatyzacji na kształt systemu rachunkowości zarządczej w przedsiębiorstwach*, „Zeszyty Teoretyczne Rachunkowości", Vol. 67 (123), pp. 135–155.

Websites:
www.skwp.pl
www.controllerverein.com

TABLES

FIGURES

GLOSSARY OF ABBREVIATIONS

AAP – The Accountants Association in Poland
ABC – activity-based costing
ABM – activity-based management
BI – business intelligence
BPI – business process improvement
BSC – balanced scorecard
CFM – Certified Financial Manager
CIM – computer integrated manufacturing
CIMA – Chartered Institute of Management Accountants
CMA – Certified Management Accountant
CSR – corporate social responsibility
DCF – discounted cash flows
ERP – Enterprise Resources Planning
EVA – economic value added
FEI – The Financial Executives Institute
GAAP – Generally Accepted Accounting Principles
HR – human resources
ICV – Internationaler Controller Verein
IFAC – The International Federation of Accountants
IFRS – International Financial Reporting Standards
IGC – The International Group of Controlling
IMA – The Institute of Management Accountants
IT – information technology
JIT – just in time
LCC – life cycle costing
LSE – The London School of Economics
NAA – The National Association of Accountants
NIP – Tax Identification Number
RI – residual income
ROI – return on investments
TC – target costing
TQC management – total quality control
TQM – total quality management

APPENDIX 1

QUESTIONNAIRE DESIGNED FOR THE PURPOSE OF THE EMPIRICAL RESEARCH

1. What is the type of company you work for?

production	non-production
1	2

2. What is the company size (by number of employees)?

under 50 people	51–100 people	101–250 people	251–500 people	more than 500 people
1	2	3	4	5

3. What is the capital structure of the company you work for?

100% Polish capital	company with foreign capital
1	2

4. What is your age group?

under 30 years	31–40 years	41–50 years	over 50 years
1	2	3	4

5. How long have you worked in this profession?

less than 5 years	6–10 years	11–15 years	more than 15 years
1	2	3	4

6. Do you have a university degree in economics?

yes	no
1	2

7. What position do you occupy?

controller (cost analyst, management accounting specialist etc., even if only partially)	other
1	2

8. What position does a controller have in the organizational structure of the company you work for?

line position (controller operates at the same level as other managers and can give orders)	staff position (controller is a subordinate to the company's management, and acts as an advisor with no executive powers)
1	2

9. What are a controller's personal qualities?

	not significant	slightly significant	moderately significant	significant	very significant
communications skills	1	2	3	4	5
persuasion skills	1	2	3	4	5
networking skills	1	2	3	4	5
assertiveness	1	2	3	4	5
analytical skills	1	2	3	4	5
team working skills	1	2	3	4	5
stress-resistant	1	2	3	4	5
leadership skills	1	2	3	4	5
able to teach others	1	2	3	4	5
integrity and objectivity	1	2	3	4	5
flexible	1	2	3	4	5
committed	1	2	3	4	5

10. Which of these professional requirements should a controller meet?

	not important	slightly important	moderately important	important	very important
knowledgeable about financial accounting	1	2	3	4	5
knowledgeable about management accounting	1	2	3	4	5
knowledgeable about management	1	2	3	4	5

able to speak foreign languages	1	2	3	4	5
knowledgeable about IT systems (ERP, business intelligence, finance and accounting systems)	1	2	3	4	5
knowledgeable about IT tools (spreadsheets, databases, PowerPoint)	1	2	3	4	5
knowledgeable about business processes	1	2	3	4	5

11. How does a controller improve his/her skills in the company you work for? (multiple answers are possible)

self-education	postgraduate studies	courses/training sessions
1	2	3

12. What tasks does a controller perform in the company you work for?

	no	to a small degree	to a moderate degree	to a large degree	to a very large degree
providing information about past economic operations	1	2	3	4	5
data analysis	1	2	3	4	5
participating in decision-making processes	1	2	3	4	5
error prevention	1	2	3	4	5
innovative activities	1	2	3	4	5

evaluating environmental changes and their impact on the company	1	2	3	4	5
planning sales and profit, cost budgeting	1	2	3	4	5
internal advisory function to managers	1	2	3	4	5

13. How many people work in the controlling department in your company?

one person only; controlling practices are only a part of their responsibilities	single, separate workplace	2–3 people	4 people and more
1	2	3	4

14. Which of the functions of controlling do you consider the most significant?

planning	control	furnishing information	steering and regulation	coordination
1	2	3	4	5

15. What impact does a controller have on the company you work for?

no impact	slight impact	moderate impact	significant impact
1	2	3	4

Łódź University Press
90-131 Łódź, 8 Lindleya St.
www.wydawnictwo.uni.lodz.pl
e-mail: ksiegarnia@uni.lodz.pl
tel. (42) 665 58 63