

MODELLING A SUCCESSFUL PERFORMANCE MEASUREMENT SYSTEM

Martin Broad¹, Seyed Mohammad Javadi²

ABSTRACT

The performance measurement system (PMS) is one of the complex but most important systems in every organization. Adopting a PMS is not a simple technical procedure and takes lots of time, efforts and resources. Besides, poorly managing the PMSs risk being burdensome without helping to reach the objectives. But, could an organization really have a successful PMS without a deep understanding of its requirements and critical success factors (CSFs)? and what are the barriers/enables to the achievement of a successful PMS? These are important issues which often less noticed in practice. If a PMS is not well adopted it would not bear fruit. Therefore, recognizing requirements and CSFs of PMSs are among of the major challenges confronting PMSs and contribute significantly to their success in this highly competitive environment. This paper identifies and analyzes the most important challenges and CSFs confronting a PMS and introduces a "successful PMS model". This model lays down a path for a PMS works efficiently and being successful within organizations. Furthermore, performance measurement frameworks and, in particular, the balanced scorecard (as the most popular framework) are scrutinized in this paper.

Key Words: Performance, Performance Measurement Systems, Critical Success Factors, Organizations.

INTRODUCTION

The term PMS has become one of the most over-used but relatively less understood terms in the organization theory. In theory the PMS provides a series of measures against which internal managers and external investors can judge the organisation and how it is likely to perform over the short, medium and long term. It helps organisations gain more control over important activities and support them to expand their potential for competencies with others. But what is a successful PMS? A successful PMS is a system which provides accurate, reliable and relevant information at the right time for the organization. Such PMS develops a basis for deciding what is measured, how and with what consequences. It reduces the burden on the managers. Once can be claimed a PMS is successful which its outcomes result in improving the behaviour of the employees and the organization, than just measuring the performance. Traditional PMSs have been restricted to the financial measures such as ROI, EPS, and EVA. These approaches considered as successful up to about two decades ago, but then after has proved more deficient due to rapidly changing environment driven by technological, economic, political and social forces. Therefore, since the early of 1990s the efforts have been focusing on developing more balanced approaches incorporating multi-dimensional performance measures (Metawie, 2005). In this regard, many compilations have been done in the

PMS literature trying to introduce as much as comprehensive PMSs to enhance the organizations' economy, efficiency and effectiveness and help them show a balanced multi-dimensional picture of their organization. However, few of these compilations practically provide any means of how to handle the requirements and CSFs of PMSs. The problem is that, no two organizations are alike. It means every organization has its own unique conditions, and consequently requires its own special PMS. Also, a couple of other internal and external factors impact the success of PMSs. These issues altogether have caused much ambiguities and acting as barriers raised some problems for PMSs being successful. This paper concerns about how a PMS can become successful. In this regard, the key factors which are critical to the success of the PMSs is identified and explained. Then in a model, named "Successful PMS Model" we show how CSFs, as pillars of success, build a successful PMS. Before identifying CSFs, it is important to light a shed on different terms derived from "performance" concept which are commonly used in the PMS's literature, but still a bit confusing. Furthermore, PM frameworks are scrutinized. In continue, we talk about the balanced scorecard (BSc), the most famous PMS, and explain why it is the most popular and successful PMS. Finally, based on the discussion and the model offered, some key notes is given concerning CSFs, successful PMSs, and the future research in this area.

1 (Lecturer in Management Accounting) School of Management, University of Southampton, UK
Email: M.J.Broad@soton.ac.uk

2 (PhD Student in Management Accounting) School of Management, University of Southampton, UK
Email: M.Javadi@soton.ac.uk

Performance

“The notion of performance is used everywhere and applies to everything! Car buffs, computer nerds, sports fans, consumer advocates, people or groups doing benchmarking, bosses, Human Resources (HR) specialists, business analysts, they are all defining and comparing aspects of required target performance and real performance delivered” (Szigeti and Davis, 2005, p. 9). Szigeti and Davis also identify two key characteristics of the performance concept: 1) The use of two languages, one for the demand for the performance and the other for the supply of the performance; 2) The need for validation and verification of results against performance targets. From this point of view, the concept of performance is simple. But, in fact, due to multiple potential users of performance evidence with different aims, performance is a multi-dimensional term including a variety of meanings, which makes it quite difficult to give an exact definition of performance. Tangen (2005) says it depends on what point of view we look at performance. In this regard, Thomas (2006, p. 19) explains: “...much of the literature implies that performance is an objective phenomenon...in reality, however, performance is a social construct...securing agreement on what constitutes performance, especially successful performance, performance is a multi-faceted and subjective phenomenon...an acceptance of ambiguity, contingency, plurality, and controversy can be seen as signs of organisational health, not as signs of confusion, lack of clarity and poor performance...”. To give a definition, Laitinen (2002) defines performance as the ability of an object to produce results in a dimension determined a priori, in relation to a target. He further concludes, based on this definition, having: 1) an object whose performance is to be considered; 2) a dimension in which one is interested, and 3) a set target for the result, is necessary. The presence of these 3 factors ensures that performance as defined above does exist. However, performance will always remain a contested and evolving concept (Thomas, 2006).

Performance dimensions

Research findings of Brush and Vanderwerf (1992), indicated that using of the term “performance” by researchers, have resulted in many constructs measuring alternative dimensions of performance. Moreover, in the research which was done by Murphy *et al.* (1996), the following eight dimensions of performance were identified: 1) Efficiency; 2) Growth; 3) Profit; 4) Size; 5) Liquidity; 6) Success/Failure; 7) Market Share; and 8) Leverage. They also revealed that, out of those eight performance dimensions, efficiency, growth, and profit were the most commonly used dimensions.

