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Critical Success Factors in the Implementation of Performance Management Systems in UAE Government Organisations

Salem Jraib Alharthi[1]

[1] United Arab Emirates

Correspondence: Salem Jraib Alharthi, P.O. Box: 11627, Abu Dhabi, UAE. Tel: 971-506-222-085. E-mail: Salem123@gmail.com

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Abstract

This study undertook research on government organisations in the UAE with a view toward identifying the most important Critical Success Factors (CSFs) that support the successful implementation of performance management systems (PMSs). However, the study was not limited to the identification of such CSFs, but also sought to examine their relevance and criticality. The remit of the research focus was narrowed to an attempt to understand the causes of PMS failure and to avoid possible obstacles to PMS implementation. Qualitative research took the form of case studies involving interviews, observations and document reviews. This study makes several contributions to the literature on CSFs that influence successful PMS implementation in the government sector, principally in the UAE and other developing countries. Further, it presents a theoretical model of CSFs for the successful implementation of PMS. The findings and recommendations presented in this paper could serve as guidelines for practitioners in the field of PMSs and for government and public organisations to fully benefit from the implementation of PMSs.

Keywords: performance management system, critical success factors, performance measurement, government organisations, implementation, PMS, CSF, UAE

1. Introduction

Organisations in today's rapidly changing global market understand that they need to periodically measure and evaluate their business performance in order to remain competitive (Sharma, Bhagwat, & Dangayach, 2005). In an increasingly aggressive competitive environment, greater focus on continuous improvement, the evolution of quality concepts, and significant developments in information and communication technologies have created a favourable context for the implementation of performance management systems (PMS) in many different organisations (Taticchi, Tonelli, & Cagnazzo, 2010). Privatisation and greater demands from stakeholders and customers are also placing new expectations on organisations, for which performance management has become a cornerstone of success (Bourne, Neely, Platts, & Mills, 2002). By supporting decision making and providing data on how effectively and efficiently services are being delivered, PMSs assist an organisation in controlling its strategy and achieving its goals and objectives (Malina & Selto, 2001). A recent study found evidence of superior financial performance in those branches of an organisation that adopted PMSs (Davis & Albright, 2004). Moreover, a PMS provides the basis for an organisation to identify its strengths and weaknesses, assess how well it is progressing toward its predetermined objectives, and decide on future initiatives with the goal of further improving organisational performance.

Limited research is available on the possible causes of the success or failure of PMSs and the impact of different success factors on their implementation (de Waal & Counet, 2009). Poor understanding of the impact of critical success factors (CSFs) leads to the neglect of their value in designing the right model and consequently increases the risk of PMS failure (Bourne & Neely, 2002). Although extensive research has been carried out to investigate the success and failure of PMSs in various organisations around the world (Ariyachandra & Frolick, 2008; Bourne et al., 2002; De Waal & Counet, 2009; Kennerley & Neely, 2002; Richardson, 2004), there is a distinct lack of published research on issues related to PMS CSFs; however, according to Ariyachandra and Frolick (2008), to help ensure PMS success, several CSFs *should* be considered. And although a structured discussion of problems encountered when implementing and using a PMS in general seems to be missing in the literature (Bourne et al., 2002), even less attention has been paid to the CSFs that can facilitate effective PMS

implementation (Cavalluzzo & Ittner, 2004). Also, of all the research reported in the literature, most relates to developed regions – Europe, the USA, and East Asia – and not to developing countries (Salaheldin, 2009). Similarly, there is a lack of literature regarding the impact of successful PMS implementation on the performance of public organisations (Jamil & Mohamed, 2011). More research into the problems that cause PMS implementation to fail is thus required in order to heighten the chance of its future success (de Waal & Counet, 2009). The design of the present study attempts to deal with the various challenges identified in the literature and to make a contribution in a number of areas, including identifying which CSFs should be considered when striving for successful PMS implementation in UAE government organisations.

2. Literature Review

2.1 Performance Management System (PMS)

Measuring organisational success is a continuous challenge for both managers and researchers (Maltz, Shenhar, & Reilly, 2003). Consequently, the performance management system (PMS) has received considerable attention over the last three decades (Bourne et al., 2002; de Waal, 2007; Kennerley & Neely, 2002). The PMS is now an established concept that is receiving renewed attention in a variety of organisations (Taticchi et al., 2010). There is evidence that PMSs are currently being implemented in approximately 70% of medium to large firms in the USA and Europe, as well as in many government departments (de Waal & Kourtit, 2013). There has also been an increasing volume of empirical work on PMSs in the public sector (Boyne & Chen, 2007; Hoque, 2008; Radnor & McGuire, 2004; Sanger, 2008).

The PMS is a critical factor for the effective management of an organisation, which may be due to the fact that, without measuring something, it is difficult to improve it (Salaheldin, 2009). Historically, PMSs were developed as a means of monitoring and maintaining organisational control and to ensure that organisations pursued strategies that led to the achievement of their overall goals and objectives (Neely, 2005). The development of a PMS in management has followed a path that has been influenced by a general push to improve the quality of services while also meeting strict cost parameters (Bititci, Turner, & Begemann, 2000). The design of an effective PMS, which includes the selection of appropriate measures and approaches for analysing results, is central to aligning an organisation's operations with its strategic direction (Kaplan & Norton, 2006).

