

## Development of Modern Management Accounting System

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Management accounting (MA) studies disclosed the significance of MA for organizational change, progress and showed the benefit of a performance measurement process. This is the reason why management of organizations should have MA system (MAS) effectively providing information for decision-making at the acceptable costs.

Issue of the right MA tools setting and correct transformation of existing system into the optimal one is not new. Nevertheless, the biggest part of scientific works related to MA is concerned with separate tools of MA and are fragmented.

**The main aspect of the relevance** of this issue is the question what features should have modern MA and how should the existing MA systems be changed into modern ones.

**The objective of this paper** is to examine theoretical and practical assumptions for the development of MAS adjusted with the environment of an organization.

According to the mentioned objectives theoretical and practical assumptions for the development of modern MAS adjusted with the environment of an organization and satisfying management needs of timely receiving the most relevant information with no surplus costs was examined in this paper. The analysis of scientific literature, the systemization of results of different researches related to MA, the studies of business companies, the conduction of financial and managerial analysis, the synthesis of management/MA theories, methods and practical cases were made in this research. The research disclosed that MA could be assessed company-wide, seeking to find an optimal configuration of the local management accounting system (Technical - Managerial View). Also different MA theories, MAS of different companies can be compared and the best choice or conclusions can be achieved based on systemization of theories and practices (Pragmatic – Interpretive View). Besides that, relationship between MA and external environment in much wider context can be analyzed (Critical-Socio-Economic View).

The performed analysis showed that MAS are strongly influenced by the internal, external environment and objectives of organization. Organizations differently pursue Return on Capital (ROE) maximization. Each type of organization has interim objectives helping them to cope with the obstacles of external/internal environment and to take advantage on possibilities. Companies performing in volatile environment use simpler MAS and vice versa, so different sets of MA tools should be applied to different types of organizations. This assumption is the key matter for the modern MA system creation.

Basic principles of modern MAS development state that managers first of all should determine an organization type. Depending on that set of MA techniques adoptable to the particular organization should be determined and applied. Implementation of proposed MA tools demands to organize that on a project basis. Project team should be organized and an approval as well as the support of the top management is mandatory. Acceptance, support and involvement of all management and employees are necessary for a successful change of existing MAS. Constant monitoring of an organization type change, the assessing of MAS effectiveness and top management's support is necessary for a successful functioning of modern MAS.

Keywords: management accounting, management accounting tools, changes, business organizations, performance measurement.

### Introduction

Today rapidly changing business environment stipulates the need of companies' shareholders and managers making decisions as fast as possible following the local/global changes of science, business, technologies, politics and society as well as internal company's situation. MA studies disclosed the significance of MA as a stimulus for organizational change, progress and substantiated the benefit of performance measurement process not only for financial results (improving financial indicators, increasing market value) but also for ongoing performance improvement, communication and control processes (Gimzauskiene & Valanciene, 2008). Following that management of organization should have MAS not overloaded/lacking the appropriate tools.

**Level of problem's exploration.** First of all it should be mentioned that the biggest part of scientific studies related to MA are concerned with separate tools of MA, but only few attempts to identify cause-and-effect relations among types of organizations and MA tools were made.

Further mentioned Lithuanian authors studied MA. Gimzauskiene (2005) studied and analyzed issues related to the influence of changes (e.g. continuous development, changes of technologies and markets, development of businesses, changes in human resources and customers) on MA and highlighted the peculiarities of the application of MA. The author in 2004 analyzed Balanced Scorecard, measurement systems, their implementation and development. Grondskis (2000, 2001) analyzed the Theory of Constraints and its impact costs, the importance of quality costing in the management system and presented a conceptual framework for measuring quality costs under

activity based costing. Valanciene (2002) analyzed satisfaction of customers and benefit to company issues according to MA. Gimzauskiene & Valanciene (2007) studied the changing role of MA and discussed new measurement tools, which are in demand and should assist in measuring, planning, evaluating and managing the value-creating process inside the organization. Authors (2009) disclosed how changes of organizational environment are reflected in performance measurement system. Vaskeliene (2005) studied the valuation of the intellectual capital of organization, analyzed intellectual capital assessment methods; in 2006 she proposed and analyzed the manifestation of dichotomy in organizational intellectual capital assessment methods. Pilinkiene (2008) analyzed market demand forecast methods, Gudonavicius, Bartoseviciene & Saparnis (2009) studied issues related to strategic management and Davidaviciene (2008) studied change management aspects. Gimzauskiene & Kloviene (2010) researched performance measurement in the context of environmental changes of organizations.

Two of the most known American scientists who studied and analyzed issues related to the strategic management, MA and methods of valuation of organizations Kaplan and Norton (1992) provided the model of the Balanced Scorecard composed out of four perspectives that should be measured in order to successfully drive a performance of an organization. Australian authors Ifandoudas and Chapman (2004) studied issues related to management theories, MA and management. The authors studied the combination of Theory of Constraints, Resource Based View and Balanced Scorecard approaches for successful continuous improvement in manufacturing small and medium enterprises. The scientist from Denmark Nørreklit (2000) critically analyzed and contradicted some assumptions of the Balanced Scorecard. Basti & Bayyurt (2008) researched efficiency measurement and Nita (2008) analyzed performance measurement and a changing management accounting role. It also should be mentioned that the authors of Scotland Carr, Mitchell & Finland - Kolehmainen (2008) studied and discussed the strategic MA. The authors provided a contextual framework of the strategic MA. Authors Yusof & Aziz (2008) analyzed strategic adaptation and value of forecasts. Alas (2008, 2009), Tamosiunas (2010) as well as Markovic (2008) analyzed organizational changes. It also should be mentioned that the author from England Armstrong (2002) discussed an application of the Activity Based Costing and Pavlatos & Paggios (2008) from Greece analyzed an adoption of traditional and recently-developed techniques of MA in the hospitality industry of Greece. Also Wickramasinghe & Alawattage (2007) described different views and the evolution of MA. Also attention should be paid to Kopitov (2008), who analyzed systems improving decision-making as well as to Kahraman & Kaya (2010) & Kaplinski (2008) who examined decision-making issues.

