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**Evolution of the Performance Measurement systems – A Literature Review
study**

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Abstract: In simple words, performance is fulfillment of some given task but its measurement is not as simple as it seems to be. Each and every organization has to implement such performance measurement systems to initiate amicable environment in itself. The continuously and rigorous involvement of performance measurement system in the organization's routine activities have triggered many researchers to bring their perspective of understanding of such systems. This paper is divided into two sections. First section focuses on the evolution of the performance measurement systems and the other section will contribute to the better understanding of the elements that affect implementation of performance measurement systems within the organizations through review of literature.

Keywords: performance measurement systems, performance, implementation, evolution

Introduction

Performance Measurement [1] is the process of collecting, analyzing and/or reporting information regarding the performance of an individual, group, organization, system or component. As performance measurement is so much involved in some phenomenon therefore attention of researchers towards such field is obvious. Because of this attention only, today we are aware of many measurement techniques/tools of performance being implemented in the organizations. For example, one of the researches by **Hackett Group** suggests that the balance scorecard is becoming widely used performance measurement tool in the USA [2]. Hence, objective of this paper is to contribute to the better understanding of the elements that affect implementation of performance measurement systems within the organization through its review of literature.

Meaning and Features

The first thing that requires explanation is the meaning of performance measurement. One can work upon its mechanism only when this terminology is cleared. One definition by business dictionary explains it as “a quantifiable indicator used to assess how well an organization or business is achieving its desired objectives.” Some of the other prominent definitions were as follows –

“Process by which the company manages its performance in line with its corporate and functional strategies and objectives.” [3]

“By performance measurement, people transform complex reality into simplified numerical concepts that can be easily communicated and acted upon.” [4]

“A performance measurement system can be defined as the set of matrices used to quantify both the efficiency and effectiveness of actions”. [5]

These definitions explain the importance of performance measurement system along with its exact meaning in the organizational sense. Such systems always guide the management in making its action more effective and pragmatic in nature. The following features are highlighted by various researchers in the literature review on performance measurement systems –

- **Optimization Vs. Sub-optimization:** when performance measurement system yield outcome less than best possible outcome, it is a situation of sub-optimization. The performance measurement systems must produce optimized outputs that will benefit the organization as a whole.
- **Environmental factors:** “performance measurement systems have an impact on the environment in which it operates. Starting to measure, deciding what to measure, how to measure and what the target will be are all acts which influence individuals and groups within the organizations.”[6]
- **Integrated activity:** performance measurement activity is an integrated process. One cannot form as well as implement it in isolation. Effective coordination of functions is required for the expected results.
- **Sense of security:** such system gives assurance to the management that whole organization is moving towards right direction. Presence of effective performance measurement system in the organization gives confidence to the management that all processes are working as per expectations and alterations could be made timely and with ease.
- **Social sanction:** all of the parties dealing with such organization where there is presence of effective measurement system will gain confidence in the working of such organization and conversely, organizations can obtain loyalty of them as a whole. Moreover, it boosts individual’s self esteem which helps organizations in managing complex or challenging tasks in the long run.

Evolution of Performance Measurement systems

“Performance measurement system is the key topic amongst accounting researchers since its introduction in the era of industry way back in the 1960’s. At this time, researchers developed a traditional management accounting system focused on financial measures such as traditional budgeting, costing and variance analysis and cost volume profit. The focus of traditional performance measurement system was to monitor organization cost.”[7]

But in the today’s business environment, the traditional performance system was not effective because of rapid changing situations. For example, earlier, framing competitor’s strategy was the prime focus but now all concentration is shifted towards customer expectations, service provided and quality of the product. Therefore, it triggers changes in the performance measurement systems as well with time. “**Johnson and Kaplan (1987)** assert that the rapid changes of

technology with enormously expanding information processing capabilities and vigorous global competition, traditional measurements systems are not providing useful information in fulfilling organizational objectives, decision making, planning and control.”[8]. Following table depicts understanding of its evolution in a better way.

Table1: Evolution of Performance measurement System

Measures	1960's	1970's	1980's	1990 onwards
Main focus	Financial	Financial	Financial/ Managerial	Financial/ Non Financial
Key Developments	Accounting Earnings	Accounting Earnings	Unit Costs	Balance Scorecard
	Earnings per share	Residual Income	Joined Budgets	Economic Value Added
	ROI	ROI	Operating Profits	Activity Based Costing
	NPV		Cash Flows	

(Source: Swamy, 2002, p44)

In order to frame correct performance measurement system, **Wisner and Fawcett** work is worth citing here. They had provided a nine step process for developing a performance measurement system [9]:

1. Clearly define the firm's mission statement.
2. Identify the firm's strategic objectives using the mission statement as a guide(profitability, market share, quality, cost, flexibility, dependability and innovation)
3. Develop an understanding of each functional area's role in achieving the various strategic objectives.
4. For each functional area, develop global performance measures capable of defining the firm's overall competitive position to top management.
5. Communicate strategic objectives and performance goals to lower levels in the organization. Establish more specific performance criteria at each level.
6. Assure consistency with strategic objectives among the performance criteria used at each level.
7. Assure the capability of performance measures used in all functional areas.
8. Use the performance measurement system to identify competition, locate problem areas, assist the firm in updating strategic objectives and supply feedback after the decision are implemented.
9. Periodically re-evaluate the appropriateness of the established performance measurement system in view of the current competitive environment.