Many PMSs have been introduced within the last three decades (Bititci, Carrie, & McDevitt, 1997; Fitzgerald, Johnson, Brignall, Silvestro, & Vos, 1991; Kanji, 1998; Kaplan & Norton, 1992; Keegan, Eiler, & Jones, 1989; Lynch & Cross, 1991; Neely et al., 2002; and others). The balanced scorecard (BSC), initially developed by Kaplan and Norton (1992), is cited by *Harvard Business Review* as one of the most important management tools of the last 75 years, while PMS is currently attracting a great deal of interest among both industrialists and academics (Bourne et al., 2002). The BSC PMS approach, which is also used extensively by other researchers, has been shown to be an effective system that provides a full evaluation of performance by combining different perspectives and measures (Jiménez-Zarco, Martínez-Ruiz, & González-Benito, 2006).

With the rapid globalisation of the UAE economy, government organisations are facing an increasingly challenging situation. Stakeholders' expectations are increasing and customer satisfaction is becoming more difficult to achieve. Thus, UAE government organisations are competing to create the conditions that will enable them to perform better. Notwithstanding the complexities in implementing PMSs, there has been little empirical research about the CSFs that impact the successful implementation of PMSs (Ariyachandra & Frolick, 2008). Also, there has been very limited empirical research about PMSs in the UAE and in the Middle East more generally. These gaps in the literature are reflected in the low level of contributions to international conferences and journals from these regions. The purpose of this study is to provide UAE government organisations with an understanding of those CSFs that influence successful implementation of PMSs.

2.2 PMSs in the UAE

UAE government organisations are striving to create the conditions that will enable them to perform better (*Abu Dhabi Sustainability Index,* 2011). Consequently, all UAE organisations have begun seeking new tools to enhance business excellence. A well-known PMS framework, the balanced scorecard (BSC) system (Kaplan & Norton, 1992), was introduced by the UAE government in 2008 for this purpose. The government, recognising the value of the PMS as a tool to support continuous improvement, formally established an office for performance management to monitor the implementation of PMSs in different organisations and instructed several of them to report their performance in the BSC format. In response, all organisations have established a set of measures and key performance indicators (KPIs) to meet the government's requirements (*The Abu Dhabi Economic Vision 2030*).

In 2006, the Executive Council, which represents the UAE government, created a Performance Department (*The Abu Dhabi Economic Vision 2030,* 2008). At that time, and in contrast to the oil companies, no government entity had established any kind of PMS. In 2007, the Environmental Authority was the first entity to develop a BSC with consultant support. Also in 2007, the Executive Council began developing a government strategy, and one year later published the first ever report on its strategy and business plan. That report included important concepts and guidelines about linking strategy to KPIs and using that strategy to build a performance matrix. The project started with 16 entities. By the end of 2008, this had increased to 32, in order to develop the BSC and the KPIs. In 2009, the UAE government announced its 2030 vision with clear milestones and requirements (https://www.abudhabi.ae/). At that stage, all government organisations were instructed to report their performances against a set of KPIs in the BSC format. Abu Dhabi Water and Electricity Authority (ADWEA) hired the same consultant who had worked with the government. This enabled them to design a strategy and a BSC that aligned with the government's vision and strategy. Today, all Abu Dhabi government organisations (63 organisations: http://www.government.ae/) have their own BSC and KPIs and report their performance regularly to the Executive Council.

2.3 Critical Success Factors (CSFs)

The concept of CSFs was first introduced by Daniel (1961) and later developed by Rockart (1979). Since then, the concept has become known in both academic and business fields. According to Amberg, Fischl, and Wiener (2005), several definitions for CSFs have been published in the last three decades, the most common of which was developed by Pinto and Slevin (1987). They defined CSFs as the factors which, if addressed, significantly improve project implementation chances. Also, Leidecker and Bruno (1984) defined CSFs as those characteristics, conditions or variables that, when properly sustained, maintained, or managed, can have a significant impact on the success of a firm competing in a particular industry. Esteves (2004), however, argued that these definitions are limited in that they fail to address the comprehensive concept proposed by Rockart (1979), which seeks to identify an ideal match between environmental conditions and business characteristics for a particular company. Thus, Rockart's definition remains the best-known: '*the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization*'.

Many previous studies were critically reviewed in the literature. The criteria used in this study to select the list of CSFs were the emphasis given to them in the literature reviewed and the frequency with which they were mentioned. The CSFs that were most discussed are summarized in Figure 1: the *x* axis shows the frequency with which individual CSFs were discussed in the literature reviewed in this study, while the *y* axis shows the 13 CSFs that were considered as potential CSFs for the field study investigation.

Figure 1. Frequency of CSF citations in the literature review

2.4 Critical Successful Factors in a UAE Context

Implementing PMSs in UAE government organisations is a challenging task and subject to a high risk of failure, for a number of reasons. This study was thus undertaken to provide UAE government organisations with an understanding of the CSFs that are central to the successful implementation of a PMS. A literature review was conducted to identify the relevant CSFs, after which an empirical case study was undertaken to discover which of them are the most critical to UAE government organisations. The literature review yielded 13 CSFs, which have been classified as shown in Table 2.