According to the reviewed scientific works, it could be stated that the exploration of the issue, i.e. research of MAS and its changes, separate techniques and identification of relations among types of organizations and MA tools is fragmented. There is no integrated framework encompassing

applicable tools of MA and types of organizations for which particular tools should be applied (Strumickas & Valanciene, 2007, 2008). The main factors, which probably had the strongest influence on the eclecticism of MA research, were:

- Different dominating theories of management such as Theory of Constraints, Resource Based View, Contingency Theory, Emergent Theory, Chaos Theory, Copycat Theory, Learning Theory, Rationalism, Theory of Contract, Complexity Theory, Agent Theory and others.
- Views to management accounting (Wickramasinghe and Alawattage, 2007) such as:
  - Technical – managerial view (cost accounting, planning and forecasting, control, decision-making, business valuation, strategic analysis techniques, etc.).
  - Pragmatic – interpretative view (quality costing, value creation, intellectual capital valuation, strategic MA issues, etc.).
  - Critical-Socio-Economic view (changes in technologies, markets, customer behavior, human resources, development of businesses, etc.).
- Changing situation in the global economy as globalization, financial crisis, etc.
- Expectations of shareholders, managers, society, scientists, etc.

So, the eclecticism of researches, theories and tools pushes us forward to the question how do managers should know what tools they have to use, what they don't and what composition of MA system gives the most effective result – providing management with information for the best possible decision-making. The multiplicity of researches related to MA indicates factors having impact on the structure of MA, trends of research and the need of integrating separate theories and techniques into a single practically adoptable modern framework, adjusted with changes of environment.

The preconditions for such changes and development of MAS were identified and discussed in former researches performed by Strumickas & Valanciene (2007, 2008, 2009). They are as follows:

- Type of organization, MA tools and the stage of company's life cycle are interrelated.
- Different sets of MA tools should be used in different types of organizations.
- Changes of MA depend on financial results and expectations/objectives of shareholders and management.
- External factors as situation in the global economy, competition, changes of science, business, technologies, politics, society and financial results of organizations are closely related.
- Rapidity of MA changes depends on an organization type because the more conservative is entity and more stable is its environment, the less changes it should implement in its MAS and vice versa.

The mentioned conclusions stipulate further trend of research - development of modern MA model for the selection of MA tools for the particular business organization avoiding the deficiency or surplus of the

methods used. In order to create such model, theoretical views on management and MA, its structure, factors having influence, existing practice and changes of MA should be evaluated. Also completely new integrated framework encompassing different types of organizations, their development and applicable MA tools should be developed. **So the main aspect of relevance** of this issue is the question what features should the modern MA have and how the existing MA systems should be changed into modern ones in order to achieve that.

**The objective of this paper** is to examine theoretical and practical assumptions for the development of MA system adjusted with the environment of organization by implementing the following steps:

- Analyze changes of MAS stipulated by external and internal business environment.
- Develop MA tools selection methodology for different business organization types.
- Provide the basic principles for methodology's application in business organizations.

**The methodology of research.** Analysis of scientific literature, systemizing of results of different researches related to MA for the evaluation of a theoretical exploration level was performed in the paper. The research is based on case studies of business companies performed by interviewing their experts of MAS and conducting of the financial and managerial analysis of these companies. Also the synthesis of management, MA theories, methods and practical cases were used.

### MA from the Theoretical Point of View

Wickramasinghe and Alawattage (2007) proposed the initial splitting of possible attitudes to MA by providing three main directions. Following different approaches, different researches can be made and different features of MA and its change could be discovered. So views are as follows:

- **Technical-Managerial.** This approach is mainly used by practitioners and describes MA as the informational system for management, created for the right and timely decision-making. This view is the ground of this research. It directs towards the modeling of simple and

at the same time efficient MAS having the optimum tools and allowing the flowing information from the very top of a management chain to the very bottom and vice versa. Nevertheless that this view is basic, no relations could be discovered without the next approach.

- **Pragmatic-Interpretive.** Researchers of MA use this view for the systemization of practices and theories. Scientists or consultants mostly use it. Pragmatic-Interpretative view helps researchers to analyze MAS. In some instance practitioners use Pragmatic-Interpretive approach for the development of MAS as well. The next view is less related to everyday practice but in the wider context it also has something in common with our research.
- **Critical-Socio-Economic.** Representatives of academics use this view as well. It is about critical evaluation of MA practices in relation to the interplay between organizations and their wider socio-economic contexts. This approach is much wider than the area of organization's management and is related to a social and wide economic context.

Depending on the particular view, different aspects of research will be provided further in the article, e.g. application of Technical-Managerial view will lead to the evaluation of separate MA techniques in separate companies by assignation of them to different groups, determination of relations between activity results, MA tools used and main events in the company. Following Pragmatic-Interpretive view practices of different organizations and theoretical views to management and MA will be systemized in order to select the most effective MA technique internally. According to Critical-Socio-Economic view, the analysis of external environment should be performed and its influence on MA practice will be evaluated.

Further in the paper the link between external environment, internal environment, objectives, the type of organization and MA tools will be reminded. It was already discussed in previous researches and its components are closely related (see Figure 1). Further in the article all main components will be discussed.

