## **RESEARCH PAPERS FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY IN TRNAVA** SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA

2009

Number 27

# PERFORMANCE EVALUATION PROCESSES FROM THE PERSPECTIVE OF CURRENT TRENDS

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### Abstract

This contribution is focused on the summary of knowledge on the measurement of business processes and current trends in business practice. Part of this contribution is an overview of the most common practices, but also discusses some lesser known methods. Overall, closer attention is given to the Balance Scorecard (BSC) method as it is one of the most utilized in measuring the economic performance of business processes.

#### Key words

performance process, performance measurement, balance scorecard, performance management

#### Introduction

In the case of performance measurement, no two organizations are identical, whether it be size, focus, or number of employees, there are no clearly standardized methods for suitable monitoring of their performance. If we want to talk about trends, we primarily focus on monitoring and evaluation of business processes. Procedural understanding is declared as such by the standards of ISO 9000:2000, which assumes base orientation on performance measurement processes. There is a direct dependency between performances of business processes are the basic assessment of business performance.

Under the performance measurement process, it is vital to understand certain activities in order to provide objective and accurate information about the individual processes. This ensures that these processes could be the owner of the process continuously, meaning operatively controlled in order to meet all the requirements imposed on processes [1].

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# Methods for measuring performance of processes from the perspective of modern management

Before we begin in more detail to address this topic, we should consider it necessary to specify that there are conflicting literary sources interpreted differently by various authors, including the concept of performance itself.

If we evaluate an enterprise based on performance, it is necessary to define what performance means to us. In the literature there is no single definition to define the concept of performance. Sometimes the performance is usually understood as rate utilization of resources, but overlaps with the concept of productivity, which is defined as the ratio of output to input. In the EFQM model, performance is defined as rate achievement by individuals, groups, organizations, and processes.

Modern management emphasises different performance measurements. In practice, these measurements do not have the necessary degree of objectivity and accuracy. The performance evaluation process is intended to give owners the right information to process a real-behavior process. Measuring performance quality management systems then provide information to senior management of organizations on how this system performs its basic functions.

The management organization is essential to measure (as it is possible to control what can be measured). There are several types of measurements in the organization - the measurement of stakeholder satisfaction, measuring the effectiveness of a quality management system, organization and performance measurement processes, measuring performance of suppliers, the effectiveness of training, the cost of quality, and so on. A key measurement in an organization is designed to measure the performance of the organization. These measurements determine the degree of obtained results. [2.]

In performance measurement processes the top managers act as the guarantors or assurance part of the process, while middle managers are process owners, and employees are responsible for collecting and processing information. The results of performance measurement processes directly affect the motivation of all employees, carrying out the processes and activities. If a company were to link performance measurement processes with payroll, we can say that employees are directly involved in the performance process, which creates good preconditions for process improvement either through corrective and preventive actions or performance improvement projects organization. The experience of performance measurement processes shows that dealing with such difficult operations can only be done when doing simple things together, methodically, and with the support of software tools.

Simplicity lies in defining realistic and measurable goals within reason as well as mutual relations. It is especially useful if the performance measurement process is carried out by a responsible owner of a process and the collection of information by a responsible employee.

Teamwork should be based on the interests of an owner's process of objectivity of information, creative working atmosphere, and mutual trust. Among the known methods of performance measurement processes are: the discrepancy concerning the recording method, method of performance measurement derived from the process capability index, measuring the performance of processes using Six Sigma methods, and competence of the Balanced Scorecard. Each of these methods includes a sequence of steps for measuring performance of processes [3].

Currently implementing new approaches to monitoring the performance of firms, although traditional, can be complemented by additional aspects. The modern method of performance evaluation is based on the premise that the firm is efficient if it is able to achieve predefined strategic objectives.

