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## PERFORMANCE MEASUREMENT SYSTEM FOR THE MODERN BUSINESS ENVIRONMENT

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***Abstract:** Changed environment, new markets and technologies require new strategies and redesign of traditional performance measurement system. Effective performance measurement system in modern terms is critical determinant of successful strategy implementation in enterprise, its growth and survival. Nowadays, all segments of business activity and success in consumption of all tangible and intangible resources must be measured with the same importance. This requirement could be realized with a set of well balanced financial and non-financial measures of performances. This paper emphasizes the relevance of designing an integrated performance measurement system, because of its great influence on quality of management decision making in contemporary business conditions.*

***Key words:** performance measurement system, redesign system, modern business environment.*

### Introduction

There are increasing changes in modern business environment, which features more customized product and service and cost-efficient production. The tendency of economic globalization and the advent of all kinds of management technologies largely prompt business competition, as well as provide the opportunity for success. During the last decades, business environments have changed rapidly and dramatically: changing nature of

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work, specific improvement initiative, changing organizational roles, changing external demands, implementing new technology. Communication fosters growing customer expectation that products will be especially suited to their own needs, and perhaps often totally individualized.

Enterprises have found themselves in need to compete by improving product quality, increased flexibility and reliability, expanding product variety, and emphasizing innovation. In the modern economy, employee knowledge and skills, relationship with customers, organization culture and other elements of intangible assets have become the driving currency of organizations wishing to effectively compete.

One tool for managers in controlling their businesses has traditionally been performance measurement. As many of the managerial challenges in the knowledge-intensive organizations seem even more difficult than in the more traditional lines of business, there is a real need for effective performance measurement that can help managers control their businesses. However, the same challenges that affect the managerial work in the knowledge-intensive organization may also cause problem in using traditional performance measurement.

Traditional measurement systems and performance measures are based on financial accounting that has become outdated in modern business environment with the changed emphasis on quality and customer satisfaction and increasing prevalence of new production technologies and management philosophies. Traditional financial control system is ill-adapted to such an environment. Not only is the information which it produces often outdated and too imprecise to provide a basis for decision on customer relationships or products, but also autonomous employees need goal and incentives other than the usual ones which are based on profit and return on investment and modeled on the income statements used in financial accounting. Other guides are needed to show the way consistent with the comprehensive vision or concept of business. The enterprise as a whole must be aware of and understand the overall strategies. For these reasons, new concepts and ideas are needed to provide a new foundation for strategic control.

### **1. Performance measurement system and strategy implementation**

Enterprises strive to achieve competitive advantage through satisfying customers effectively and efficiently. The business success now depends largely on the capability of quick response to customer requirements. Effectiveness requires that enterprises be equipped with customer-focused common goals among all the related suppliers and

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manufacturers. Efficiency demands enterprises to meet with customer requirements economically. Adequate performance measurement has to satisfy different information requirement as well as to reflect success in using material (physical, financial) and human and other intellectual resources of a firm.

Performance measurement could be defined as the process of quantifying effectiveness and efficiency of management action [1, 2]. Performance measurement provides necessary information of management feedback for decision makers and managers. In modern business management, it plays the important roles of monitoring performance, monitoring effects on strategies and plans, enhancing motivation, improving communication, diagnosing problems, etc. Performance measurement has a coordination role, which incorporates coordination information for decision making, internal communication across processes, and external communication with stakeholders. Business performance measurement is a tool for balance among three major tensions within a firm: a) balancing short term results against long-term capabilities and growth opportunities, b) balancing performance expectation of different constituencies, and c) balancing the motives of human behavior and encouraging transformation.

In addition, a performance measurement system enables managers to deal with great size and complexity of business activity by focusing attention on the aspects of business that are critical to success. On other words, performance measurement system will help managers to manage complexity by focusing on the factors that cause it, thereby attacking root causes rather than symptoms [3, 4].

Performance measurement results can be used to monitor the enterprise's progress towards the achievement of the defined goals. Thus enterprise can identify where are and where they are aiming at. The measurement results help in describing the organization's vision of the future to the entire organization. Performance measurement results can help managers evaluate the effect and feasibility of strategies and plans. The performance measurement may also help in integrating short-term goals with respect to long-term goals or describing short-term goals with respect to long term goals. Performance measurement results can also be used to identify where problems' bottlenecks and waste exist. Besides that, performance measurement has a critical role in guiding operations directly. So, the timely and accurate feedback information of operational performance is significant to keep operations consistent with the planned objectives and make timely corrections. Measurement reveals the business progress and highlights the organization's vision and current strategic position. It helps all the personnel

understanding results of their operations to confirm what their achievements are. These facilitate shared understanding and great communication among all the staff and thus motivate their efforts [5].