Performance indicators, performance measures

Love and Holt (2000) and Mbugua *et al.*, (1999) make a distinction between performance indicators, per-

formance measures and performance measurement. As Mbugua *et al.*, (1999) state, performance indicators determine the required measurable evidence to prove that a planned effort has achieved the expected result. Based on their definition, indicators are called measures when they can be measured without ambiguity and with some degree of precision. In other words, performance measures report clearly about the relationships between program activities, outputs and outcomes associated with them (Thomas, 2006). He also claims performance indicators are less precise than measures, as they usually provide only a proxy indication of the performance of a program or system. Thomas (2006, p. 28) further continues: “whereas measures might be likened to numbers on a gauge, performance indicators might be compared to alarm bells”. Also, Sinclair and Zairi (1995) claim that performance measures are the numerical or quantitative indicators. At this time Neely *et al.*, (1995, p.80) define performance measures as: “a metric used to quantify the efficiency and/or effectiveness of an action”. However, when it is not possible to find a precise performance measure, it is better to refer to performance indicators. It should also be noted that to the best of our knowledge in current state, the distinction between true measures and approximate indicators is somewhat artificial (Thomas, 2006). However, performance measures and targets are key elements of performance measurement.

Performance measurement

Performance measurement is a systematic way of evaluating the inputs and outputs of an activity and is considered as a tool for continuous improvements (Sinclair and Zairi, 1995; Mbugua *et al.*, 1999). Neely *et al.*, (1995, p. 80), define performance measurement as: “the process of quantifying the efficiency and effectiveness of action”. It is a part of an organization’s management process to inform how the organization is doing against its intentions (CIPFA, 1998). Some examples of performance measurements which have emerged in management literature to improve the performance are: financial measures, employee measures, customer satisfaction measures, supplier measures, project performance measures and industry measures (Mbugua *et al.*, 1999).

Performance measurement components

The components of performance measurement are set out in the diagram below (Figure 1). As the diagram shows, PM is something more than having just a set of measures. Performance measures must be put in their correct place within the context of the organization, the results of the measures considered and monitored and the system itself evaluated (HM treasury, 2001). In other words, the basic system of any PM is that measures are developed from an organization’s strategy, with actual performance assessed against targets set.

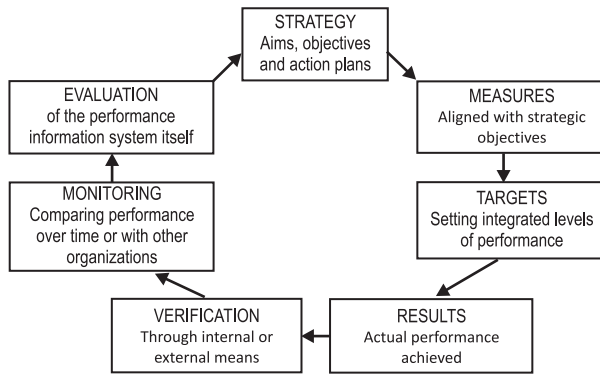


Fig. 1: Components of performance measurement. Source: Adapted from HM treasury, 2001.

Performance measurement systems

PMSs have become popular and grown in use over the last two decades. Organisations adopt performance measurement systems for a variety of reasons, but mainly to control their organisation in ways that traditional accounting systems do not allow (Kellen, 2003). Based on Neely *et al.*'s (1995, p. 81) definition, PMS is "the set of metrics used to quantify both the efficiency and effectiveness of actions". In their definition, efficiency is a measure of how economically the organization's resources are utilized when providing a given level of customer satisfaction, while effectiveness refers to the extent to which customer requirements are met. In another definition, Bititci *et al.* (1997, p. 522) introduce PMS as "the information system which is at the heart of the performance management process and it is of critical importance to the effective and efficient functioning of the performance management system". Furthermore, according to Bourne *et al.* (2003) a PMS refers to the use of a multi-dimensional set of performance measures for the planning and management of an organization. As Neely *et al.* (1995) explain, in a framework for designing a PMS, three levels should be observed: 1) The individual performance measures level; 2) The set of performance measures (the performance measurement system as an entity); and 3) The relationship between the performance measurement system and the environment within which it operates. The framework is shown in Figure 2.

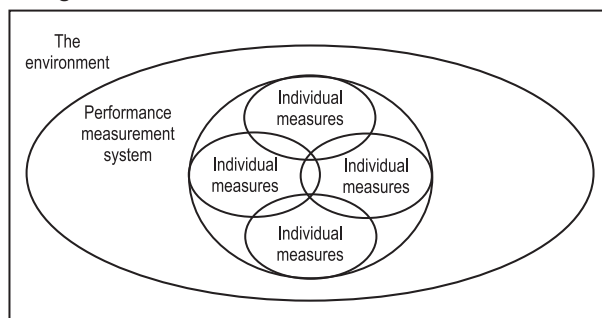


Fig. 2: A framework for performance measurement system design. Adapted from Neely *et al.* (1995).

Performance measurement frameworks

Over the last two decades, several new PM frameworks have been created to help organisations design and implement their PM systems to assess all dimensions of their performance and reflect their objectives appropriately. Some of the better known of these frameworks in the literature are: 1) The performance measurement matrix (Keegan *et al.*, 1989); 2) The results and determinants framework (Fitzgerald *et al.*, 1991); 3) The SMART performance pyramid (Cross and Lynch, 1992); 4) The balanced scorecard (Kaplan and Norton, 1992); and more recently, 5) The performance prism (Kennerley and Neely, 2002; Neely *et al.*, 2002). All these frameworks are characterized by addressing some of the criticisms of traditional financial based measurement systems, dealing with a rapidly changing environment, emphasizing on giving a considerable role to non-financial and qualitative measures, and finally focusing on such factors as quality, flexibility, reliability, relevancy, customer satisfaction, and delivery performance. Thus, they could have successfully covered a great extent of the weak points of old measurement systems. As a result, an increasing number of organisations have been investigating implementing these new systems and frameworks (Rejc and Slapnicar, 2005). "Altogether, between 40 and 60 percent of companies significantly changed their measurement systems between 1995 and 2000" (Frigo and Krumwiede, 1999, p. 43). However, none of these systems are perfect and by referring to Kennerley and Neely (2002) on the lack of ongoing attention to the performance measurement process as "barriers to the evolution of performance measurement", it is revealed that more work in this area needs to be done. The framework below (Figure 3) illustrates the contribution of various frameworks, concepts, and tools of performance measurement. It should be mentioned these multitude of concepts, perspectives, theories and frameworks on performance measurement (or any other subject matter) is called "meta-theory" (Hedberg *et al.*, 2000). Meta-theory helps organisations to determine a hierarchy of measures which connect the organisational vision to strategy and those actions which reflect strategies and objectives.