In practice, two basic approaches are applied:

- 1. The first is based on the definition and evaluation of strategic objectives for the four main areas (financial, customer, internal processes of learning, and growth), which has taken the English name of Balanced Scorecard, a system of balanced indicators.
- 2. The second approach is based on measuring the performance of organizations through performance measurement processes, the so-called Performance Management.

The common denominator of both approaches is to move away from evaluation of business performance only on financial indicators and instead concentrate more on the extensive use of other types of indicators (e.g. qualitative and time). The performance of the organization can monitor and also use modern methods to manage. Indirect methods can evaluate the performance of a specific person, and use process analysis to identify useful and useless work outputs of individual people and teams.

Based on the classic arguments of critical performance measurement systems since the early 90s, the formulation of requirements for a performance measurement system was established to satisfy the following criteria:

- Companies should establish such systems of performance measurement to support their strategy;
- Performance measurement systems should include non-financial indicators, which indeed complement the financial indicators, particularly with regard to customer perception and performance of internal processes;
- The general system of performance measurement should be decomposed into sub-meters to allow companies to transfer targets better managed by subs [4].

#### **Comparison of methods for performance evaluation**

If we further specify the methods most commonly used to assess, the processes need to be divided into two basic groups. The first group will consist of methods that were developed in research and consultancy practice. The second group will be formed by methods which have arisen on the ground.

The methods are classified in Table 1, which contains 10 methods developed in a manner of expert advisory practice and 4 that are developed by practice. These methods are much more entailed, but among them there are only very small differences because we have focused only on the comparison of the following methods.

Table 1 provides a brief overview of some of the practices' essential methods of performance measurement processes:

Table 1

Development	Development Duties	Methods			
Science and /	Developed based on research	- Data Envelopment Analysis			
or consulting	work in universities or	- Performance Measurement in service			
experience	institutions.	Businesses			
	Most large-scale tested in	- Balanced Scorecard			
	practice or improved application	- Tableau de Bord			
	in practice.	- Productivity Measurement and			
		Enhancement System(PROMES)			
		- Performance Measurement Model			
		- Performance Pyramid			
		- Quantum Performance Measurement			
		- Concept Ernst and Young			
		- Business Management Window			
Corporate	Development of performance	- Concept J.I. Case			
Practice	measurement concepts well suited to their needs addressing	- Concept Caterpillar			
	issues of performance	- Concept Honeywell Micro Switch			
	management and measurement specific to particular firms	- Hewlett-Packard concept of the internal market			

These 14 methods for measuring performance are compared using the relevant criteria. Each of these benchmarks describes the important aspects necessary to the function of performance measurement methods:

- 1. Continuity of the concept of vision and strategy (link to strategic planning), and rules for the stated aim of the plan.
- 2. Use differentiation to stakeholder goals.
- 3. Addressing multiple levels of performance.
- 4. Description of rules for management indicators (creating and maintaining variables).
- 5. The modalities of measurement (measuring cycles, the measurement points).
- 6. Procedure for consideration and performance analysis of derogations.
- 7. Addressing aspects of incentives and remuneration.
- 8. Integrating the concept of reporting.
- 9. Institutional framework (process and participants in PM).
- 10. Application tools in the PM.
- 11. Link to performance management and integration aspects of continuous improvement [4].

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Criterion Concept	Continuity of vision	Differenti- ation of	Addressing multiple	Manage- ment	The modalities	Assessme- nt and	Addressing motivatio-	Concept Reporting	Institutio- nal	Applica- tion tools	Integration Preforman-
	and strategy		levels of	indicators	of	analysis of	nal aspects		framework	in the PM	ce Manage-
		der-oriented			measurem-	performan-					ment
		goals	ce		ent	ce					
						deviations					
Data Envel.					l						
Analysis									1		
PM in Service											
Business											
Balanced										l I	
Scorecard											
Tableau											
de bord											
ProMES											
PM – model											
Performance											
Pyramid											
Quantum PM											
Concept											
Ernst&You											
Business Mgt.											
Window											
Concept											
J.I. Case											
Concept											
Caterpillar											
Concept											
Honeywell								·		·	
C.Hewlett-											
Packard								·			