Performance measurement systems and methodologies continue to be important management tool in today's competitive business environment. However, the environment in which enterprises compete is dynamic and rapidly changing, requiring constant modification of strategies and operations to reflect these changing circumstances. Many enterprises have redesigned their measurement systems to ensure that they reflect their current environment and strategies. One of the major goals of performance measurement system is to motivate managers to implement the enterprise's strategy. It should support the accomplishment of strategy. Because strategies affect multiple time periods, performance measures can indicate only whether or not the enterprise is on track to success. Moreover, strategies are always evolving in response to changing customer needs, competitor initiatives, and enterprise capabilities. Managers are therefore tracking a moving target, and measures should be indicative of whether current activities are moving the enterprise in the right direction.

The new ways of operating, such as rapidly changing business objectives and organizational structures, require specific principles for performance measurement design, implementation, and use. If the measurement system is not adjusted to reflect changes in strategy, managers will stay on the course by continuing to follow the existing measurements. Because measuring performance is a management process that must be designed, managed, and continuously improved, management of enterprise has to take some activities owing to ensure that its performance measurement system remains strategically relevant during economic slowdowns [6].

## **2. The shortcomings of traditional financial performance measurement system**

Traditional financial performance measurement system or management control systems based on financial (accounting) measures of performances. For most of the twentieth century, traditional financial performance measurement system has existed in an environment of mature products and stable technologies. It has sometimes been said that traditional management control stopped developing in 1925. At that time virtually all of the accounting procedures presently used was already in existence [7]: budgets, standard costs, the DuPont model of profitability analysis, etc.

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Sophisticated technologies and production processes have led to new demands on systems of management control. Financial measures of performance showed the effects of decision already taken but failed to provide adequate guidance for long term strategic development. Many began to realize that to be competitive an enterprise needed more complete reporting on the various aspects and dimensions of its business activities [8, 9].

Traditional approaches to performance measurement provide financial, operational, and physical measures for local activities. These measures are usually developed from a bottom-up perspective and do not necessarily measure the core processes and critical success factors. Therefore, they may not provide a coherent set of performance measures that move the organization in the desired direction.

Traditional financial performance measurement systems during the past two decades have been receiving a lot of critics. The problems with traditional performance measurement are highlighted and summarized here as follows attitudes.

First of all, there is a problem of short-term orientation of financial measures of performance (profit, revenue, cost, return on investment, etc.) Information on these performances provides the foundation for enterprise decision-making. Financial measures show the results of past activities. Namely, traditional approaches to performance measurement are focused on the historical performance of internal operations. They can report what happened during last period within the organization but provide no information on how managers can improve performance in the following period. They are retrospective rather than proactive.

The lagging nature of finance-based measurement systems make them useless for proactive actions and performance improvement. They are the results of previous management action and organizational performance which are not focused on the cause of it. Traditional financial performance measurement systems encouraging short term objectives and short-term thinking. On the other side, financial control also discourages long-term thinking. It can lead to reduction in R&D, cutbacks in training, watered-down incentive and motivation programs, and postponement of investment plans. The main problem is thus one of sub optimization over time. The critical challenge is to achieve a balance between the short and long dimension of business activity. This short-run perspective encourages manipulation of financial measures, so that the financial key measures are misleading and lack credibility or purposes of analysis and decision-making.

Besides that, financial and operational performance measures or indicators that should be linked are reported in separate places. It is difficult to see the picture or understand business success when the operational data is in one place and the financial data is in another. Traditional system of performance measurement and reporting should incorporate key performance measures, financial and non-financial, as an integral part of management reporting system for controlling strategy implementation process.

Another problem of traditional performance measurement is the lack of relevance to enterprises' strategies or strategic goals. Many measurement initiatives and systems in enterprises are not derived from strategies and are therefore not supporting the business. The fixation on measurement in financial terms has led enterprises to ignore less tangible, non-financial measure such as product quality, customer satisfaction, delivery time, employee satisfaction, flexibility, new-product lead time, etc. Financial measures used to send misleading signals about the business success of enterprise. In other words, traditional performance measurement systems fail to draw the overall performance due to this lack of relevance, and hence misleading the actions and decisions to provide accurate feedback information.