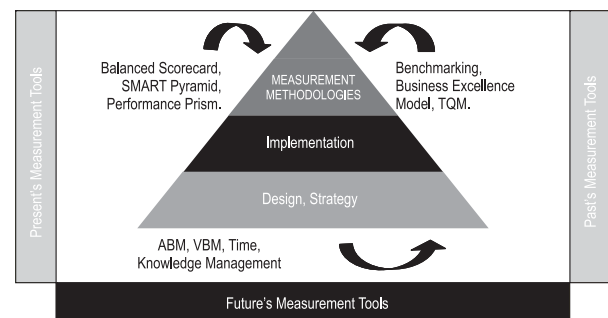


Fig. 3: Performance measurement methodologies, tools and concepts. Source: Adapted from Sharif, 2002.

Critical success factors

Critical success factors (CSFs) are the integral parts of PMSs which are vital to their success. But what are they? The concept of CSFs was first introduced by D. Ronald Daniel in the 1960s. A decade later, Jack F. Rockart denoted and developed it. Rockart (1979, p. 85) defined CSFs as: "The limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization. They are the few key areas where things must go right for the business to flourish....CSFs are areas of activity that should receive constant and careful attention from management". Based on this definition, there are four basic types of CSFs: 1) Industry; 2) Strategy; 3) Environmental; and 4) Temporal CSFs. Each CSF should be associated with a target goal. In PMS literature, CSFs refer to the areas of activity surrounding a PMS which focus on the most important issues and variables that absolutely critical to its success. In other words, identifying and implementing the CSFs prevents a PMS wasting efforts and resources on less important areas and ensures of being well-focused and successful. It also, helps the organization direct and measure its current operation and future success. Without CSFs a PMS will become unviable. All CSFs should be known and assigned. However, some of them are manageable and others can only be monitored. A successful PMS is built on around eight CSFs. In the following sections, we introduce and explain about these eight CSFs which have a significant impact on the success of a PMS, but in practice are often less noticed. All these CSFs together constitute the pillars of the success of a PMS.

1) Clarity of objectives

Based on the organization's strategic objectives in achieving the correct direction and also this fact that a PMS has a multiplicity of internal and external users (such as employees and managers, investors, customers, suppliers, government and other authorities, banks, competitors, interest groups, public, media, etc.) it is important that the purposes and objectives of the PMS is clarified to understand who uses the information, and why and how the information is used. Generally, objectives should be precise and unambiguous, operational (capable of being met), measurable, positive (and not negative). But more specifically, the key strategic objectives of a successful PMS are (Gresse, 2004): 1) Serve as the primary tool for implementing organisational goals and strategies; 2) Integrate and align the objectives and key metrics of the organization vertically and horizontally through all job categories and levels including management. In this way the entire system works together in pointing towards the critical bottom line MEASURES, with bottom line RESULTS following as a matter of course (What gets measured gets done); 3) Facilitate continuous performance improvement, organization development and culture change; 4) Attain the quality and efficiency. In the other words, fulfil the customer's needs as

precisely, quickly and cheaply as possible; 5) Clear ambiguity concerning work expectations and standards, reducing job holder stress, resource wastage and conflict; 6) Continuously enhance staff participation through the identification of outcome-related training and development needs and strategies; 7) Reduce Line Manager reluctance and fear to do Performance Appraisals with their employees; and 8) Facilitate performance-based remuneration and rewards, so staff can see and experience a clear link between their performance and the rewards they receive.

2) Correct strategies

Strategy is the principal idea, approach or plan of action selected to accomplish the objectives. Correct strategies ensure that all noses within the organization are pointing in the same direction (Flapper *et al.*, 1996). Well defined objectives with wrong strategies would not obtain the expected results. PMSs with different objectives require different appropriate strategies at different levels for each objective. But it should be noted that PMSs' strategies generally must be in the same way of the organization's strategic direction. In other words, they should support the overall organizational strategy. Also, as employees have greater in-depth experience and knowledge of their relative departments than the top-management, therefore, their involvement of the strategy, ensures the effectiveness of the correct strategy (Thompson and Strickland, 2003). Successful strategies guarantees the success of the PMS. But recognizing which strategies are successful and which are not, requires: 1) First, a framework to identify, develop and manage the strategies; and 2) Second, strategies are tested, analyzed and negotiated as the data becomes available from the PMS. PMSs with more specific strategies are more successful. Furthermore, strategies should be compatible with the PMSs simplicity/complexity. In other words, small or undeveloped PMSs need simple strategies, while big or developed systems need more complex strategies.

3) Appropriate PMS

All organizations have their own unique PMSs, designed based on their specific operational needs, objectives, requirements, and culture. Regardless of what type of an organization, a sound PMS itself must be equipped with three key characteristics. The PMS should be: 1) Legitimate; 2) Technically valid; 3) Functional (Thomas, 2006). Also, according to Tangen (2005), there are four requirements for PMS which are considered as most important requirements. Based on these requirements, PMSs must: 1) provide accurate information; 2) be derived from the organization's objectives, support its strategy and tactics; 3) Guard against sub-optimisation; and 4) Include a limited number of performance measures. Moreover, some other qualities are considered as important features of a good PMS. For example, PMSs should provide accurate, reliable and

relevant information to the organization. Relevance, here itself is a qualitative characteristic which timeliness, feedback value and predictive value are its components. PMSs should use a mix of both financial and non-financial performance measures and consider short term as well as long term results. Furthermore, as Neely *et al.* (2002) propose, PMSs must consider other stakeholders besides the investors, such as customers, suppliers and employees. A good PMS, should also evaluate the group, not individual performance. Although just having or establishing a good PMS, does not necessarily guarantee it will result in a better performance, but it is quite critical for the organization to establish a proper PMS compatible to its nature and goals, as the success of the organization is heavily based on this factor. The main reason is that PMS, in the best shape, just provides the correct information for the organization, and then appropriate decisions and actions are made based on that information. If it is not appropriately designed or chosen, or is not suitable for the organization, or is not matched completely with all parts of the organization, it would definitely not be able to provide the correct information, and as a consequence, it would result in wrong strategic decisions which would surely have a negative influence on the performance of the organization. However, many other factors within the organization, such as environment, availability of resources, culture, motivation to change, would also affect the decisions and actions. Regarding the type or complexity of the PMSs,

