

A Review for the Successful Implementation Factors of Performance Management Systems

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Abstract

Although firms are adopting strategic performance management systems (PMS) that provide information that allows the firms to identify the strategies offering the highest potential for achieving the firms' objectives, many firms still suffer from making the implementation of PMS a success. The purpose of this paper is to identify those factors that influence the successful implementation of performance management systems.

This paper performs a comprehensive literature scrutiny on the implementation factors of PMS including the Balanced Scorecard, Performance Prism, Intellectual Capital Navigation, and Activity-based Costing, as well as traditional performance management systems.

The findings of this research will provide useful insights into the anatomy of the success factors for implementing performance management systems and will help management to all the different sized organizations in the different sectors and industries. This paper also provides some future directions for research.

Keywords:

Performance management systems, Performance measure, Success factors

Introduction

Anderson (2006) defined performance management as actively monitoring the organization's performance levels to continuously improve.

The terms of performance measurement and performance management have been used interchangeably. Otley (2001) noted that the move from measurement to management is a small but important one, and it is asserted that any discussion in this field must encompass the measurement and the management of actions. Now, it is needed to look beyond measurement to the use of the information in decision-making and control, so 'performance management' will be used in this paper.

Since Alexander (1985) concluded that literature is dominated by a focus on long range planning and strategy content rather than the actual implementation of strategies,

a few researchers have attempted to carry out their research into strategy implementation. Despite the importance of the strategic execution process, there are still relatively few studies focusing on the potential role of the performance management systems (PMS) in the process of strategy implementation.

Ittner et al. (2003) expressed many firms are adopting strategic performance management (SPM) systems that (1) provide information that allows the firm to identify the strategies offering the highest potential for achieving the firm's objectives, and (2) align management processes, such as target setting, decision-making, and performance evaluation, with the achievement of the chosen strategic objectives. Although firms are adopting one, many firms still suffer from making the implementation of PMS a success. The purpose of this paper is to identify those factors that influence the successful implementation of PMS.

This paper performs a comprehensive literature scrutiny on the implementation factors of PMS including the existing performance management frameworks such as Balanced Scorecard (BSC), Performance Prism, Intellectual Capital Navigation, and Activity-based Costing, as well as traditional performance management systems.

We collect most commonly mentioned implementation factors through the literature scrutiny, and a short questionnaire, as part of the research process, is used to support the results of the literature scrutiny.

Performance management frameworks

Before the 1980s, the performance management process was consistent with a cost accounting approach, which emphasized selective financial indicators, such as profit and return on investment. Towards the late 1980s and 1990s many academics recognized the limitations of financial, internal and historically-based performance measures.

Since then, there have been a number of frameworks and models developed for performance management, such as strategic measurement and reporting technique (Cross and Lynch, 1989), the performance measurement matrix (Keegan et al., 1989), results and determinants framework (Fitzgerald et al., 1991), balanced scorecard (Kaplan and Norton, 1992, 1996, 2001), Cambridge performance

measurement systems design process, (Neely et al., 1996), integrated performance measurement system reference model (Bititci et al., 1997), Skandia's Navigator (Edvinsson and Malone, 1997), performance prism (Neely and Adams, 2001), as well as various business excellence models. Some of the important performance measurement frameworks are discussed below.

Lynch and Cross (1991) introduced the performance pyramid system which was originally developed by Judson (1990). The purpose of this framework is to link an organization's strategy with its operations by translating objectives from the top down and measures from the bottom up. It is also useful for describing how objectives are communicated at various levels in the organization.

Kaplan and Norton (1992) developed initially balanced scorecard framework in 1992, probably the most well-known PMS, for measuring performance of an organization. The founders presented the balanced scorecard complements financial measures of past performance with measures of the drivers of future performance (Kaplan and Norton, 1996). The balanced scorecard approach allows managers to look at a business from four important perspectives – financial perspective, internal perspective, customer perspective and learning and growth perspective.

As growing interest in intellectual capital, Edvinsson and Malone (1997) developed the Skandia navigator using the Skandia insurance company's management tool. Skandia AFS has taken a leader in developing measures of intellectual capital as a management tool. The Skandia navigator incorporates measures in several dimensions such as financial focus; customer focus; human focus; process focus; and renewal and development focus. The navigator is used as a model to drive sustained business development and to ensure that management actions and behaviors are consistent with renewal and development as well as financial reporting. It is a management and reporting model that helps managers visualize and develop measures that reflect the intangible assets.