Based on the literature review, the researchers developed a preliminary list of the CSFs that were the most frequently discussed and recommended for the successful implementation of PMSs. The list was used in this study as the foundation for a detailed investigation using case studies. This phase of research will assess the impact and value of CSFs for PMS implementation in UAE government organisations. Therefore, it is anticipated that this study will yield a short list of CSFs that are specific to UAE government organisations. Consideration of these CSFs may enable UAE organisations to better use their resources by focusing on the areas that are most likely to have a greater impact on PMS success. The researchers have classified the CSFs into four categories, as shown in Table 2.

Table 2. CSFs identified before field research, classified into four groups

CSF		Group
1.	Linking PMS to organisational strategy	
2.	System design and integration	PMS design and implementation
3.	Continuous monitoring and reporting	
4.	Clear targets and business benefits	
5.	Top management commitment and support	
6.	Staff involvement in the system	People
7.	Skilled resources running the system	
8.	Staff training and awareness	
9.	IT infrastructure and support	Technology
10.	Effective data management system	
11.	Motivation and linking performance to incentives	Processes
12.	Change management	
13.	Role of effective communication	

The CSFs are discussed under four headings, each representing an area of impact: (1) PMS design and implementation, (2) People, (3) Technology, and (4) Processes. A general discussion is provided below on the theoretical and practical implications of PMSs for UAE government organisations.

3. Research Methodology

This study undertook research on government organisations in the UAE with a view toward identifying the most important CSFs that support the successful implementation of PMSs. However, the study was not limited to the identification of such CSFs, but also sought to examine their relevance and criticality. The remit of the research focus was narrowed to an attempt to understand the causes of PMS failure and to avoid possible obstacles to PMS implementation. Qualitative research took the form of case studies involving interviews, observations and document reviews. The aim of this research was to identify the most important CSFs that support both successful PMSs and the implementation of a simple and objective PMS framework for UAE organisations. Moreover, this research aimed to develop a framework for the facilitation and implementation of organisation-wide change, such as that provided in a performance management system (PMS). The research specifically focused on governmental organisations in the UAE that share similar characteristics, and assessed the correlation between their strategies, processes and PMSs. The outcome of this study can assist UAE organisations in implementing effective PMSs, better managing their strategies, and enhancing the efficiency of their businesses. The findings of this research should be of considerable interest and value to senior policy makers, managers and other interested parties.

Based on the nature and the objectives of this study, the researcher believes that the case study design was the most appropriate framework for the present research. A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context (Yin, 2009). A case study may be appropriate

when the field is underdeveloped (Yin, 2003). The method is often exploratory in nature (Eisenhardt and Graebner, 2007) and can be useful in understanding beliefs and relationships. According to Moore (1983), case studies are the preferred strategy when the investigator has little control over events. Case studies do not necessarily have to rely on previous literature or prior empirical evidence. Thus, case study research can be used for theory-building even if little is known about the phenomenon (Vissak, 2010). Thus, the case study method enables research to be conducted in countries with sample bases that are too small for other statistical generalisation methods to be applied (Rowley, 2002).

This study used purposive sampling to identify interviewees. A total of 26 face-to-face, semi-structured interviews were conducted over a period of three months in five organisations. Initially, a small number of interviewees were selected based on their position in the organisational hierarchy and their role within the organisation. An 'expert panel' sampling technique was appropriate for this study, as it was concerned with a small number of specialised people who were knowledgeable in the study area (Aaker, Kumar, & Day, 2001). In each organisation, the researcher approached the managing director to support and facilitate the interviews. The number of participants from each organisation varied between four and six respondents.

Data analysis was spread over two levels. The first level of analysis involved the comparison of interview data for each factor investigated. Then, the diversity of CSFs was divided into a number of categories or themes, which were justified by interview data. The second level of data analysis was a higher level; it involved a more interpretive analysis that was concerned with the responses as well as what may have been inferred or implied. It included the researcher's critical evaluation of the dataset and findings. Therefore, 'memo' codes, or the running commentary of the researcher, were applied to arrive at an in-depth understanding of the interview responses. This inductive approach assists in establishing clear links between the research objectives and the summarised findings derived from the raw data. Consequently, in the present study, the second level of analysis tested the list of CSFs generated from the literature in light of data gathered during interviews. In detailed analysis, a method called *data matrices* was used. Data matrices are familiar case-by-attribute matrices that are used across the sciences to record data (Bernard & Ryan, 2009). The data matrix used in this study consisted of the construct (theme), attributes or propositions, literature, data references and critical evaluation. The objective of this data matrix was to provide a body of knowledge to aid in implementing PMSs.