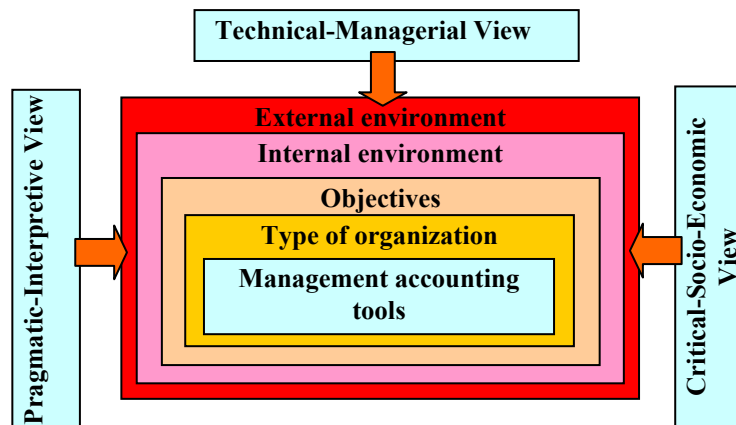


Figure 1. Views and factors related to MA

**External environment.** The Global financial crisis of 2008 once again confirmed the importance of external environment to the particular firm nevertheless that the firm has sound or poor performance. Some faced financial difficulties or went bankrupt; others found new possibilities, performed acquisitions of peers, etc. Taking into consideration the situation mentioned, we would like to put the emphasis on macro economic analysis and its impact. The accuracy of budgets, forecasts and objectives can be significantly deteriorated due to the possible changes in the global markets. Also such changes as usage of renewable resources (heat pumps, solar energy, wind, environmental sustainability, etc.) have strong impact on tomorrow's business. Businesses are seizing the opportunity to grow their topline by introducing ecofriendly products, services and business models. Organizations are identifying ways to reduce energy costs (direct and indirect), improve efficiency and reduce waste. New environmental laws, federal and state programs, and international guidelines are driving many organizations to set their own strategies for reducing emissions. Employees, consumers, shareholders and communities are calling for a heightened focus on environmental sustainability (Ernst & Young, 2010).

**Internal environment and objectives.** The internal environment of the company is affected by the external one and by the shareholders/management of an organization. Actually the situation in the local and global markets affects shareholders' expectations as well. Internal environment (organizational structure, mission, vision, objectives, culture, MAS, technologies, philosophy of business, etc.) is strongly influenced by the actual results and expectations of shareholders/management. Usually the deterioration of performance is led by the pressure on management and subsequently – the initiation of changes in internal environment. Already mentioned objectives are the outcome of shareholders'/management's expectations. As the external environment is intended to be favorable, objectives are intended to be more ambitious and of longer time horizon and vice versa. Of course improvement or impairment of organization's activity have the same effect.

Very important aspect of today's company's performance is a constant change. New markets, new consumer expectations and new regulation all of them accelerate the need for a new vision. Companies need to be nimble, able to implement and willing to plan for a future that will be ever-changing (Ben van Gils, 2009). Changes of environments stipulate changes of organization's type. **Type of organization** depends on the factors related to their external and internal environment (see. chapter Research methodology and Results). Companies are starting from Market Creators. Afterwards they become Value Creators and facing difficulties as their ROE is diminishing to an unacceptable level. Such situation requires companies to turn into Refocuser or even Restructurer type. Depending on an organization's type, different **tools of MA** are preferred (Strumickas & Valanciene, 2008, 2009).

## Research methodology and Results

In order to verify theoretical assumptions related to MA structure and factors having influence on it, trends of change according to the main factors (organization type, stage of

organization life cycle, etc.) and examine the existing practice, the empirical research of MA practice in Lithuanian business companies was performed in 2009. The research method adopted in this study is a case study. The choice of organizations was determined by the diversity of business sectors, organization size, age, performance results and strategies. Development of MA might be disclosed analyzing relation of such variables as MA tools, organization type and organization objectives. The research consisted of the following steps:

**Steps 1 and 2. Case studies and identification of organization type.** In this research cases of 7 companies (Refiner, Window producer, Pipeline producer, Real estate renter, Customs service provider and two financial brokers) were analyzed. Following the determined criterions (see Table 1), these companies were divided into four groups: Value Creators, Market Creators, Refocusers and Restructurers. The company type changes, MA tools used, the main events and performance for the period from 2004 till 2007 were examined.

**Step 3. Identification of tools and areas of MA.** Tools of MA were divided into 7 broad categories (Cost accounting, Budgeting, Control, Decision-making, Intellectual capital valuation, Business evaluation and Strategic analysis). During interviews with MA specialists or related officers, the particular tools used during the examined period were analyzed. The analysis of the areas and tools of MA showed that:

- *Value Creators* used the most sophisticated (long – term objectives, long – term forecasting, etc.) and the highest number of tools. Actually it can be logically explained, as Value Creators are entities functioning in stable business sectors and having positive environment for the creation of a properly functioning management accounting system. Repetitive operations of Value Creators constitute good track record, possibility to apply tools, have reliable results and are more secure due to their bigger size. Size itself is regarded as providing a greater degree of protection - larger organizations are more likely to be supported by lenders and ultimately by the state (Jens Tholstrup, 2009).
- The second category of organizations is *Market Creators*. These companies have less sophisticated and less number of MA tools as they work in more volatile business conditions. Usage of less number and less sophisticated tools is common practice for such companies as it facilitates the faster decision-making. Usage of data insights and analysis for faster and smarter decision-making is the one of key elements for the improvement of company's performance (Ernst & Young, 2010). Deviations in activity of Market Creators are significant so the application of such methods as long-term budgeting/forecasting or business value calculation, etc. usually have no sense. Application of sophisticated or based on questionable assumptions methods for Market Creators leads to even demoralization of company's employees when required long-term objectives simply cannot be achieved due to significant deviations. Such kind of situations has impact on company's employees' rotation, especially on rotation of management.