Neely (2002), and Kennerly and Neely (2001) outlined that the performance prism is a multi-faceted framework, which attempts to address the shortcomings of the frameworks that are currently available. The framework has been deliberately designed as a highly flexible so that it can provide a broad as well as narrow focus. The performance prism consists of five interrelated perspectives namely stakeholder satisfaction, strategies, processes, capabilities and stakeholder contributions. These five perspectives provide a comprehensive and an integrated framework for thinking about organizational performance.

Roos et al. (1997) developed the IC-Navigator model which has a strong focus on long-term value creation potential. The Navigator depicts the presence and importance of tangible and intangible resources and the transformations of these resources in accordance with achieving the organization's strategic intent. By focusing on the resource level, increased clarity is given to the processes through which an organization's resources contribute to the development and deployment of

strategic capabilities. With the Navigator, only proxy measures are taken of resources and transformations, hence all metrics are dimensionless, ordinal numbers. Evaluating performance through the Navigator approach brings some structure to the complexities and peculiarities involved with the measurement and management of intangibles.

Literature review

Chan (2004) provided the following list of enablers for successful implementation: top managers' commitment; middle managers' and employees' participation; a culture of performance excellence; training and education; keeping the BSC easy to use; clarity of vision, strategy and outcome; links with incentives; and resources to implement the BSC. In 2006, he also examined healthcare organizations which implement BSC. When implementing BSC as a strategic management system, an organization has to define and communicate its strategic objectives to employees throughout the organization, setting specific goals and linking rewards to performance measures. The organization then allocates resources and sets milestones for action plans that are aligned with their strategic goals. Periodically, it is essential to provide feedback to employees to facilitate ongoing strategic review and learning. In this way, the process of implementing a BSC can translate an organization's vision into specific strategies where business plans are set, resources allocated, and performance monitored. (Chan, 2006)

Atkinson (2006) addressed the strategy implementation issues including: communication; middle management issue; clarification of priorities and improved coordination across functions, businesses and boundaries.

Assiri et al. (2006) proposed the model contained 27 critical success factors (CSFs) which are expected to influence the BSC implementation. The model divides those factors into three levels, namely dominant, main, and supporting factors.

Amaratunga (2001) emphasized that the application of the BSC is far from simple and requires a comprehensive understanding of the principles involved and significant commitment towards accepting the new philosophy and implementing the necessary change.

According to the study, the evidence supports the theory that the BSC offers a medium to deliver strategic vision while providing an evaluation system.

The BSC is not an end in itself, it exists only to show a way to future action. This requires interpretation of the results and the identification of what is good, what is bad, and what needs changing.

Waal (2003) interviewed with Kaplan about differences between the winners and the losers in implementing BSC. Kaplan mentioned that there is a clear separation between the winners and the losers in implementing the BSC. The organizations with breakthrough results created, among others, a better sense of urgency for performance management and the scorecard, used strategy maps significantly more, and communicated more extensively to

their people than the organizations with the results of failure. The separated actions are:

- Executive team has created a sense of urgency.
- Strategy is translated into a strategy map and a balanced scorecard.
- Corporate/business unit measures are linked and aligned.
- Employees are aware of the strategy.
- Individuals and team goals are aligned with the strategy.
- The balanced scorecard is an integral part of the strategic planning process.
- The budget is driven by the strategy.

Using data from a government-wide survey administered by the US General Accounting Office, Cavalluzzo et al. (2004) examined some of the factors influencing the development, use, and perceived benefits of results-oriented performance measures in government activities. They found that organizational factors such as top management commitment to the use of performance information, decision-making authority, and training in performance measurement techniques have a significant positive influence on measurement system development and use. They also found that technical issues, such as information system problems and difficulties selecting and interpreting appropriate performance metrics in hard-to-measure activities, play an important role in system implementation and use.

Bourne et al. (2002) discussed the implementation issues associated with the balanced scorecard and similar frameworks. They found the differentiating factors between success and failure of implementing PMS:

- purpose – clear vision for moving the company forward;
- structure – which related to parent subsidiary relationship which had negative impacts which were not fully understood; and
- culture – it was found that having a paternalistic culture was beneficial to successful implementation.