4. Results

The collection and analysis of empirical data in this study led to the identification of the five most important CSFs affecting the successful implementation of PMSs. However, the data collected from the case study organisations showed a very weak emphasis being placed on CSFs, highlighting the need to give them priority in the implementation of PMSs in UAE organisations. In the literature, motivation and linking performance to incentives was found to be the most important CSF, and yet the field data revealed that it was completely missing from the case study organisations. Linking PMS to organisational strategy was ranked the second most important CSF in the literature, although some scholars consider it the most important factor for PMS implementation. That said, the field data results are alarming: 61% of managers reported that no proper link was made between PMS and organisational strategy. Moreover, staff involvement in the system was ranked the third most important CSF in the literature for PMS implementation; yet in this study, 75% of managers reported that staff involvement in PMS design and implementation was either poor or limited. System design and integration was ranked by the literature as the fourth most important CSF, and was discussed more than any other factor. However, although in the surveyed organisations a PMS design was actually in place, 65% of respondents thought that the design required improvement. The fifth most critical factor, top management commitment and support, also received much attention in the literature. However, 58% of respondents reported weak commitment and weak support from top management for PMS implementation.

In addition to identifying CSFs in a UAE context, the outcome of the field research provided a simple model for all CSFs that illustrates thier details and explains how they work. Furthermore, this study contributes to the currently limited understanding of the CSFs affecting PMS implementation. The results of empirical investigation and the analysis of literature led the researchers to create a list of the top five CSFs that exert the most influence on the successful implementation of PMSs within UAE government organisations:

1. Motivation and linking performance to incentives
2. Linking PMS to organisational strategy
3. Staff involvement in the system
4. System design and integration

5. Top management commitment and support

A detailed discussion of these factors is presented later in the discussion section of this paper.

4.1 CSF Framework for the Implementation of PMSs

To develop a framework for successful PMS implementation, various PMS models were reviewed to determine which CSFs potentially affect its success. Empirical findings of this study, together with the literature review, were used to develop a framework containing appropriate CSFs and the relationships that exist between them. However, based on the literature review, the researchers could not find any previous model for CSFs that lead to successful PMS implementation. Instead, some models were found in the area of CSFs for IT project implementation. Yeoh and Koronios (2010) conducted a study that attempted to develop a framework for business intelligence (BI) systems implementation. Their framework (see Figure 2) was based on the identification and assessment of CSFs as related to managing change in BI implementation, the motivation of their empirical research was to shed more light on the CSFs that influence the implementation of BI systems (Yeoh & Koronios, 2010). They believed that understanding relevant CSFs enables BI stakeholders to optimise their scarce resources and efforts by focusing only on those factors most likely to aid successful system implementation (Yeoh & Koronios, 2010).

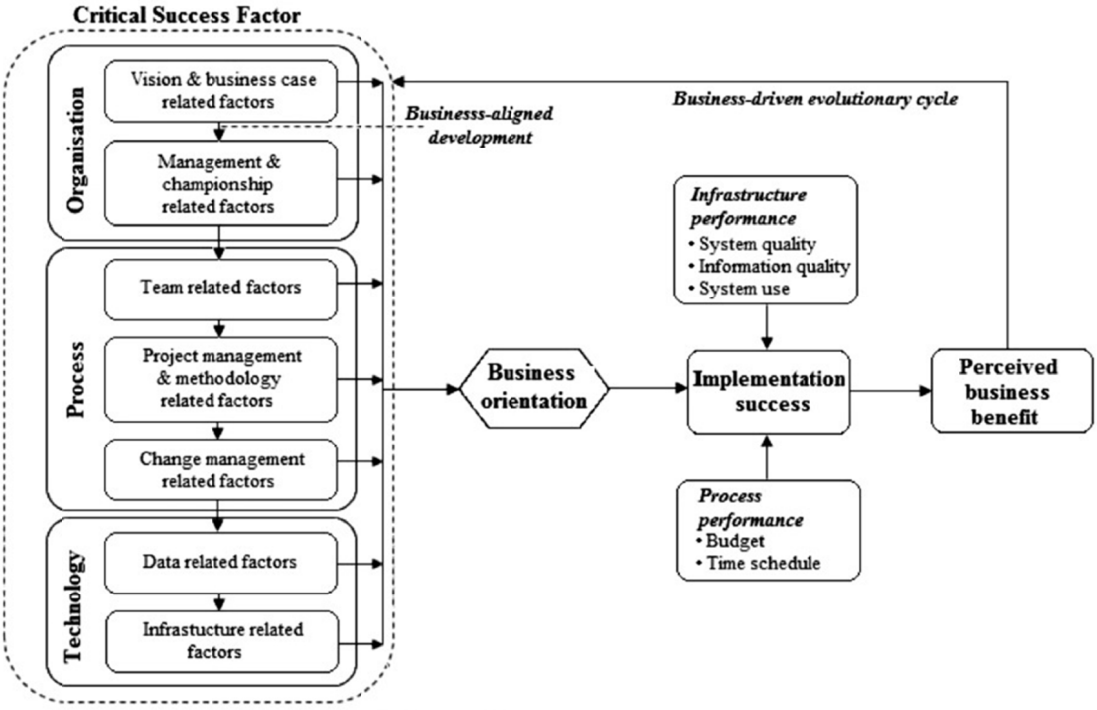

Figure 2. CSF framework for the implementation of BI systems (Yeoh & Koronios, 2010)

As illustrated in Figure 2, the proposed CSF framework for successful BI implementation outlines the contribution of different CSFs on the success of BI implementation. In addition, this framework considers the impact of two key external dimensions, as per Ariyachandra and Watson's (2006) recommendations: process performance and infrastructure performance. According to Yeoh and Koronios (2010), this framework supports the efforts of the organisation and individual users to assess the benefits of BI system implementation. Furthermore, the framework uses a closed feedback cycle to provide continuous assessment of the results. Based on this assessment, the system can be modified, optimised and improved accordingly. Yeoh and Koronios' (2010) framework was found to be the most appropriate framework for modification and was extended to develop new CSF frameworks for PMS implementation.