Traditional control system pays little attention to the business environment. They ignore the customer and competitor perspective and thus cannot give early warning signals of changes in enterprise's industry and business. Financial measures have an internal rather than an external focus. Performance standard should be based on external, industry-recognized benchmarks whenever possible. Business processes should always be considered in light of world-class alternatives. Internally driven standards expose an enterprise to the risk of failing to focus on closing performance gaps. Financial measures are used to make comparison with previous periods on the basis of standards which been developed internally.

Traditional performance measurement system furnishes abstract information to employee. Financial reports give information that is meaningless to a large part of the organization, consisting of the many employees who don't see how their work is related to the numbers shown in the various quarterly and monthly reports. Employees at all levels of the organization need performance data they can act on. This information must be relevant for their day-to-day activities [10].

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Serious problem of the performance measurement system is their attempt to quantify both tangible and intangible performance solely on financial items. Non-financial measures or intangible measures should be included in the modern, integrated performance measurement system. The measurement system should be updated every time the business objectives change. Updating measurement system refers to deleting obsolete measures and choosing new. Organizations in contemporary business conditions have been changing their measurement systems because limitation of traditional performance measurement approaches and have been accepting new approaches to performance management.

### **3. The evolution of traditional performance measurement system**

Traditional performance measurement cannot capture the complexity and insight in today business performance due to the shortcomings highlighted above. Today's competitive and dynamic environment requires organizations to focus on much more areas than ever such as innovation, quality, learning speed, responsiveness and flexibility. These and other requirements point out new approach in designing an integrated measurement system [8,11].

Evolution of performance measurement system could be presented as process which consists of three phases. The first generation measurement systems were based on assumption that financial measure should be supplemented with non-financial or operational measures, such as the Balanced Scorecard or Performance Prism approach [12].

Financial performance dimension in the Balanced Scorecard supplemented with customer, internal and learning and growth perspective. Balanced Scorecard overcomes many limitations of traditional performance measurement systems. First, it minimizes information overload by limiting the number of measures used. Second, it brings together in a single management report different elements of a company's strategy. Third, it guards against sub optimization by forcing senior managers to consider important operational measures together and understand the trade offs of one area versus another. A properly developed Balanced Scorecard should:

- represent financial and non-financial measures from all levels of the organization (from line to executives),
- maintain an equilibrium between external measures (developed for the stakeholders and customers) and internal measures (developed for business processes, innovation, learning and growth),

- maintain an equilibrium between outcome measures (results from the past) and measures that are for future performance,
- maintain balance between objective (easily quantifiable outcome measures) and subjective (judgmental performance drivers) outcome measure,
- include only measures that are elements in a chain of cause-and-effect relationships that communicate the meaning of the organization's (or business unit's) strategy.

Balanced Scorecard concept providing a multidimensional corporate measurement system, that proposed a performance measurement matrix reflecting the need for balanced measurement, emphasizes the fact that the set of measures used by an organization has to provide a "balanced" picture of the business. To overcome the shortcomings in the Balanced Scorecard model, the Performance Prism was developed. It points out broader view of stakeholders: stakeholder satisfaction, stakeholder contribution, strategies for satisfying stakeholder wants and needs, processes for executing these strategies and capabilities for operating and enhancing these processes. Performance Prism suggests a broader set of financial and non-financial performance measures. Performance prism is an example of a "customized" balanced scorecard framework.

In the second phase of evolution, performance measurement systems addressed this issue by using strategy and/or strategy maps to take into account the dynamics of value creation by transformations of tangible and non-tangible resources. In this phase, Balanced Scorecard and Performance Prism concept will be modified and supplemented with Balanced Scorecard Strategy Map and Success Map [13]. These concepts offer a better visualization of four listed scorecard perspectives and five performance dimension of prism. In other words, they allow visualization of the linkage between intangible assets and business value. As well as, they provide better selection performance measures or indicators for concrete enterprise performance measurement system [14].

The third generation performance measurement system will build on these developments and seek to link explicitly the non-financial and intangible dimension of business performance to cash flow. New models of business performance measurement system must satisfy a few criteria. The future generation model has to reflect the realities of organization. Challenge for it is to maintain the usefulness of current model of visualization of the relevant linkages in addressing the key business areas but in a way which extend the measurement to flows of cash. New model of business



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performance system must provide the right information [15]. One of the biggest challenges for performance measurement is to realize the difference between data and information. Decision-makers must not get raw performance data. Performance measurement system must produce useful information for decision-making as transparent as possible. Performance measurement systems are succeed when they provide relevant fact and data about current performance and show what needs to be improved, either immediately or in the future. Effective performance measurement system play the following important roles in enhancing business success and competitive advantages of a enterprise: ensures customer requirement have been met, provide standard for establishing comparison, highlights efficiency and effectiveness problem and determines which areas requires special attention and priority action, justifies the use of tangible and intangible resources, provides feedback for driving improvement effort [16, 17].