In addition, their empirical studies provided evidence that a paternalistic culture can lead to a successful PMS implementation.

Aaltonen and Ikavalko (2002) recognized it is increasingly acknowledged that the traditionally recognized problems of inappropriate organizational structure and lack of top management backing are not the main inhibiting factors to effective strategy implementation. In addition, the major challenges to be overcome appear to be more cultural and behavioral in nature, including the impact of poor communication and diminished feelings of ownership and commitment. They insisted the role of middle managers, arguing they are the key actors who have a pivotal role in strategic communication.

Neely and Bourne (2000) indicated that the measurement initiatives often fail because of difficulties during the implementation phase. These difficulties cluster under three main headings - political, infrastructural and focus. The political challenges associate with measurement relate to the fact that many people feel threatened by measures. The second reason measurement systems fail in implementation

is simply through lack of infrastructure in the organization. The time, effort and resource required are often the downfall of the measurement system and the root cause of the third major reason why implementations fail - loss of focus.

Schneiderman (1999) identified the followings as reasons for the failure of the BSC concept in certain circumstances:

- The independent (i.e. non-financial) variables on the scorecard are incorrectly identified as the primary drivers of future stakeholder satisfaction.
- The metrics are poorly defined.
- Improvement goals are negotiated rather than based on stakeholder requirements, fundamental process limits, and improvement process capabilities.
- There is no deployment system that breaks high level goals down to the sub-process level where actual improvement activities reside.
- A state of the art improvement system is not used.
- There is not and cannot be a quantitative linkage between non-financial and expected financial results.

Beer and Eisenstat (2000) founded notable barriers to successful strategy implementation. These comprise:

- Top-down or laissez-faire senior management style
- Unclear strategic conflicting priorities
- An ineffective senior management team
- Poor vertical communication
- Poor coordination across functions, businesses or borders
- Inadequate down-the-line leadership skills development

It is recognized that changes like adopting a new system require a shared vision and consensus. If competence, coordination and commitment are lacking, failures of strategy implementation are inevitable. (Atkinson, 2006).

Corboy and O'Corrbui (2002), meanwhile, identify the deadly sins (failure factors) of strategy implementation which involve: a lack of understanding of how the strategy should be implemented; customers and staff not fully appreciating the strategy; unclear individual responsibilities in the change process; difficulties and obstacles not acknowledged, recognized or acted upon; and ignoring the day-to-day business imperatives.

Bourne and Neely (2000) conducted a case study, and the results revealed that there are three main obstacles to the full implementation of the performance measures. These are:

- resistance to measurement, occurring during design and use phases;
- computer systems issues, occurring during implementation of the measures;
- top management commitment being distracted, occurring between the design and implementation phases.

Senior management commitment is considered essential by many for the successful implementation of change in 1990s.

Successful implementation factors

A large number of articles relevant to the implementation of PMS are collected to find the specific factors making implementation of PMS a success. We look for 138 articles written in English from 1993 to 2007. The articles were mainly about the implementation of BSC.

From the collected articles, we summarize the successful implementation factors of PMS. The most commonly mentioned success factors are shown in Table 1 in descending order according to frequency.

Table 1 Most commonly mentioned implementation factors

Determinants	Frequency
Strategy Alignment with organizational resources	71
Determining proper KPIs / Leadership	52
Top management commitment	45
Impact of organizational culture	38
Appropriate design of management system	38
Linking performance to reward system	37
Training	27
Feedback / Monitoring	26
Uncontrollable environmental factors	22
Updating PMS	19

Strategy alignment with organizational resources. Individual and team goals should be aligned with the strategy. Both intangible and tangibles have to be aligned with strategy in order to create value. Support from all faculty and staff is imperative to create alignment and synergy across the whole organizations. The objectives and measures have to be cascaded from the top to the bottom of the organization. The BSC objectives and measures have to be cascaded from the top to the bottom of the organization. The organization starts its BSC by identifying the strategic objectives in the upper level of the organization, and then cascading to the lower level departments to determine their achievements and contribution to overall goals.

Determining proper KPIs. PMS translates an organization's strategy into a comprehensive set of KPIs. These KPIs measure performance-linked corporate goals by tracking performance. By demonstrating the cause-and-effect relationships between KPIs, the PMS provides managers with an obvious understanding of how their decisions impact not only on their direct area of responsibility, but also on other departments and the overall organization strategy.