As illustrated in Figure 3, the modified proposed model produced by this study has unique characteristics that are an improvement over the previous model. First, it is customised to this study's objectives and serves as a framework for CSFs involved in the successful implementation of PMSs. Second, the design was improved so

that managers can use its simple and practical design without confusion. Third, the model is flexible and dynamic, and can be reviewed and updated from time to time. All that is needed is to use the closed loop feedback cycle, as in Yeoh and Koronios' (2010) framework. A fourth strength of the proposed model is that it has fewer CSFs; this encourages a greater degree of focus and allows an organisation to prioritise its efforts and budget with regards to only the most important factors. A fifth strength of the model is that CSFs are clearly defined and can be easily measured. In fact, a separate model for every CSF was developed to assist in understanding inputs; consequently, key performance indicators (KPIs) can be designed and the results measured. Finally, all complex relations and high-level groups were removed to support better implementation. Hence, the proposed CSF framework for successful PMS implementation in UAE government organisations is less complicated and represents this empirical study's main findings.

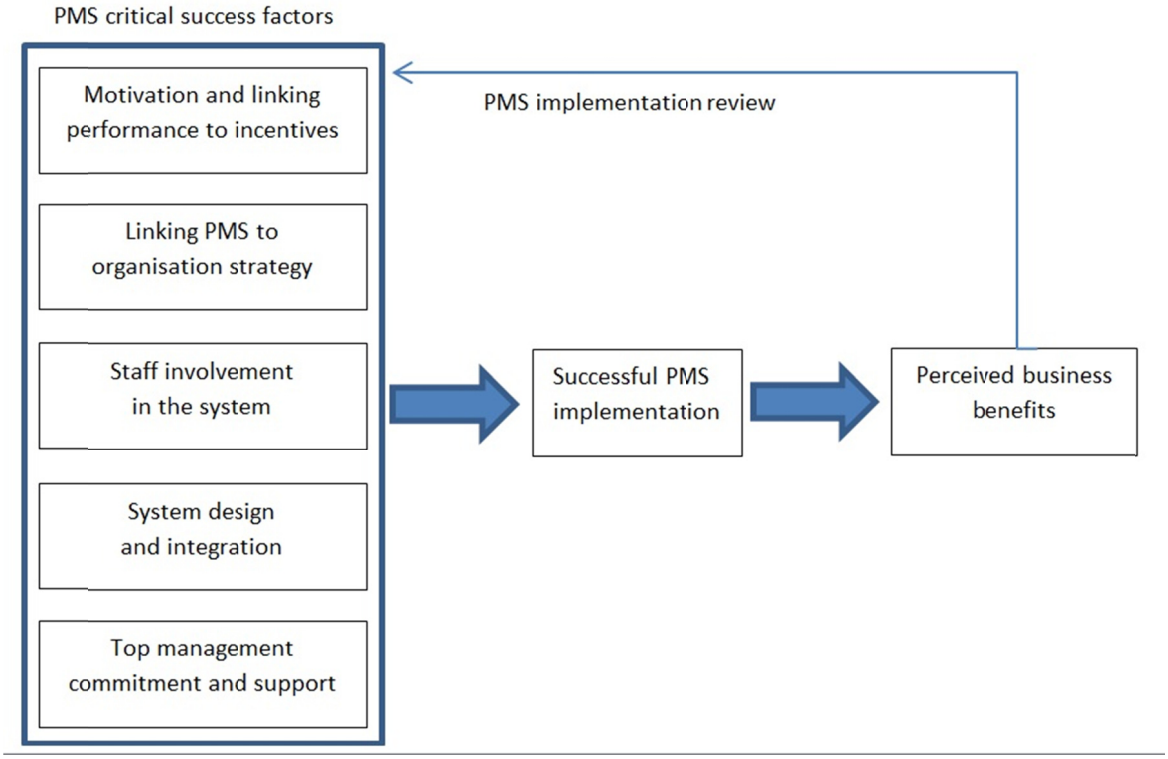

Figure 3. Proposed CSF framework for successful PMS implementation in UAE government organisations

5. Discussion

This study found that the five factors listed in Figure 3 are interrelated: higher levels of motivation are associated with higher levels of staff involvement; linking PMS to organisational strategy depends on appropriate PMS design and integration; and top management commitment and support increases motivation and staff involvement within an organisation. Thus, every CSF has either a direct or indirect impact on the other factors. The order of CSFs in the framework was arranged from top to bottom according to their relative importance. Critical assessment of both the literature and this study's empirical findings led to a greater understanding of the level of importance of every CSF based on the level of impact it has on PMS implementation and on the level of attention paid to it in the literature. As shown in this framework, the collective outcome of the five CSFs determines the success of PMS implementation. Weaknesses in any one of the CSFs will consequently affect the entire system. Moreover, the framework flow shows that the overall success of PMS implementation will result in perceived business benefits. These benefits can be measured using strategic KPIs. The closed feedback loop is essential for continuous improvement, as it is a dynamic process that needs to be reviewed on a continuous basis. Therefore, the validity of the framework can be reviewed on an ongoing basis, and if the benefits are found to be less than expected, the CSFs can be reviewed to determine the source of the problem.