Table 1

## Criteria for the determination of a company type

No.	Indicators and criteria for their assessment	Type of organization	Market Creators	Refocusers	Value Creators	Restructurers
1.	<b>Perform in dynamic business sectors.</b> Calculated according to the absolute change of companies' number in business sector. <i>Source: data of Department of Statistics to the Government of the Republic of Lithuania for the period from 1997 till 2005.</i>		> 295 companies per year	> 295 companies per year	-	-
2.	<b>Characterized by sound performance.</b> Measured by the actual capital profitability and expectations of capital profitability compared to average capital markets profitability (P/E ratio), which long-term (more than 100 years) average is 16%. <i>Source: ING Investment Weekly, February 23, 2009.</i>		>16%	-	>16%	-
3.	<b>Use entrepreneurial strategies.</b> Measured according to 5 criteria: a. Proactive management; b. Objectives exceed available resources and possibilities; c. Culture of teamwork; d. Ability to learn; e. Ability to solve problem situations. <i>Source: Jucevicius R. (1998). Strategic management of organizations.</i>		Conform	Conform	-	-
4.	<b>Pursue long-term development and position in the market.</b> Measured according to term of activity's planning.		> 1 year	-	> 1 year	-
5.	<b>Are under pressure for better financial results.</b> Measured by the actual capital profitability and expectations of capital profitability compared to average capital markets profitability (P/E ratio), which long-term (more than 100 years) average is 16%. <i>Source: ING Investment Weekly, February 23, 2009.</i>		-	<16%	-	<16%
6.	<b>Perform in stable business sectors.</b> Calculated according to the absolute change of companies' number in business sector. <i>Source: data of Department of Statistics to the Government of the Republic of Lithuania from 1997 till 2005.</i>		-	-	< 295 companies per year	-
7.	<b>Use conservative business strategies.</b> Measured according to 5 criteria: a. Proactive management; b. Objectives exceed available resources and possibilities; c. Culture of teamwork; d. Ability to learn; e. Ability to solve problem situations. <i>Source: Jucevicius R. (1998). Strategic management of organizations.</i>		-	-	Conform	-

It stipulates a phenomenon when management leaves a company, new management is hired and is also involved into the situation when they lack experience, are under pressure of shareholders and repeat the same mistakes as the previous management. So the long-range objectives for Market Creators may have negative effect rather than positive. As a result, the planning and management process should be simplified and become more flexible; the effort should be reduced at the same time (Jurgen H. Daum, 2002).

The last two categories left are Refocusers and Restructurers. These categories represent the "on spot" condition of entity rather than a long-term status. Refocusers are companies trying to avoid recession stage so they use less number of tools than Value Creators and Market Creators. This fact may be explained by their worse condition and need to make decisions as fast as possible. The case of Restructurers is even simpler. A company, which is trying to get out of a recession stage, should change its structure radically so decisions should be concrete, simple and effective.

**Step 4. Identification of the first, second and third level objectives.** Levels of objectives in the research were introduced in order to show that every company has its ultimate objective – maximization of ROE but different organizations achieve it differently. It should be noted that first level objectives are such that can be directly influenced by MA tools. Second level objectives are the objectives, which can be achieved only when the first level

objectives are implemented. Third level objective is the maximization of shareholder value. It is possible when the first and second level objectives are achieved. We would like to note that the first and second level objectives are different depending on the type of an organization. The trend of objectives and expectations change is such that the length of the perspective is diminishing, as the financial situation of the company is getting worse.

**Steps 5 and 6. MA changes and overall trends of performance.** After the implementation of the mentioned steps the overall trends and relations among company type, MA tools and objectives were analyzed. The analysis of 7 cases showed simple and obvious trends. First of all the number and complexity of MA tools is diminishing in such a manner: Value creators → Market creators → Refocusers → Restructurers. The same thing can be said regarding the complexity of MA tools and the time horizon of planning and objectives setting. So as the future of organization is less determined, the simpler methods should be used. Change dynamics are increasing in the environment and force companies to balance their activities in shorter intervals with external developments. The traditional corporate management instruments budgeting and monthly target/actual comparison prove to be too inflexible (Jurgen H. Daum, 2002).