Tangen (2005) has categorized PMSs into three classes which is shown in figure 4. Based on this classification, he suggests that an organization should start firstly with a third class, simple yet useful PMS fulfilling the organization's basic needs instead going directly to an advanced, and when is completely done, should progress to the second class and gradually to the highest class. He even goes further by saying that one needs to learn how to walk before how to run, emphasizes that an impatient organization that directly attempts to reach the highest class of a PMS will almost surely fail. Thus the period of experimentation and learning of each class before fully embedded into the organisation should be conceived. Considering the availability of several PMSs to select from and also a couple of other factors like organization size and structure, management attitude, experience, culture, etc., offers practitioners many options for designing and implementing a PMS for their organization, which makes it quite challenging and confusing to establish a successful PMS, due to lots of alternatives and ambiguities raised. Employing a wrong PMS may result in dismissing it totally and starting from the beginning with a completely new third class PMS which means incurring a great loss and waste of all resources of the organization.

4) Alignment

In order to be successful, the PMSs not only must be recognize the priorities and objectives of the

System Class	Description of the system	Characteristics
Third Class (Mostly Financial)	In this class mostly traditional performance measures such as ROI and cash flow are used. These systems are profit oriented and are optimising against cost efficiency and mainly short term results with limited and delayed feedback.	Low requirements, Having control over the basic principle, Single-dimensional, Focus: internal, Short-term result, Top hierarchical levels covered, Easily accessible information.
Second Class (Balanced)	This class has a multidimensional balanced view of performance, when it comes to both different perspectives and time horizons. These PMS support innovation and learning and are very Customer oriented. Aim to improve rather than to monitor.	Multi-dimensional, Focus: internal and external, Long-term and short-term result, Most hierarchical levels covered, Information goes directly to the right persons.
First Class (Fully Integrated)	This is the most advanced system class, which means that many high standards are met. This PMS is able to explain different causal relationships across the organisation. The needs from all relevant stakeholders are considered. Databases and other reporting systems should be fully integrated to one another. The information in this PMS is updated continuously and directly presented to the persons who need it.	Causal relationship dimensional, Focus: all stakeholders, Existing processes for natural evolution, All hierarchical levels covered, Advanced information handling architecture.

Fig. 4: Performance measurement System Classes. Source: Adapted from Tangen (2005).

organisation, but also must be aligned specially with strategic objectives. For this reason, in the first instance organizations need to be clear about their goals and objectives. Goals are general and provide a framework for the strategic objectives. The PMS will therefore have a hierarchy of objectives, plans and indicators, reflecting the structure of the organisation. Not aligning the PMS with the other existing systems will create parallel, non-integrated and resource-wasting systems. Successful PMSs try to align all part of the organizations as much as possible. Of course, it is extremely difficult to get everyone pulling towards the organization's direction and focussing on the same objectives. No matter what the direction is, but the important issue is that when all the parts of an organization are aligned and move in the same direction, the system gets an incredible power. Needless to say that it is the managers' responsibility to illustrate the direction and help everyone in the organization to know exactly what is most important.

5) Proper key performance indicators and measures

As mentioned earlier in this paper, Performance indicators are the tools used to define and measure the progress of organizations toward their goals and objectives. Understanding and prioritizing the Key Performance Indicators (KPIs) plays a big role in helping the organisations and their PMSs ensure that they are measuring the success of their performance, business or campaign in a right way. Thus, KPIs should reflect a balanced perspective of the organizations by measuring main aspects and actual outcomes of their performance. So it is important that always both financial and Non-financial KPIs directly related to the organizations' strategy be adopted. In public sector, the purpose of performance indicators must balance the needs for public and professional accountability with the need to promote quality improvement initiatives (Ibrahim, 2001). The diversity of organizations tells that the implementation of a single model for performance indicators is not straightforward. Just choosing appropriate measures and combining them into one measurement system that satisfies most points of view has become a complex and time-consuming facet of PMSs. There are also several levels of KPIs within an organisation. There may also be different degrees of importance for KPIs, ranging from basic KPIs to more important/defined KPIs. Previous experience is required for designing appropriate performance measures, else it is likely that the information retrieved from the measures would not be interpreted correctly (Tangen, 2005). Scriven (2004) propounded the following criteria which have been proven by experience and research to be effective in assisting in the selection of performance measures: 1) Performance measures should truly align with the strategic direction of the organisation; 2) Performance measures should be quantitative and it is advisable to be pragmatic when selecting performance measures; 3) Accessibility can