Below, the five CSFs are briefly described to demonstrate how they work and how they are measured. Also, a simple model is developed to illustrate this study's empirical findings for each factor; the model also helps enhance understanding of the mechanisms and important elements needed to make each factor effective and successful.

5.1 Motivation and Linking Performance to Incentives

The literature stresses the importance of motivating people by offering incentives for performance and setting personal targets, whether at an organisational or staff level (Blasini & Leist, 2013). However, the reason why this CSF is given top priority on the list is that, in UAE government organisations, no link is made between PMS results and incentives; indeed, no system of rewards and recognition appears to be in place at all. The majority of managers surveyed in this study believed in the critical importance of motivation to the success of PMSs: 20 of the 26 managers highlighted the importance of motivating employees. Moreover, the majority of managers also stressed the importance of linking incentives to organisational performance in order to motivate staff. They believed that proper motivation will have a positive impact on an organisation's performance. For instance, one manager stated that *'There are no incentives in place at present; also, no one receives a bonus if the organisation performs well*.' Another manager stated that '*If staff can see the benefit from that system, and they* feel that their performance will be recognised*, the PMS will be successful*.' A third manager claimed that '*People will accept a PMS if they see any signs of benefits; rewards and recognition should be given to people who are involved in its successful implementation.'*

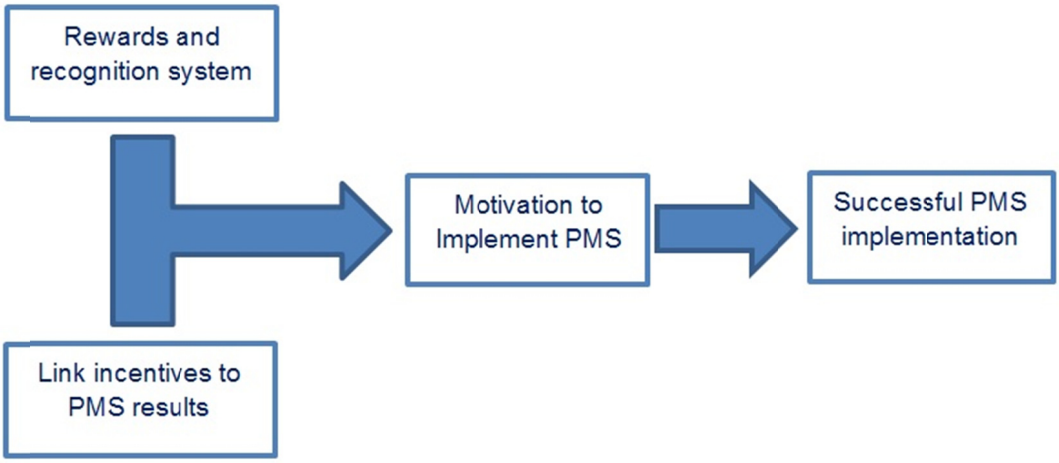

Figure 4. Motivation model for PMS implementation

Bourne et al. (2002) identified lack of motivation as a major threat to PMS success. Figure 4 illustrates the mechanism of the motivation model and its contribution in promoting the successful implementation of PMSs. According to empirical findings in this study, the most important factors that stimulate desire and motivation in staff to be continually interested and committed to PMS implementation are the link between incentives and PMS results and the availability of rewards and recognition. The effective use of these two factors would create the desired level of motivation among staff needed to implement PMSs effectively; consequently, this would also support their successful implementation. The assessment of this model implementation can be achieved by auditing organisation policy for the existence of such systems. In addition, determining the right type or level of implementation can be carried out using some KPIs, including staff satisfaction with the rewards and recognition system, the percentage and amount of incentives applied, and their relationship with PMS results.

5.2 Linking PMS to Organisational Strategy

Norton and Kaplan (2002) stated that linking PMS to organisational strategy is the most important factor in achieving the successful implementation of PMSs. Although the results of this study indicate that managers strongly subscribe to this view, in practice there is weak alignment between organisational strategy and PMSs.

This study found that 39% of managers interviewed believed that their organisation's PMS was strongly aligned with organisational strategy. In contrast, 44% of managers interviewed believed that the alignment between a PMS and organisational strategy is weak. The remaining managers (17%) had an even more negative impression,

believing that the alignment was missing altogether. For instance, one manager stated, *'The link is immature at the moment because our strategy doesn't have smart objectives setting out where we want to go. These are desires, not necessarily strategies.'* Another manager claimed, '*We're still missing the linkage between the two [PMS and strategy].'*

KPIs are not strongly linked to the organizational strategy and there is no proper cascading of initiatives from organisational objectives. PMSs are not used as strategic tools for implementing organisational strategy. Figure 5 presents a model for the successful alignment of PMSs and organisational strategies. Based on the empirical findings, it can be argued that the importance of the alignment between PMSs and organisational strategies is strongly linked to the fact that an organisational strategy needs a PMS to monitor and control its execution and implementation.