Evolution of performance measurement system had given us various systems as depicted in table 2 –

Table 2: A list of Emerging Performance Measurement systems

S No:	PM system and approaches	References
1.	Strategic Measurement Analysis and Reporting Techniques (SMART)	Lynch and Cross 1991; McNair <i>et al.</i> 1990[10]
2.	Performance Measurement Questionnaire (PMQ)	Dixon <i>et al.</i> 1990[11]
3.	Results and Determinants Matrix (R &DM)	Fitzgerald <i>et al.</i> 1991; Fitzgerald and Moon 1996[12]
4.	The Balance Scorecard (BSC)	Kaplan and Norton 1992, 1996, 2000[13]
5.	Comparative Business Scorecard (CBS)	Kanji 1998; Kanji and Moura e Sa 2002
6.	Cambridge Performance Measurement Process (CPMP)	Neely <i>et al.</i> 1996, 2000; Borne <i>et al.</i> 1998, 2000[14]
7.	Consistent Performance Measurement System (CPMS)	Flapper <i>et al.</i> 1996
8.	Integrated Performance Measurement System (IPMS)	Bititci <i>et al.</i> 1997, 1998a, b[15]
9.	Dynamic Performance Measurement System (DPMS)	Bititci <i>et al.</i> 2000
10.	Integrated Performance Measurement Framework (IPMF)	Medori 1998a, b; Medori and Steeple 2000

(Source: Pun and White, 2005, p.53)

Elements/Factors affecting Performance Measurement System Implementation

Creating a system and also implementing it in a same way as planned are two different activities performed by human source in any organization. Whether, the performance measurement is related to financial things or managerial things but implementation always encompasses challenges and opportunities for a business unit. This section of paper will focus on those factors that affect conveniently implementation of performance measurement system within the organizational planning premises.

1. **Environmental forces** – there are various controllable and uncontrollable factors present in the planning premises of organization that influences implementation of performance measurement systems to much extent. Planning premises defines the boundary within which planning work could be implemented.
 - a. **Controllable Planning Premises** – these are those factors that are within control of management. For example, organizational policies, procedures, etc. Any shortcomings in these factors can be altered and efforts must be made to create such

- ideology that promotes proper acceptance and implementation of chosen performance measurement system.
- b. **Uncontrollable Planning Premises** – these are those factors that are beyond the control of management. For example, change of government regulations, change in fashion, etc. Rectifying these factors is a tedious task and practically impossible. Hence, timely confrontations with such changes are necessary so that adjustments in the ongoing measurement systems can be made.
 2. **Limitation of competency** – human resource is responsible for creation and implementation task in the organization. If they are incompetent to think and act expectedly, whole project of implementation will be a failure. Hence, efforts must be made to ensure employees with high Machiavellianism quotient and they must have internal locus of control.
 3. **Reward – cost structure** – rational approach for implementing performance measurement system is to check its ROI (return on investment). If cost applied is more and benefits reaped are less then such system is not a logical system in the eye of management. Efforts must be made to reap maximum benefits with the application of less cost. Such performance implementation system will give benefit to the organization and its people.
 4. **Level of Risk Involved** – no system is risk proof, but efforts must be directed towards taking calculative risk. Initial paper work must be done regarding the pros and cons of any measurement system so that risk of failure could be minimized to maximum. Also with huge cost and resources involvement, it becomes more risky. Inclusion of resources must be made wisely.
 5. **Economical** – that performance measurement system is acceptable and workable that involves less money, efforts and time of the organizational people. Hence, the performance measurement system must be economical to the organization.
 6. **Feasibility** – the performance measurement system must be feasible to organization. It means, the organizational resources must support its implementation otherwise all efforts will go wasted.

Conclusion

While reviewing the evolution of the performance measurement systems, one perspective of researcher came into existence that traditional, finance based performance system were insufficient [16] and hence organizations must adopt the more diversified systems as noted by Nanni *et al.* (1992). The current boost in this area will bring out many more innovative systems which will help organizations to conduct its operations in a cordial way.

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