be an issue and it is advisable to undertake a cost and benefit analysis of collecting measures which are not readily available. In fact there should be reasonable balance between the cost of collecting the indicators and the value of the information they provide; 4) A phased realisation approach is preferable as performance measures may be progressively refined or added. In other words, circumstances and objectives of the organizations usually change over time and when an objective changes, the related measures should change as well. Here there should be a flexibility in the PMS to let this change happen ensure that the PMS at all times is coherent with the objectives of the organization. In addition, there are some other principal criteria for KPIs and measures, such as: 1) KPIs should be simple, well defined easily understood and easy to use; 2); KPIs vary between locations, i.e. one measure is not suitable for all departments; 3) KPIs should provide fast feedback; 4) KPIs should be designed so that they stimulate continuous improvement rather than simply monitor; 5) KPIs should not be chosen without considering and taking into account behavioural aspects, as they greatly impact the employees' behaviour. This makes a mutual understanding between employees and the organisation, represented by the managers. Employees know what are their tasks and what is expected of them. Furthermore, they are evaluated based on their actual performance, not based on prejudice, bias, or unrealistic assumptions. These criteria are sometimes incompatible. For this problem, Neely *et al.*, (2002) gives an example. He says performance measures, on the one hand, must be designed to be as exact as possible, which may result in a very complex formula and on the other hand, must be easy to measure and easy to comprehend, which are arguments for using simple formulas. Regarding the number of measures, Turnage (2006, p. 3) says "if you have hundreds of measures, you have none". Meaning that there should be a concise number of Performance measures within organizations and they should concentrate on a limited number of key indices. In this regard, Scriven (2004) by giving the example below (Figure 5), rejects this attitude that some organisations have so many key performance indicators or measures. He continues that it is likely they cannot see the wood for the trees and claim this is a major indicator of failure for the use of Scorecards in an Organisation.

6) Employees' participation and trust

Employees' participation plays a great role in the process of the PMS within all organizations with different lines of missions, goals and activities. It could strongly be claimed that there is no chance for the success of a PMS without proper participation of employees. This is because of that all operations are managed by employees who are committed to achieve the objectives of the organization and, in exchange, it is vital to consider their attributes and expectations which play a significant role

Description	Reasons of failure of the PMS
One Australian University published over 100 measures	Too many measures.
These measures reflected the availability of data rather than what was important to the business strategy	No clear business strategy
Furthermore these were measures only at the corporate level.	No focus on strategy
To have broken them down to the next level (division/faculty) would have required a significant level of data collection and systems effort	No linkage to strategy.
The measures were mainly logging measures.	Measures do not reflect strategic drivers but rather ease of data collection.
They did not change behaviour or measure accountability.	Accountability mechanisms are not established.

Fig. 5: Reasons of failure of a PMS. Source: Adapted from Scriven (2004).

in their motivation and performance. Zairi (1994) mentions that the human factor lays at the heart of the issue of performance. Also, according to Beer (1997), organizational and human elements play a great role in using the technical or structural solutions which the research and theory did not incorporate. Hence, human issues appear to be a “make or break” factor in the success of PMSs. This is the very important issue which often is forgotten within the organizations. A properly established PMS, not only will provide employees throughout all the organization with clear goals and objectives and their tasks of how they relate to the overall success of the organisation, but also it practically involve them with the activities and provide the conditions for their participation as a loyal support to the system. On the other hand, gaining employees’ participation is only possible by firstly gaining their trust. Thus, building trust in the organization is an essential precondition for a PMS operating efficiently. It is the basis of strong relationships and will increase the mutuality, efficiency and productivity. Since it is crucial to the success of the organization to reach its objectives, so it is worth of allocating a lot of time, efforts and resources to build or rebuild the employees trust within the organization. In case of the lack or poor trust, there would be no good working relationship and hence cooperation will end up under formal tough procedures in a not healthy climate which finally result in the failure of the system. Turner (2002) points to a several benefits of building trust during the implementation of the BSc. They are: 1) Increased employee trust in management; 2) Improved quality of work; 3) Employee commitment to the use of the BSc; 4) Improved employee satisfaction; 5) Ability to meet stakeholder expectations; 6) Improved productivity; 7) Increased value; 8) Increased access to new capital; and 9) Increased number of long-term investors. Several models have been proposed for building trust in an organization. One of them is Goodman’s trust-building model (Goodman, 2001) which consists of 6 steps that an or-

ganization has to take to (re)build trust (Figure 6). This model seems to provide clear and detailed steps that in practice is relatively easy for an organization to implement (Waal *et al.*, 2005).

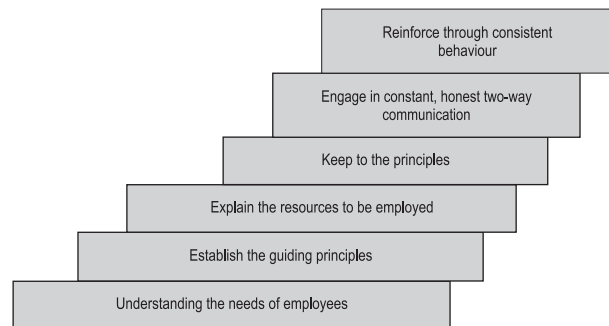


Fig. 6: Goodman’s “Trust-building model”. Source: Adapted from Goodman (2001).

As a case, Waal *et al.* (2005) conducted a survey during the implementation of a PMS (BSc) in a mining company in Zimbabwe. In their research they designed a revised trust-building model based on the Goodman’s model, called ‘trust-building cycle’, and used during the implementation of a BSc. Their findings showed that employees’ trust was an important factor for the successful implementation of far-reaching changes, such as introducing a new performance management system like the BSc. Moreover, the employees were unanimous in their opinion that all stages of the trust-building cycle helped them regain trust in the BSc.

7) PMS high adaptability

Adaptability here refers to the ability of quick response to changes, improvability and developability. PMS should be flexible and rapid in responding to the constant internally and externally changes in conditions of the organization. This feature of continuously adaptability is an important factor of success (Kennerley and

Neely, 2002). This becomes particularly important if the organization's environment is competitive. Improvability comes through this fact that some factors are not considered at the time of design a PMS. This feature allows organizations to keep their existing PMS, instead of adopting a completely new PMS. It helps PMSs be compatible with the on-going changes. PMS should be designed with a broad view and a great potentiality so that when the organization progresses, it could meet the new requirements. Like building a new house on the same foundation, which should be strong enough for future expansion and adding more floors upon it, not destroying it down and building from the first. While improvability looks at temporary short-term solutions, developability relates to long-term plans. As previously mentioned, it takes time to develop a PMS as the organization needs to build up experience of the existing PMS before moving to an advanced one. Improving and developing PMSs can be challenging at some point and may require employees tolerance and consensus during the transition process. Without these features, over time, the PMSs face serious problems measuring and reporting successfully. It is worth mentioning that adaptability is not a project that finishes one day. It is a continues matter which requires ongoing management's attention.