# TABLE COMPARISON CONCEPTS OF PERFORMANCE MANAGEMENT [5] Table 2

Black	Conceptually extensively reflected	
Gray 75%	Conceptually reflected	
Gray 50%	Conceptually, hardly reflected / only conditionally	
Gray 25%	Conceptually NOT TAKEN	
White	Not assessed for missing information	

## Advantages and disadvantages of the methodsof Balance Scorecard

The concept of Balanced Scorecard (BSC) has recently came to the forefront as an interest to senior managers. It allows them to introduce a performance management system, focusing on the organizational and personnel departments, and what the company expects from them. It also regularly and systemically evaluates whether the company is successful in meeting its objectives.

Balanced Scorecard is a strategic performance measurement system that arose in the early 90s thanks to the American experts Robert Kaplan and David Norton. Major changes that have been brought on by BSC were the extension and connection of measuring business performance from purely financial indicators rather than indicators from other perspectives of the enterprise's activities.

Objectives and indicators are based on the vision and business strategy. Its founders have proposed four BSC perspectives: Values (financial), customer, internal business process perspective, and learning and growth. [6.]

BSC Development is a systematic business process. It enables the creation of consensus and clarifies how to implement the mission and strategy of each SPJ. The teamwork of senior management plays an important role as the BSC-making process consists of the following steps [7]:

- 1. Establishment of strategic objectives
- 2. Link strategic objectives' chain of cause and effect
- 3. Choice and design parameters
- 4. Setting targets
- 5. Approval of strategic actions

The processing of these steps forms the core of the implementation of BSC.

The problem is that this method, as the authors themselves point out, is not applicable to the desired result always and everywhere. It is said that this method was shown to fail when an organization did not produce the desired effects. Many critics also argue that they are practiced in the organization of certain forms of measurement and evaluation is not always desirable to make radical and extreme change. In any case, however, the BSC method is considered a method that could bring a system into monitoring with evaluation indicators, which are part of different perspectives.

#### Own contribution to the subject

The authors pointed to the contribution of different options and methods of performance measurement processes recorded in literary sources, but not always economic practices used. An important benefit is also a demonstration of the various links and functionality for comparing methods from those who have practiced them.

#### Conclusion

This article discusses measuring the performance of business processes in practice. According to the findings of this measurement, the most used method is Balanced Scorecard, but Slovak managers, being among a few exceptions, found this method did not work. Many businesses where this method is known do not use it because of newer methods of performance evaluation, which suits them better. This system does not have long to satisfy the requirements for measuring performance, but there is no effort to change the past and its traditional approaches to corporate governance.

#### **References:**

- [1] NENADÁL, J. Meranie v systémoch manažmentu kvality. In *Ekonóm*, 2001.
- [2] http://em.kbbarko.cz/c.php?a=311
- [3] http://www.krajciova.sk/\_dokumenty/clanky/c10\_ meranievykonnostiprocesov.pdf RNDr. Marta Krajčíová
- [4] TURČEK, D., ZÁMEČNÍK, R. *Riadenie a hodnotenie výkonnosti podnikových procesov v praxi*. Zvolen, TU, 2007.

- [5] GLEICH, R. *Performance Measurement als Controllingufgabe*. Mníchov: Controlling Forschritte, Verlag Valen, 2002.
- [6] semafor.euke.sk/zbornik2007/pdf/gavurova.pdf Ing. Beáta Gavurová, Katedra manažmentu
- [7] HORVÁTH & PARTNERS: *Balanced Scorecard v praxi*. 1. vydání. Praha: Profess Consulting, s.r.o., 2004, 386 s. ISBN 978-80-7259-033-9
- [8] LINCZÉNYI, A., NOVÁKOVÁ, R. *Manažérstvo kvality*. Bratislava: Vydavateľstvo STU, 2001.

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