As illustrated in Figure 5, the PMS alignment with organisational strategy model consists of three levels: the top level represents organisational strategy, vision, mission, objectives and values; the middle level includes the strategic objectives and initiatives that support strategy execution (the middle level is usually the operational level, where all relevant initiatives and objectives are derived from the strategy and converted to tasks and projects, and the bottom level represents the PMS. At this level, the PMS contributes to organisational strategy via the KPIs, which are the core of PMSs. Similarly, PMSs can be used to support strategy execution as a tool for managing a business. The model also shows that the initiatives in the middle level can be monitored and measured by the PMS in the bottom level. The results can be feedback to the middle level to report the execution performance. Therefore, a PMS cannot work independently, and should always be used to measure strategic issues: this is its greatest value for an organisation. The existence of this link can be assessed by auditing an organisation's objectives and initiatives. All strategic objectives and initiatives should have KPIs and be monitored by a PMS.

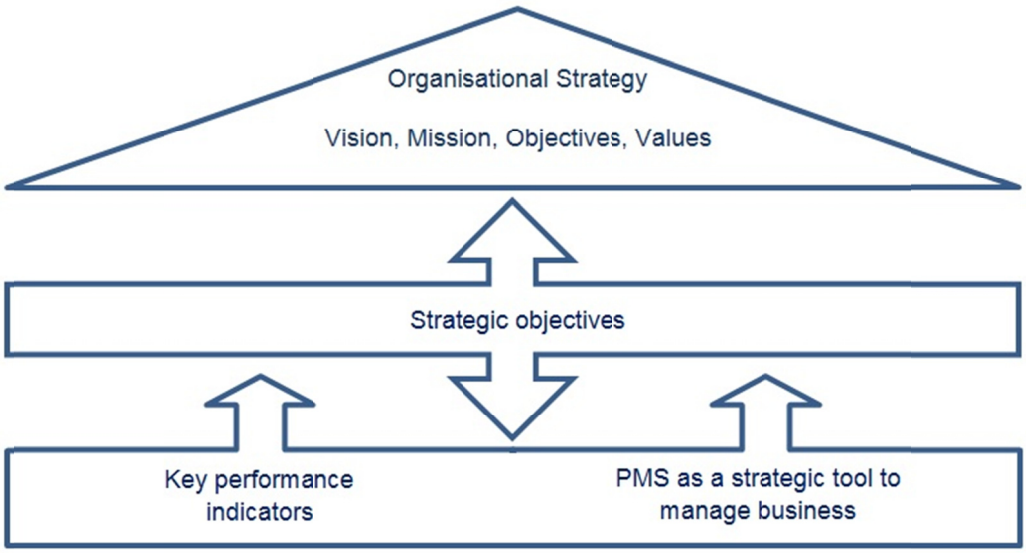

Figure 5. PMS alignment with organisational strategy

5.3 Staff Involvement in the System

According to evidence from this study, there is poor involvement by staff, especially at lower levels, in PMS implementation; this is due to a number of factors, including their exclusion from PMS design, which leads to poor ownership of the system. In addition, staff at lower levels do not participate effectively in implementation. Poor awareness of the system and limited training are further reasons for weak involvement. The literature highlights the importance of involving staff in the decision–making process for the successful implementation of PMSs (Sadikoglu & Zehir, 2010).

Interview data regarding staff involvement shows that only 23% of the respondents believed that the staff were well involved in the PMS development and implementation process. Conversely, 42% reported that only upper level and senior managers were involved in the PMS development and implementation process. It was apparent

that the majority of managers (or 75% of the respondents) were not satisfied about the current level of staff involvement in PMS development and implementation. One-third of respondents (33%) stated that the overall level of staff involvement was quite poor. There are many potential reasons for this, one of which could be the limited number of staff who have access to the system. One respondent claimed that '*Unfortunately, not only junior, but some senior members of staff, and some middle management, are not interested*.' Similarly**,** another respondent stated '*Staff are not that interested, they don't see any change*.' A third respondent asserted that *'The system looks isolated; staff involvement is limited as the PMS takes data from reports and sends them to management, and the staff doesn't notice it.'*

Figure 6 illustrates the staff involvement in PMS implementation model; this model summarises the contribution that staff awareness and involvement make to the effective implementation of PMSs. According to the empirical findings of this study, effective involvement by staff in PMS implementation depends mainly on three factors: sufficient awareness by staff of PMS objectives, effective engagement of staff in PMS design, and the involvement of staff in PMS implementation.