8) Getting feedback

Knowledge of results (feedback) is an integral part of a dynamic successful PMS to make sure if the goals and specific objectives of the organization are to be achieved. Although feedback may exert its main effect through providing the organization with information, it may also itself have motivating properties. PMSs can not be static in nature, as conditions of the organizations are subject to change over time. Waggoner *et al.* (1999) mentioned PMSs are constantly evolving and identified the following 4 categories of influences that could influence the evolution and transformation of the PMSs: 1) Internal influences; 2) External influences; 3) Problems related with the process; and 4) Issues related with the changes that happen in the organization. It is almost impossible to evaluate the performance of a person, division, department or the organization as a whole, without having feedback. Decision makers don't exist in operations so they need feedback. A review or measure of how effectively the system which has been implemented is the degree to which synergies are achieved in organizational performance. The reason is that all employees work towards the same goals and objectives. Lessons learned from the review at feedback phase, hale organization assess current performance level and understand the impact of its decisions and actions, and make the necessary changes so that future actions become more efficient and effective. Principally feedback should aim to enhance the performance of the organization. It also should be timely, detailed, efficient, inclusive, positive not fear, and realistic. However, the optimal timing, frequency and amount of feed-

back are at present somewhat uncertain. Feedback is used mainly to aim the 3 main questions: what is going well? What is not going well? and what are the possible areas for improving? (Lee, 2007). Some other detailed questions which should be answered by the PMSs are: Are the organization's strategies working? Has the organization's environment changed? Have key performance indicators been chosen correctly?

Successful PMS model

As explained in the previous sections, the following factors are critical to the success of a PMS: 1) Clarifying the objectives; 2) Applying the correct strategies; 3) Choosing an appropriate PMS; 4) Alignment of all parts; 5) Identifying Proper KPIs and measures; 6) Employees' participation and trust; 7) PMS high adaptability; and 8) Getting feedback. These CSFs are illustrated in the "Successful PMS model" (Figure 7).

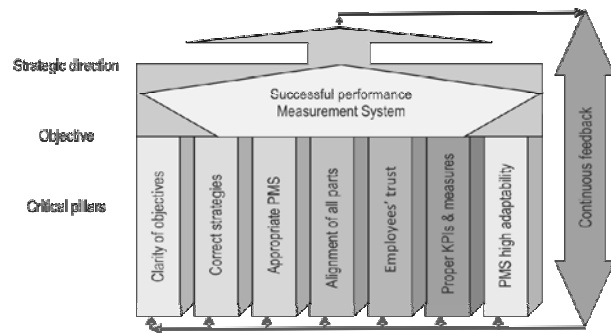


Fig. 7: Successful PMS model. Critical factors as pillars of the success of PMS.

The above model shows that a successful PMS will be built upon around eight CSFs. Based on this model, each CSF acts as a pillar of success. Attainment of successful PMS depends on satisfactory performance of each CSF, not only independently, but also altogether as a unit. It is also obvious from the model that the lack or poor performance of each CSF would hurt the PMS working efficiently and being successful within the organization.

Most popular PM framework

At present the most popular of the above mentioned PM frameworks is the Balanced Scorecard (BSc) which firstly introduced by Kaplan and Norton (1992). It originally was considered as an improved PMS, but very soon was unveiled that it could be used as a performance management system to implement strategy at all levels by helping the organization to: 1) Clarify its strategy; 2) Communicate strategic objectives; 3) Plan, set targets, and align strategic initiatives; and 4) Get strategic feedback and learn from it. It is now conceived as a multidimensional framework which explicitly evaluates the success of an organisation by employing and balancing performance metrics from financial (e.g., cost of manufacturing and cost of warehousing), customer (e.g.,

on-time delivery and order fill rate), business process (e.g., manufacturing adherence-to-plan), innovation and technology perspective (e.g. new-product development cycle time). By combining these different perspectives, the BSc helps the organization to understand the inter-relationships and trade-offs between alternative performance metrics and leads to improved decision making (Aramyan *et al.*, 2006). One of the more important features of the BSc is that it combines both financial and non-financial metrics simultaneously through a 4-dimension performance matrix and gives a clear balanced view for the present and the future of the performance of the organisation. The BSc is the product of the chosen metrics and KPIs of each perspective times the statistical weights of each indicator. Based on Rohm (2008), BSc is like a journey, not work on a project. It has two phases: 1) Building the BSc. This phase has six steps to build an organization's BSc; and 2) Implementing the BSc. This phase also takes an additional three steps to implement the BSc system throughout all levels of the organization (developing phase). Rohm and Habach (2008), emphasize when the BSc is built, the organization should be careful not to go back to business as usual and must work hard to cut off attempts to revert to old ways. These issues are vital to the success of a BSc system.

Why Balanced Scorecard is successful/popular?

Evidence on the success of the BSc has been reported across many organizations in the US (Hepworth, 1998). Being comprehensive, BSc has become a powerful and effective management system for the implementation of strategy. It is very flexible and can be applied successfully to a variety range, from small private to non-profit and governmental, of organizations. Rohm (2008, p. 8) claims: "A BSc system provides a basis for executing good strategy well and managing change successfully...it will cause people to think differently (more specific) about their organization and their work...it will also bring change in the way things are done, as new policies and procedures are developed and implemented... the BSc journey involves changing hearts and minds...". Many organizations over the last decade have adopted are in the process of implementing the BSc to help them to execute their strategies and monitor their performance and they have succeeded dramatically. The BSc gives a way to get the organizations focused. And focus is what makes the difference. The bottom line for a BSc is that organizations can successfully execute their strategy and provide an integrated evaluation of performance. It also addresses the real measures related to staff and makes a sound communication to all employees. But it only works if there is a continuous communication. One of the main benefits of BSc is that it makes all parts of the organization go in the same direction

and it makes the organization so incredibly powerful. But it is necessary to be mentioned that BSc, like any other system, is not perfect. It does not work magic and has its own minus and plus. When a BSc system is established, it will not automatically work. Lots of other issues (like setting targets, benchmarking performance, doing surveys, making judgment, etc.) should be done to make the BSc work. It is still not enough for very important strategic decisions and other techniques should be used as well. If it is not employed well, it will fail. Schneiderman (2006) propounds six factors as main reasons for the failure of the BSc: 1) The non-financial variables are incorrectly identified and given disproportionately more weight as the primary drivers; 2) The measures are poorly defined and goals unrealistic; 3) Improvement goals are negotiated rather than based on business strategy, fundamental process limits, and process improvement capabilities; 4) There is no deployment system that cascades high level objectives down to the sub-process level where actual improvement activities reside; 5) No improvement system used in response to missed measures; and 6) There is misalignment between rewards and desired behaviours.