BSC measures have to be determined according to cause-and-effect linkage. The well-designed BSC illustrates the organisation's strategy through the objectives and measures that have been chosen. These measures should link together in a chain of cause-and-effect relationships.

Top management commitment. It is very important that strong leadership has to be provided during the implementation phase. No project can be successful without executive support and commitment. Managers should give necessary priority to the implementation of PMS to gain internal commitment. People will be looking for clues. If staff feel that senior management are not fully committed to the strategy, their commitment and enthusiasm for it will wane. Staff must believe that implementing the strategy is one of the organization's top priorities. From the time the strategy is developed, senior management must sell and continue to sell the strategy to the organization and to the other stakeholders. They need to explain the vision and communicate the importance of the strategy for the future of the organization. Moreover, their commitment and support does not end with initiation and facilitation, but must extend to the full implementation of PMS. They must be involved at every step of the project and show their commitment in the project.

Impact of organizational culture. In order to achieve long-term success it is imperative that the organizational culture evolves to the point where it cultivates performance improvement as a continuous effort. Culture stimulating is another main factor of the implementation of PMS. It is well known that culture is a crucial element to be prepared before implementing any new system in an organization. All organization levels have to be prepared prior to introducing PMS, starting at the top and permeating throughout the whole organization. All levels should be aware of the significance of the BSC and its future benefits. Organizations need to create, therefore, a culture where all employees can participate and be involved in the PMS projects relevant to their workplace. A successfully implemented and used performance measurement system, through cultural change, leads to a more participative and consultative management style. Similarly, the correct use of performance measurement systems can encourage an achievement culture to emerge. Viewing performance improvement as a one-time event is a recipe for failure.

Appropriate design of management system. Designing of an adequate information system is also important for making the implementation of PMS a success.

Linking performance to reward system. Kaplan and Norton (1996) believe that the rewards of executives and managers have to be tied with the results of BSC measures. These rewards can be divided into extrinsic and intrinsic. In order to strengthen the implementation of PMS, the reward of executives and managers has to be tied with the results of PMS. Organizations should try to tie any reward and recognition system to performance improvement as measured by PMS. Linking performance measure to reward system could motivate employees to develop improvements within their work area and allow them a share in savings.

Training. PMS is essentially a new approach for organization. It is about adopting new perspectives and

processes, and about innovation and change. Consequently, employees' training and education initiatives may help facilitate this change by providing employees with the knowledge and skills they require to adapt to and to lead this change process.

Feedback / Monitoring. The BSC has become a commonly practiced and popular management reporting method in recent times. The BSC may also enable organizations to integrate all aspects of the management information system, and it can have a consequence on how managers think about their business and how they invest their time and resources.

Uncontrollable environmental factors. Strategy-based information collection was largely guided by external factors and in particular changing legislation. External factors influenced information generation and strategic opportunities. Especially, public sector organizations have become increasingly obliged by complex corporate governance legislation to publish extensive performance statistics. Organizations should monitor changes in the external environment such as new/changed policy directives and sudden changes in the economy and update the plan on the basis of both changes in external planning assumptions and learning about the management team's cause and effect assumptions.

Updating PMS. The BSC team has to expect a number of changes in the measures of each perspective. Even the organizational strategy may require to be changed, due to sudden changes in internal or external circumstances. Therefore, the performance measures have to be updated according to new circumstances. Despite changes of circumstances, the measures should, however, be evaluated and reviewed at least once a year in conjunction with the organization planning.

Research Design

This study performs a comprehensive literature scrutiny on the implementation factors of the various performance management frameworks. As part of the research process, a short questionnaire was used to support the results of the literature reviews suggested.

The sample organizations were chosen from members of Special Interest Group (SIG) for Strategic Enterprise Management (SEM) in the Korea Society of Management Information Systems (KMIS). Among them, 57 responses have been returned. The aim of the survey was to examine the present situation for the implementation of BSC as well as SEM solutions. Some of members have experienced with PMS, but some of them have not. To identify the companies which already have implemented PMS, the question in the questionnaire asked to specify whether they had PMS. As a result, the respondents are 21 and account for 36.8%. The problems occurred after implementing the performance

management systems are shown in Figure 1. Most frequent problems are the difficulties in agreement with performance measures and the subjective decision making for KPIs; they account for 47.6 % and 42.9% respectively. On the contrary, there is little significant between inadequate business strategy and implementation of PMS.