There are many complex factors that affect evolutionary change within organizations and hence the evolution of traditional performance measures and measurement systems. These issues can be grouped in two main themes: a) drivers of change (those factors that cause change to be necessary), b) barriers of change (those factors that must be overcome of change is to be effective) [18]. There are two relevant questions: what factors encourage and what factors inhibit the introduction of new measures, modification of existing measures and deletion of obsolete measures. Drivers of change are external and internal. External drivers of change are, for example, customers, the marketplace, legislation, new industries, nature of the work, future uncertainty. Internal drivers are following: actual performance, dysfunctional behavior, effective review/monitoring systems reflecting different levels of review. The main barriers to change include corporate culture, internal capabilities, technology, availability of necessary resources and capabilities, motivation for change or support for measurement.

Installing a performance measurement system and embedding it in management processes involve bringing about organizational change. Successful design and implementation will not occur automatically, but several moments can elevate the probability of success significantly. Leadership is critical in designing and deploying effective performance measurement and management systems. Clear, consistent, and visible involvement by senior executives and managers is necessary. Besides that, a conceptual framework is needed for the performance measurement system in the firm. Every organization needs a clear and cohesive performance

measurement framework that is understood by all levels of the organization and support objectives and the achievement of results. Also, effective internal and external communication with employees, process owners, customers, and stakeholders is very important for successful development and deployment performance measurement systems. Each company must develop a unique set of performance measures tailored to its particular needs and operating environment. In general, the key performance measures will be related to the following categories: financial, human resource, internal business processes, competitor indicator, environmental indicator, etc. On the other side, performance measures should be derived from the enterprise's strategy and data collection and methods of calculating the level of performance must be made clear.

Performance measurement system of the enterprise should be under periodically review in the following circumstances: the business strategy is modified, stakeholders state new requirements, the implemented performance measures are not useful, new operational information technology systems are put in place, and new information technology opportunities emerge. Maintaining the effectiveness of the organization and the measurement systems requires a systemic review process [19]. The process of reviewing performance is a complex task that spans the whole organization. Involving the appropriate persons in spending sufficient time reviewing the performance measurement system is costly, but very important to the continuous adjustment of the business and its performance orientation in today's markets.

### **Conclusion**

Performance measurement has an important role in the efficient and effective management of organizations. Designing and using the performance management system remain much debated issues. Business performance management has become an increasingly important aspect of competitiveness, and this has led to the development of new performance framework and systems. There is a growing trend toward managing performance improvement through focusing on the underlying drivers of performance, be they improvements in the processes or the underlying resources that give these processes capability. The past obsession with financial performance is decreasing and there may be recognition that there is now a significant trade between hitting today's financial results and sustaining the capabilities and competencies that allow companies to compete effectively in the future. The shortcomings of traditional accounting

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performance measures include failing to convey strategies and priorities effectively within an organization, encouraging short-term perspective, backward looking nature and inflexibility to change. This led to the development of innovative performance measurement frameworks which viewed business performance through more than one perspective and identified that performance measurement had to be coherent with low-level action taken within the business.

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### **SISTEM MERENJA PERFORMANSI ZA SAVREMENO POSLOVNO OKRUŽENJE**

**Rezime:** Promenjeno okruženje, nova tržišta i tehnologije traže nove strategije i redizajn tradicionalnog sistema merenja performansi. Efektivni sistem merenja performansi u savremenim uslovima, ključna je determinanta uspešne implementacije strategije preduzeća, njegovog rasta i opstanka. U današnje vreme, svi segmenti poslovne aktivnosti, kao i uspešnost upotrebe svih materijalnih i nematerijalnih resursa mora biti merena sa istom važnošću. Ovaj zahtev mogao bi se ostvariti setom dobro izbalansiranih finansijskih i nefinansijskih merila performansi. Ovaj rad ističe značaj dizajniranja jednog integrisanog sistema merenja performansi, s obzirom na njegov veliki uticaj na kvalitet odlučivanja menadžmenta u savremenom poslovnom okruženju.

**Ključne reči:** sistem merenja performansi, redizajn sistema, savremeno poslovno okruženje.