Key conclusions and recommendations

Conceptual understanding of PMSs and CSFs such as the degree of support from management and employees, and skill in designing KPIs and measures are all significant issues in implementing an effective PMS. Therefore, it would be wiser for organizations to notice and pursue the CSFs involved with their PMSs, rather than just employing a PMS. Without them being determined, successful PMSs will not be attained. But recognizing and the use of CSFs is still uncommon among organizations. The aim of this article is to find out the nature of critical factors underpin the success of a PMS. The "successful PMS model" presented in this article helps organizations by setting out CSFs, underpin their PMSs. In promulgating the model we hope to encourage the development of a more substantial body of knowledge. The CSFs outlined in the model introduce the key important parameters for helping to build such knowledge. The model is intended to be more enabling than prescriptive and would be a useful framework for organizations to get direction. For the future, some in-depth practical researches in a real context should be done to discover the more tested reliable CSFs. Also, more comparative and consultative PMSs should be developed. Such systems create powerful incentives for performance improvement and thereby help employees, managers and organizations get more benefit from them. In other words, the more comprehensive a PMS, e.g. considering other outside stakeholders, the more benefits achieved. However recognizing most CSFs and managing a successful comprehensive PMS that satisfies most points of view seems a difficult time-consuming task.

REFERENCES

- Aramyan, L., Ondersteijn, C., Van Kooten, O. and Oude Lansink, A. (2006), "Performance Indicators in Agri-Food Production Chains", Chapter 5, (on-line serial), available at http://library.wur.nl/frontis/quantifying_supply_chain/05_aramyan.pdf, (Accessed: 18th February 2009).
- Beer, M. (1997), "Why management research findings are unimplementable: an action science perspective", Working paper, Harvard University, Quoted in: Waal, A.A. de., "Performance driven behaviour as the key to better organizational performance", *American Accounting Association (AAA), Management Accounting Section (MAS) Meeting, Working Paper Series, 2007*, also available at http://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=418814#ByDownloads, (Accessed: 18th February 2009).
- Bititci, U.S., Carrie, A.S. and Mcdevitt, L. (1997), "Integrated performance measurement systems: a development guide", *International Journal of Operations and Production Management*, Vol. 17, Nos. 5/6, PP. 522-34.
- Bourne, M.C.S., Neely, A.D., Mills, J.F. and Platts, K.W. (2003), "Implementing performance measurement systems: a literature review", *International Journal of Business Performance Management*, Vol. 5, No. 1, PP. 1-24.
- Brush, C.G. and Vanderwerf, P.A. (1992), "A Comparison of Methods and Sources for Obtaining Estimates of New Venture Performance". *Journal of Business Venturing*, Vol. 7, PP. 157-170.
- Cross, K. F. and Lynch, R. L. (1992), "For good measure", *CMA Magazine*, Vol. 66, No. 3, PP. 20-24.
- Fitzgerald, L., Johnson, R., Brignall, T. J., Silvestro, R. and Voss, C. (1991), "Performance Measurement in Service Businesses", *The Chartered Institute of Management Accountants*, London.
- Flapper, S.D.P., Fortuin, L. and Stoop, P.M.P. (1996), "Towards consistent performance management systems", *International Journal of Operations and Production Management*, Vol. 6, No. 7, PP. 27-36.
- Frijo, M.L. and Krumwiede, K.R. (1999), "Balanced Scorecards: A Rising Trend in Strategic Performance Measurement" *Journal of Strategic Performance Measurement*, No. 1, PP. 42-44.
- Goodman, M.B. (2001), "Restoring Corporate Trust", Fairleigh Dickinson University.
- Gresse, W. (2004), "Performance Management-Appraisal System Design", Performance Associates Ltd, (on-line serial), available at http://www.performanceassociates.co.nz/performance_management_appraisals.html, (Accessed: 18th February 2009).
- Hedberg, B., Dahlgren, G., Hanson, J. and Olive, N.G. (2000), "Virtual organisations and beyond: Discovering imaginary systems", Chichester, John Wiley and Sons, Ltd.
- Hepworth, P. (1998), "Weighing it up: a literature review for the balanced scorecard", *Journal of Management Development*, Vol. 17, No. 8, PP. 559-563.
- HM Treasury, (2001), Cabinet Office, National Audit Office, Audit Commission and Office of National Statistics, "Choosing the Right Fabric – A Framework for Performance Indicators", (on-line serial), available at <http://www.nao.org.uk/guidance/focus/fabric.pdf>, (Accessed: 18th February 2009).
- Ibrahim, J.E. (2001), "Performance indicators from all perspectives", *International Journal for Quality in Health Care*, Vol. 13, PP. 475-480.
- Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – Measures that drive Performance", *Harvard Business Review*, January-February, PP. 71-79.
- Keegan D.P., Eiler, R.G. and Jones, C.R. (1989), "Are Your Performance Measures Obsolete?", *Management Accounting*, US, June, PP. 45-50.
- Kellen, V. (2003), "Business Performance Measurement, At the Crossroads of Strategy, Decision-Making, Learning and Information Visualization", (on-line serial), available at: www.kellen.net/bpm.htm, (Accessed: 18th February 2009).
- Kennerley, M. and Neely, A. (2002), "A framework of the factors affecting the evolution of performance measurement systems", *International Journal of Production & Operation Management*, Vol. 22, No. 11, PP. 1222-45.
- Laitinen, E.K. (2002), "A dynamic performance measurement system: evidence from small Finnish technology companies", *Scandinavian Journal of Management*, Vol. 18, PP. 65-99.
- Lee, C.D. (2007), "4 Steps Toward Creating a Better Performance Management System", (on-line serial), available at <http://www.docstoc.com/docs/1019984/4-Steps-Toward-Creating-a-Better-Performance-Management-System>, (Accessed: 18th February 2009).
- Love, P.E.D., and Holt, G.D. (2000), "Construction business performance measurement: the SPM alternative", *Business Project Management Journal*, Vol. 6, No. 5, PP. 408-416.
- Mbugua, L.M., Harris, P., Holt, G.D., and Olomolaiye, P.O. (1999), "A framework for determining critical success factors influencing construction business performance", *Proceeding 15th Annual ARCOM Conference, September 5th-7th*, Reading: ARCOM. 1., PP. 255-264.
- Metawie, M., and GILMAN, M. (2005), "Problems with the implementation of performance measurement systems in the public sector where performance is linked to pay: A literature review drawn from the UK", 3rd conference on performance measurements and management control, September 22nd-23rd, Nice, France. Also available online at http://www.allamreform.hu/letoltheto/kozigazgatas/kulfoldi/Miral_Metawie_PROBLEMS_WITH_THE_IMPLEMENTATION_OF_PERFORMANC.pdf, (Accessed: 18th February 2009).
- Murphy, G.B., Traylor, J.W. and Hill, R.C. (1996), "Measuring research performance in entrepreneurship", *Journal of Business Research*, Vol. 36, PP. 15-23.
- Neely, A., Adams, C. and Kennerley, M. (2002), "The Performance Prism: The Scorecard for Measuring and Managing Business Success", *Financial Times*, Prentice Hall, London.