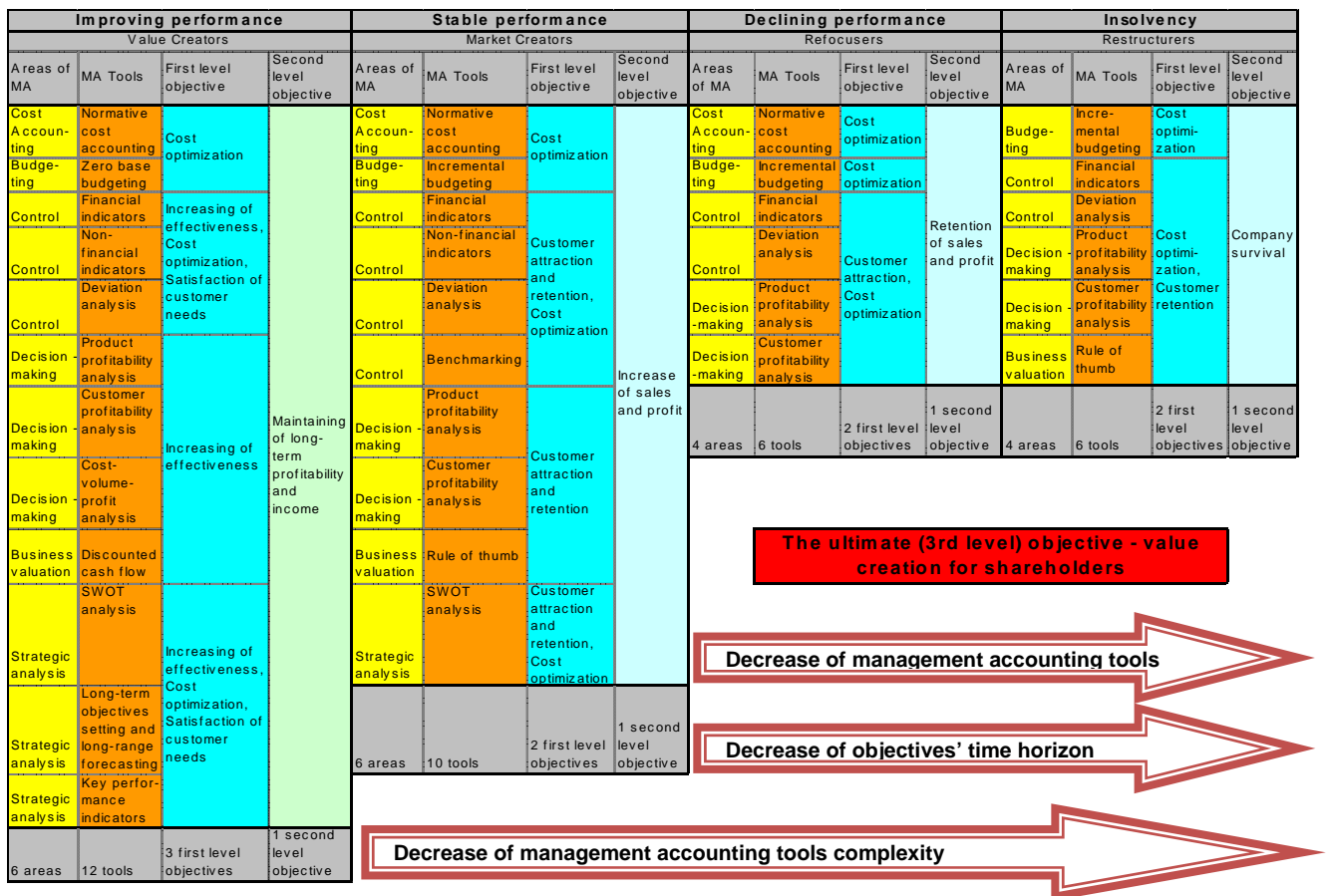


Figure 2. Trends of MA system change

### Basic Principles of the Modern MA System Development

As the research has been already discussed, the second stage is the description of the methodology for MAS balancing, i.e. the setting of the optimal quantity of tools for the particular organization and facilitating positive MAS change. The basic principles or steps of implementation are provided further in the paper.

**Step 1. Determination of an organization type.** First of all company's management should know what set of MA tools can give the most relevant information in the shortest period of time and facilitate the achievement of all levels' objectives. For that purpose it is necessary to define an organization's type following established criterions, which were provided in the Table 1. It is necessary to note that criterions provided in the Table 1 include the influence of external environment (No. 1 and 6) and internal environment (No. 2, 3, 4, 5, 7). Depending on the organization type, different sets of MA tools should be applied (see Figure 2) for better striving for company's objectives.

**Step 2. Comparison of proposed and actual set of MA tools.** As management of a company is already familiar with proposed set of MA tools, comparison with the actual set and should be made. Also the usefulness of actual and proposed set of tools should be evaluated (e.g., from the perspective of decision-making and execution acceleration, costs of software used, costs of the staff involved, costs of

the consulting services needed, probabilities to optimize operations, etc.). Actually all work related to the implementation of balanced MA model should be made in the form of a project (i.e., it should have time, budget and scope boundaries and project team should be assigned to it). Such team should provide a thorough analysis of what tools should be left, excluded and implemented, what tools are mandatory, what probable economic effect will provide new tools, what company will lose after exclusion of some tools, what will be the total effect on company's performance in financial expression, how it will effect employees morale, rapidity of management's decision-making, operations, etc.

**Step 3. Final review, approval and support of the top management.** The management of company should approve the final set of MA tools. The committee of balanced MA system implementation should be familiarized with the analysis provided by an execution team and approve or reject the final set in the form of a project. If an approval is made, the project should be started. If not, following committees remarks project's corrections should be made and provided for the next review by the committee of a balanced modern MAS implementation. Nevertheless that company has formally implemented the modern MAS, the support of the top management is the mandatory condition for the successful implementation and maintenance of such MAS. As financing in an organization is always an object of dispute and generates potential conflicts, setting priority for balanced

MAS by the top management is one of the key factors of success.

**Step 4. Implementation of proposed and elimination of excessive MA tools.** This part of the project is the most complicated. As the budgeted and project manager for this project are already assigned, implementation should be done following established milestones periodically measuring deviations. One more aspect of implementation is crucial. The system should be accepted not only by management but also by all the employees of company. Involvement of employees is another key factor of success. Such technique of change management helps to avoid rejection of newly implemented MAS.

**Step 5. Evaluation of MAS change effectiveness.** When the proposed set of tools is implemented, the analysis of its effectiveness and project execution should be performed on the periodical basis and systems adjustments must be made if necessary. The ultimate result of the implementation of such MAS changes is MAS, most efficiently providing necessary information to management for decision-making. It will work if management and employees will accept it. Therefore transparency and considering of employees opinion should be taken into account during the development and implementation stages. Such MAS should be periodically reevaluated and adjusted according to organization life cycle and management needs.

### Conclusions

The following conclusions can be formulated according to the results of theoretical and empirical research provided in the paper:

- MA can be viewed differently. It can be assessed company-wide, seeking to find optimal configuration of the local MAS (Technical-Managerial View). Different MA theories, MAS of different companies can be compared and the best choice or conclusions

can be achieved based on systemization of theories and practices (Pragmatic-Interpretive View). Also relationship between MA and external environment in much wider context such as changes in global society, economy, technologies, etc. can be analyzed. All these views together show the main areas and trends of research.

- MAS are strongly influenced by the internal, external environment and objectives of an organization. Different types of organizations differently pursue the same goal of ROE maximization. Each type of organization has interim objectives helping them to cope with the obstacles of external/internal environment and to take advantage on possibilities. As a company is performing in more volatile environment, the simpler MAS should be and vice versa. So different sets of MA tools should be applied to different types of organizations and in this way the balancing of MAS (i.e. implementing modern MAS) could be implemented.
- Basic principles of modern MAS development state that first of all managers of a company should determine an organization type by assessing external, internal environment and the objectives of a company. Depending on that set of MA techniques adoptable to a particular organization should be determined and applied. The implementation of proposed MA tools demands to organize that on a project basis. A project team should be organized, and the approval as well as support from the top management is mandatory. Acceptance, support and involvement of all management and employees are necessary for a successful change of existing MAS. Constant monitoring of organization type change, assessing of MAS effectiveness and top management's support is necessary for a successful maintenance of modern MAS.