Table 2 shows the previous decision for the successful implementation of the performance management systems. According to the survey, we founded that top management commitment is the most important factor accounted for 66.7% while Linking to compensation and identifying strategy are followed.

Table 2 The previous decisions for the successful implementation of PMS

respondents		21
Top Management Commitment	%	66.7
Linking to Reward	%	33.3
Identifying Strategy	%	28.6
Determining proper measures	%	23.8
Developing the functional BSC	%	19
Strengthening Feedback Process	%	9.5
Deploying information infrastructure	%	9.5
the others	%	4.8
Totals	%	195.2

Discussion and conclusion

In order to produce successful results from implemented PMS, it is emphasized the importance of "agreement of performance measures" and "proper KPIs" in Figure 1, and it is essential to have top management commitment for the successful implementation of PMS (Table 2). These findings from the survey are similar to what we summarize from the literature reviews in Table 1.

It is found that organizational factors such as top management commitment, linking to compensation, and aligning strategy with organizational resources in implementation of PMS are more often concerned than system itself. At the initial phase of the implementation, structural factors such as determining proper KPIs, selecting good metrics, and designing performance management system seem to be important, however, as growing interests in sustaining PMS, organizational factors predominate over structural ones.

This paper concludes that the change management illustrates the importance of ideas in the success of PMS within organizations.

The implication of this paper is that it is based on a comprehensive literature review on the factors influencing the successful implementation of performance management systems from 1993 to 2007.

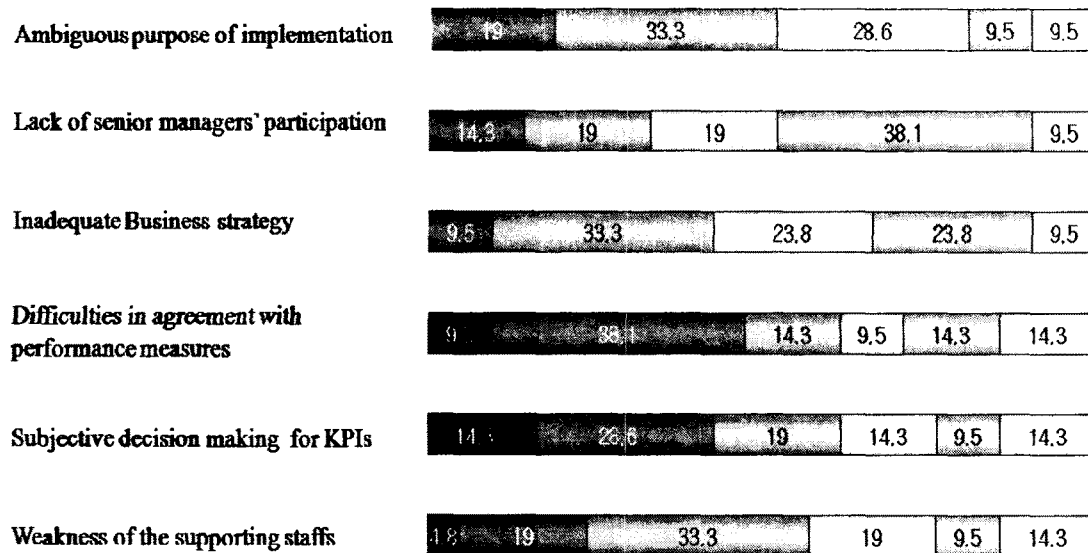


Figure 1 Problems occurred after implementing the performance management systems

There are several limitations in this research. First, the findings are based on short questionnaire, thus only scratching the surface of the questions asked. Second, the selection criteria of the success factors in the literature review could be ambiguous, while there might be the effect of other factors such as type of industry, size of organization, and type of performance management frameworks.

The preliminary findings of this research require further, detailed study to explore how the factors are affected by different industry characteristics, including type of industry, level of competition, and type of strategy. A much broader study involving manufacturing, services, as well as the public sector, and using a variety of implementation frameworks, may uncover significantly more insights into the success factors for implementing PMS. Thus more research is required to develop a strong understanding of the successful implementation factors of PMS.

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