- Neely, A., Gregory, M. and Platts, K. (1995), "Performance measurement system design: a literature review and research agenda", *International Journal of Operations & Production Management*, Vol. 15, No. 4, PP. 80-116.
- Rejc A. and Slapnicar, S. (2005), "Corporate Performance measurement Systems: Empirical Evidence of Determinants", (on-line serial), available at http://miha.ef.uni-lj.si/_dokumenti/wp/clanek.doc, (Accessed: 18th February 2009).
- Rockart, J. (1979), "Chief executives define their own information needs", *Harvard Business Review*, Vol. 57, No. 2, PP. 81-92.
- Rohm, H. and Halbach, L., "A balancing act: Sustaining new directions", *Balanced Scorecard Institute, PERFORM Magazine*, Vol. 2, issue 3, PP. 1-8, (on-line serial), available at <http://www.balancedscorecard.org/Portals/0/PDF/perform2.pdf>, (Accessed: 18th February 2009).
- Rohm, H., "A balancing act", *Balanced Scorecard Institute, PERFORM Magazine*, Vol. 2, issue 2, PP. 1-8, (on-line serial), available at <http://www.balancedscorecard.org/Portals/0/PDF/perform.pdf>, (Accessed: 18th February 2009).
- Schneiderman, A.M. (2006), "**How to build a balanced scorecard**" (on-line serial), available at www.schneiderman.com, (Accessed: 18th February 2009).
- Scriven, G. (2004), "Strategic Planning and KPI's", CPA NSW Country Congress, (on-line serial), available at http://www.agility.com.au/pdfs/CPA_NSW_Country_Congress_2004.pdf, (Accessed: 18th February 2009).
- Sharif, A.M. (2002), "Benchmarking performance management systems", *Benchmarking: An International Journal*, Vol. 9, No. 1, PP. 62-85.
- Sinclair, D. and Zairi, M. (1995), "Effective process management through performance measurement. Part III-an integrated model of total quality-based performance measurement", *Business Project Re-engineering & Management Journal*, Vol. 1, No. 3, PP. 50-65.
- Szigeti, F. and Davis, G. (2005), "Performance Based Building: Conceptual Framework", *Performance Based Building Thematic Network (PeBBu)*, Final Report, (on-line serial), available at http://www.pebbu.nl/resources/allreports/downloads/04_framework_final.pdf, October, (Accessed: 18th February 2009).
- Tangen, S. (2005), "Analysing the requirements of performance measurement systems: Insights from practice", *Measuring Business Excellence*, Vol. 9, No. 4, PP. 46-54.
- Thomas, P.G. (2006), "Performance Measurement, Reporting, Obstacles and Accountability: Recent Trends and Future Directions", *The Australian National University (ANU) E Press*. Also available on-line at <http://epress.anu.edu.au/anzsog/performance/pdf/prelims.pdf>, (Accessed: 18th February 2009).
- Thompson, A.A. and Strickland III, A.J. (2003), "Strategic Management: Concepts and Cases", McGraw-Hill Irwin Publishing, New York.
- Turnage, W. and Brown, R. (2006), "Focusing on Performance Management", Presentation to: Council on Virginia's Future, (on-line serial), available at http://www.future.virginia.gov/docs/meetingmats_103006/COVF_Perform_Lead.pdf, (Accessed: 18th February 2009).
- Turner, C. (2002), "Lead to Succeed: Creating Entrepreneurial Organizations". TEXERE, New York, NY.
- Waal, A.A. de. And Nhemachena1, W.Z. (2005), "Building employee trust in performance management: The case of a mining company in Zimbabwe", *International Journal of Organisational Behaviour*, Vol. 11, PP. 1-19. Also available online at <http://www.usq.edu.au/resources/vol11dewaal.pdf>, (Accessed: 18th February 2009).
- Waggoner, D.B., Neely, A.D. and Kennerley, M. (1999), "The forces that shape organizational performance measurement systems: an interdisciplinary review", *International Journal of Production Economics*, Vol. 60-61, PP. 53-60.
- Zairi, M. (1994), "Measuring Performance for Business Results", Chapman and Hall, London.