### References

- Alas, R. (2008). Implementation of Organizational Changes in Estonian Companies. *Journal of Business Economics and Management*, 9(4), 289-297.
- Alas, R., Sharifi, S., & Sun, W. (2009). China and Estonia in Flux: is this a Valid Basis for Comparison of their Approaches to Change Management? *Inzinerine Ekonomika-Engineering Economics*(2), 18-27.
- Armstrong, P. (2002). The Costs of Activity-Based Management. *Accounting, Organizations and Society*, 7 (1-2), 99-120.
- Basti, E., & Bayyurt, N. (2008). Efficiency Performance of Foreign-Owned Firms in Turkey. *Transformations in Business & Economics*, 7(3), 20-30.
- Ben van Gils (2009). Lessons from Change: Transforming the Power and Utilities Industry. <http://www.ey.com/>.
- Carr, C., Kolehmainen, K., & Mitchell, F. (2008). The Influence of Context on Strategic Investment Decision Practices: The Role of the Strategic Management Accounting. *European Accounting Association 2008 Conference, Rotterdam*. 71.
- Davidaviciene, V. (2008). Change Management Decisions in the Information Age. *Journal of Business Economics and Management*, 9(4), 299-307.
- Domeika, P., & Grondskis, G. (2001). Integrated Model of Company Cost Accounting. *Inzinerine Ekonomika-Engineering Economics*(6),15-20.
- Ernst & Young (2010). Sustainability Strategies: Greening Our Own Organization. <http://www.ey.com/>.
- Ernst & Young (2010). Lessons from Change: Findings from the Market. <http://www.ey.com/>.
- Gimzauskiene, E. (2004). Adoption of Management Accounting Methods in Evaluation Process of Organization. Doctoral dissertation.

- Gimzauskiene, E. (2005). Changes of Management Accounting in the Context of Knowledge Economy. *Social Research*, 2(6), 22-30.
- Gimzauskiene, E., & Kloviene, L. (2010). Research of the performance measurement system: environmental perspective. *Inzinerine Ekonomika-Engineering Economics*, 21(2), 180-186.
- Gimzauskiene, E., & Valanciene, L. (2007). Changing Role of Management Accounting: Lithuanian Experience Case Studies. *Inzinerine Ekonomika-Engineering Economics*(5), 16-23.
- Grondskis, G. (2000). Integrated Model of Company's Cost Accounting. Doctoral dissertation.
- Gudonavicius, L., Bartoseviciene V., & Saparnis, G. (2009). Imperatives for Enterprise Strategists. *Inzinerine Ekonomika-Engineering Economics*(1), 75-82.
- Ifandoudas, P. & Chapman R. (2004). Combining TOC, RBV and Balanced Scorecard Approaches for Successful Continuous Improvement in a Manufacturing SME. *5th CINet Conference, "Strategic Priorities for the Global Knowledge Economy"*.
- Jucevicius, R. (1998). Strategic Development of Organizations. The World Center of Lithuanian Culture, Science and Education. 456.
- Jens Tholstrup (2009). What's Next for Corporate Development? – Opportunity and Risk in the Financial Crisis. <http://www.ey.com/>.
- Jurgen H. Daum (2002). Beyond Budgeting: a Model for Performance Management and Controlling in the 21<sup>st</sup> Century? *Controlling and Finance*, July 2002 issue.
- Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard - Measures That Drive Performance. *Harvard Business Review (January-February)*, 71-79.
- Kaplan, R. S., & Norton, D. P. (1996). Balanced Scorecard. Translating Strategy into Action. Harvard Business School Press, 322.
- Kopitov, R., & Faingloz, L. (2008). Ways of transforming aims into results at successful companies. *Technological and Economic Development of Economy*, 14(3), 312-327.
- Kahraman, C., & Kaya, I. (2010). Investment Analyses Using Fuzzy Probability Concept. *Technological and Economic Development of Economy*, 16(1), 43-57.
- Kaplinski, O. (2008). "Development and Usefulness of Planning Techniques and Decision-Making Foundations on the Example of Construction Enterprises in Poland". *Technological and Economic Development of Economy*, 14(4), 492-502.
- Markovic, M. R. (2008). Managing the Organizational Change and Culture in the Age of Globalization. *Journal of Business Economics and Management*, 9(1), 3-11.
- Nita, B. (2008). Transformation of Management Accounting: From Management Control to Performance Management. *Transformations in Business & Economics*, 7(3), 53-64.
- Norreklit H. (2000). The Balance on the Balanced Scorecard: a Critical Analysis of Some of Its Assumptions. *Management Accounting Research*, 11(1), 65-89.
- Pavlatos, O., & Paggios, L., (2008). Traditional and Recent-developed Management Accounting Techniques in the Hospitality Industry: Evidence from Greece. *European Accounting Association 2008 Conference, Rotterdam*. 18.
- Pilinkiene, V. (2008). Selection of market demand forecast methods: Criteria and application. *Inzinerine Ekonomika-Engineering Economics*(3), 19-25.
- Pilinkiene, V. (2008). Market Demand Forecasting Models and their Elements in the Context of Competitive Market. *Inzinerine Ekonomika-Engineering Economics*(5), 24-31.
- Strumickas, M., & Valanciene, L. (2007). The Interface Between Management Accounting and Modern Management Theories. *Economics and Management – 2007*, 122-128.
- Strumickas, M., & Valanciene, L. (2008). Research of Changes of Management Accounting in Context of Modern Management Theories. *Economics and Management – 2008*, 72-78.
- Strumickas, M., & Valanciene, L. (2009). Research of Management Accounting Changes in Lithuanian Business Organizations. *Inzinerine Ekonomika-Engineering Economics*(3), 26-32.
- Tamosiunas, A. (2010). Managing Corporate Strategic Changes in the Context of Climate Change. *Inzinerine Ekonomika-Engineering Economics*, 21(1), 19-31.
- Valanciene, L., & Gimzauskiene, E. (2007). Changing role of management accounting: Lithuanian Experience case studies. *Inzinerine Ekonomika-Engineering Economics*(5), 16-23.
- Valanciene, L., & Gimzauskiene, E. (2008). Dimensions of open system in performance measurement: theoretical aspect. *Economics and Management*, 13, 79-87.



- Valanciene, L., & Gimzauskiene, E. (2009). Dimensions of Performance Measurement System in Changes Research. *Inžinerine Ekonomika-Engineering Economics*(4), 41-48.
- Valanciene, L. (2002). Model of Differentiation of Company's Goods in the Aspect of Management Accounting. Doctoral dissertation.
- Vaskeliene, L. (2005). Valuation Model of Organization's Intellectual Capital. Doctoral dissertation.
- Vaskeliene, L. (2006). Manifestation of Dichotomy in Organizational Intellectual Capital Assessment Methods: Theoretical Research and Empirical Evidences. *Social Research*. 8, 150-159.
- Yusof, F. M., & Aziz, R. A. (2008). Strategic adaptation and the value of forecasts: The development of a conceptual framework. *Journal of Business Economics and Management*, 9(2), 107-114.

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### Šiuolaikinės valdymo apskaitos sistemos plėtojimas

Santrauka

Lietuvos ir užsienio mokslininkų bei specialistų atlikti valdymo apskaitos (VA) tyrimai atskleidė VA svarbą organizaciniams pokyčiams, įmonių plėtojimuisi ir parodė veiklos vertinimo teikiamą naudą. Šių tyrimų pagrindu atsirado poreikis diegti VA sistemas (VAS), efektyviai teikiančias informaciją vadovybės sprendimams priimti. Visgi, didelė mokslinių VA tyrimų dalis yra susijusi su atskirais VA metodais. Tik keletą atvejų buvo bandyta nustatyti priežastis ir pasekmės ryšius tarp organizacijų tipų, VA priemonių ir siekta toki efektyvumą vertinti. Atliktų tyrimų, teorijų ir VA priemonių ekletiškas sąlygoja **šios problemos svarbą ir klausimą**, kokias VA priemones turėtų pasirinkti vadovai, kokių reikėtų atsisakyti ir kokia VA struktūra yra efektyviausia. Taigi **šio straipsnio tikslas** yra išnagrinėti teorines ir praktines VAS, suderintas su organizacijos aplinka, plėtojimo prielaidas.

Būtent dėl minėtos priežasties šiame straipsnyje buvo išnagrinėtos teorinės ir praktinės šiuolaikinės VAS kūrimo ir diegimo prielaidos. Siekiant išsiaiškinti šias prielaidas, tyrimo metu buvo atlikta mokslinės literatūros analizė, tyrimų, susijusių su VA, rezultatų sisteminimas, verslo organizacijų finansinė ir vadybinė atvejų analizė, valdymo ir VA teorijų sintezė.

Tyrimo metu buvo nustatyta, kad VA gali būti analizuojama atskiros organizacijos mastu, siekiant nustatyti optimalią VAS konfigūraciją (techninis-vadybinis požiūris). Be to, įvairių kompanijų VAS gali būti lyginamos tarpusavyje, norint įvertinti sistemų plėtojimosi dėsningumus, ryšius tarp organizacijos veiklos, valdymo bei taikomų VA metodų ir nustatyti tinkamiausią variantą, sisteminant teorijas ir praktikas (pragmatinis-interpretacinis požiūris). Taip pat galima analizuoti ryšius tarp VA bei išorinės aplinkos, apimančios globalius socialinius, technologinius, verslo, ekonomikos, mokslo ir kt. procesus (kritinis socialinis-ekonominis požiūris).

Siekiant patikrinti teorines ankstesnių tyrimų prielaidas ir išnagrinėti VA praktiką, 2009 m. buvo atliktas empirinis tyrimas. Tiriant buvo atlikta pasirinktų verslo organizacijų analizė ir išanalizuotos 7 verslo organizacijos (perdirbimo, langų gamybos, vamzdžių gamybos, nekilnojamojo turto nuomos, maitinės paslaugų įmonės ir 2 finansų maklerio įmonės), kurios buvo suskirstytos į keturias grupes: vertės kūrėjus, rinkos kūrėjus, krypties keitėjus ir struktūros keitėjus. Organizacijos į minėtas grupes suskirstytos pagal kriterijus, apibrėžiančius šias organizacijų savybes ir požymius: verslo sektoriaus dinamiškumas, veiklos rezultatai, strategijos versliniškumo bei konservatyvumo lygis, tikslų ilgalaikiškumas, akcininkų lūkesčiai, išreikšti pageidavimu kapitalo pelningumu. Taip pat straipsnyje pateikta šių organizacijų tipų pasikeitimų, VA priemonių, svarbiausių įvykių ir veiklos rezultatų 2004 – 2007 m. kaitos analizė, nustatant ryšius tarp išvardytų kintamųjų.

Atliekant tyrimą VA priemonės buvo suskirstytos į 7 kategorijas: sąnaudų apskaita, biudžetų sudarymas, kontrolė, sprendimų priėmimas, intelektualaus kapitalo vertinimas, verslo vertinimas ir strateginė analizė. Interviu su VA specialistais metu buvo atlikta VA priemonių, naudotų per nustatytą laikotarpį, analizė. Be to, buvo nustatyti organizacijų tikslų lygiai siekiant akcentuoti tai, jog kiekviena kompanija siekia pagrindinio tikslo – didinti nuosavo kapitalo pelningumą. Tačiau skirtingos organizacijos šio tikslo siekia skirtingai. Reikėtų atkreipti dėmesį į tai, kad straipsnyje yra pateikiami pirmojo lygio tikslai, t.y. tokie, kuriems gali būti daroma tiesioginė įtaka naudojant VA priemones. Antrojo lygio tikslai – jie gali būti pasiekiami tik tuomet, kai yra įgyvendinami pirmojo lygio tikslai. Trečiojo lygio tikslas – akcininkų vertės (nuosavo kapitalo pelningumo) didinimas. Pirmojo ir antrojo lygio tikslai skiriasi nuo organizacijos tipo.

Atlikus išvardytus veiksmus, buvo nustatytos ir išanalizuotos pasirinktų įmonių tipų kaitos tendencijos, ryšiai tarp organizacijų tipų, VA priemonių bei tikslų. 7 verslo organizacijų atvejų analizė atskleidė tai, jog VA priemonių skaičius ir sudėtingumas keičiasi tokia kryptimi: vertės kūrėjai → rinkos kūrėjai → krypties keitėjai → struktūros keitėjai. Tą patį galima pasakyti ir apie VA priemonių sudėtingumą bei planavimo / tikslų nustatymo ilgalaikiškumą. Kuo organizacijos ateitis yra mažiau apibrėžta, tuo paprastesni VA metodai turėtų būti taikomi ir atvirkščiai. Taigi tyrimo metu buvo nustatyti šie VAS kaitos dėsningumai:

- VAS veikia vidinės, išorinės aplinkos pasikeitimai ir organizacijos vadovybės / akcininkų keliami tikslai bei lūkesčiai.
- Kiekvienam organizacijos tipui yra būdingi skirtingi tarpiniai tikslai, kuriuos įgyvendinus yra maksimizuojamas investuoto nuosavo kapitalo pelningumas ir taip kuriama vertė akcininkams.
- Organizacijos, veikiančios nepastovioje aplinkoje, turėtų taikyti nesudėtingas VAS ir priešingai, įmonės, veikiančios stabilioje aplinkoje, gali taikyti sudėtingesnius VA metodus.
- Skirtingiems organizacijų tipams turėtų būti taikomi skirtingi VA priemonių rinkiniai. Tai yra svarbiausia prielaida kuriant šiuolaikinę VAS.

Vadovaujantis teorinėmis prielaidomis ir empirinio tyrimo rezultatais, buvo nustatyti šiuolaikinės VAS kūrimo principai. Pirmiausia, įmonės vadovybė turi žinoti, koks VA priemonių rinkinys gali suteikti svarbiausią informaciją sprendimams priimti per trumpiausią laiką. Tam, vadovaujantis minėtais kriterijais, yra būtina nustatyti organizacijos tipą. Nustačius VA priemonių rinkinį, priklausomai nuo organizacijos tipo, turi būti palyginamos faktiškai naudojamos ir siūlomos VA priemonės. Taip pat turi būti įvertintas faktiškai taikomų ir siūlomų VA priemonių naudingumas bei parengtas atitinkamas projekto šiuolaikinei VAS diegti (t. y. turi būti nustatyti laiko, biudžeto ir darbų apimtys apribojimai ir suformuota projekto įgyvendinimo komanda). Projekto įgyvendinimo komanda turėtų atlikti detalią analizę ir nustatyti, kokios VA priemonės turi būti paliktos, kokios turi būti pašalintos ir kokios privalomos. Taip pat svarbu įvertinti, kokią įtaką naujas priemonių rinkinys turės organizacijos veiklos procesams, darbuotojų moralei, sprendimų priėmimo greičiui ir t. t. Galutinis VA priemonių rinkinys turėtų būti patvirtintas įmonės aukščiausios vadovybės. Tokios VAS įgyvendinimo komitetas turėtų būti supažindintas su analizės, atliktos projekto įgyvendinimo komandos, rezultatais ir turi patvirtinti arba atmeti galutinį VA priemonių rinkinį. Minėtam komitetui patvirtinus VA priemonių rinkinį, turėtų būti pradėtas projekto įgyvendinimas. Jei patvirtinimas nebūtų gautas, projekto įgyvendinimo komandai reikėtų atsižvelgti į komiteto pastabas, pakoreguoti projektą ir pateikti jį pakartotinai peržiūrai.

Įdiegus šiuolaikinę VAS ir norint, kad tokia sistema sėkmingai funkcionuotų, vien tik formalaus požiūrio nepakanka. Būtinai įmonės aukščiausios vadovybės palaikymas. Kadangi atskirų projektų finansavimas organizacijose yra nuolatinių ginčų ir konfliktų objektas, VAS pozicionuojant kaip prioritetinę sritį būtų užtikrinamas stabilus šio projekto finansavimas.

Sudėtingiausias šiuolaikinės VAS įgyvendinimo etapas yra praktinis siūlomų VA priemonių diegimas ir perteklinių VA priemonių eliminavimas. Kai yra paskiriamas projekto vadovas ir nustatomas biudžetas, VAS turi būti įgyvendinama remiantis apibrėžtomis gairėmis, periodiškai matuojant nukrypimus. Be to, nauja sistema turi būti priimtina ne tik vadovybei, bet ir organizacijos darbuotojams. Darbuotojų įtraukimas padėtų vadovybei išvengti naujai įdiegtos VAS atmetimo ir pasipriešinimo pokyčiams.

Kai siūlomas VA priemonių rinkinys yra įdiegtas, būtina periodiškai atlikti efektyvumo analizę ir reikiamus koregavimus. Šios sistemos diegimo rezultatas turėtų būti VAS, efektyviai teikianti informaciją sprendimams priimti. Tokia sistema veiks tik tokiu atveju, jei ji bus priimtina vadovybei ir darbuotojams. Dėl šios priežasties turi būti užtikrintas skaidrumas organizacijoje ir turi būti atsižvelgta į organizacijos darbuotojų nuomonę diegiant šią sistemą. Tokia VAS turi būti periodiškai vertinama ir keičiama, keičiantis organizacijos gyvavimo ciklo stadijai bei vadovybės poreikiams.

Apibendrinant galima teigti, jog:

- VA galima nagrinėti įvairiais pjūviais, tiek mikrolygmeniu, t. y. analizuojant tam tikrų priemonių naudojimą atskirose įmonėse, tiek ir makrolygmeniu, t. y. vertinant ir lyginant tarpusavyje įmonių praktiką, valdymo ir VA teorijas, taip pat vertinant globalių finansinių, socialinių, technologinių ir kt. procesų įtaką organizacijoms ir VA.
- Pagrindiniai veiksniai, sąlygojantys VAS pokyčius, yra išorinė ir vidinė aplinka, akcininkų lūkesčiai ir tikslai.
- Įgyvendinant šiuolaikinę VAS, turi būti atsižvelgta į minėtus veiksnius ir, remiantis straipsnyje pateiktomis gairėmis, įdiegtas VA priemonių rinkinys, tinkamiausias konkrečiai verslo organizacijai.

Raktažodžiai: *valdymo apskaita, valdymo apskaitos metodai, pokyčiai, verslo organizacijos, veiklos vertinimas.*

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