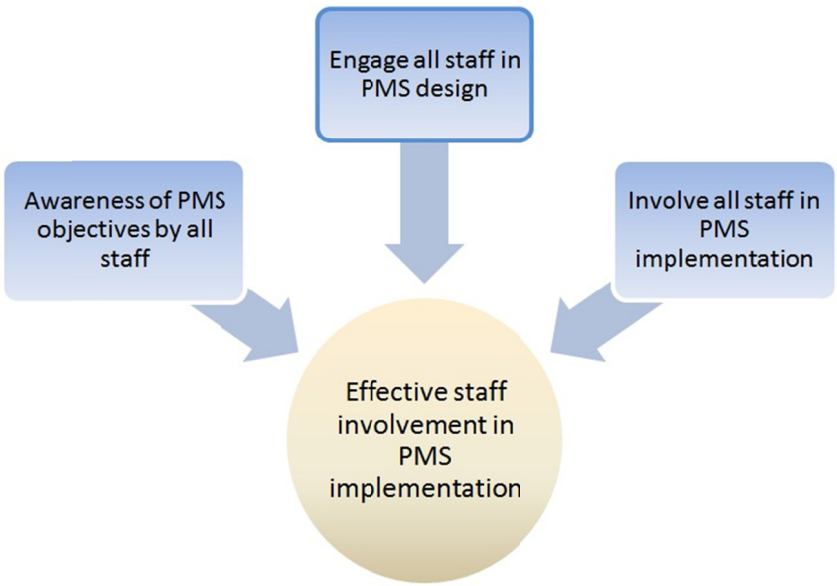

Figure 6. Staff involvement in PMS implementation model

Although some of these factors are discussed in other sections in this paper in detail, the level of staff involvement can be assessed and measured through surveys or reviews of the project resource plan to determine how many people participated in every stage. In addition, KPIs based on training and awareness sessions and workshops can be obtained to assess staff involvement.

5.4 System Design and Integration

The results of this study demonstrate that the existing PMS design is complex and requires major improvement if the implementation of PMSs is to be successful. The study also found evidence of a lack of focus and the use of too many measures in the design, both of which increase the probability of failure. According to Neely, Bourne, and Kennerley (2000), successful PMS implementation largely depends on an appropriate design, and other researchers have concurred with this view (Bourne et al., 2002; Pawar & Driva, 1999; Richardson, 2004).

This study found that 27% of respondents thought that the existing PMS design was simple and easy to deal with, while 50% believed it was complex and difficult to use. However, the majority of respondents (65%) agreed that the PMS design required improvement. For example, one respondent stated that '*The system is still not effective; it is not transparent and its design does not cover all levels of the organisation*.' Another respondent commented that '*I feel it is being isolated, not embedded in the business*.' A third respondent claimed, '*We have developed our own system because we still see the system as limited; it is designed to report high-level KPIs but not KPIs for our units and sections*.'

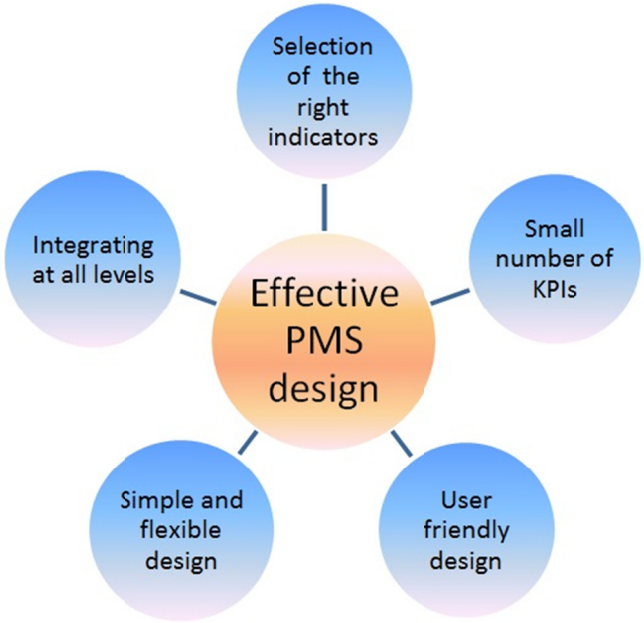

Figure 7. The five elements of an effective PMS design

In addition, this study recorded complaints that PMSs were not user-friendly and were not properly integrated with all levels of the organisations; moreover, the wrong KPIs were being selected and were poorly defined. Based on empirical results and the literature review, a proposed model for effective PMS design is presented in Figure 7 that illustrates the five elements of effective PMS design: (1) the selection of the right indicators, (2) a small number of KPIs (usually 6-9 in each level), (3) a user-friendly design to encourage use by staff, (4) proper integration of KPIs at all levels, and (5) a simple and flexible design so that staff can understand and modify it when necessary.

PMS design is for the most part technical and is thus usually controllable; therefore, it can be easily measured and assessed. The number of KPIs can serve as an indicator, and a smaller number is preferable. The number of levels in an organisation covered by a PMS is another KPI, and more levels are preferable. Customer satisfaction surveys can also be used to assess satisfaction with the PMS design, so more user involvement represents greater satisfaction.

5.5 Top Management Commitment and Support

This study has found that the level of existing support and commitment to PMSs in top management is poor, although managers do acknowledge this weakness. This finding is in agreement with research by Chrusciel and Field (2003), de Waal (2002), Kaplan and Norton (2000), and Richardson (2004), among others. In addition, the literature stresses the importance of gaining consensus and buy-in from senior management early on, in order to establish legitimacy and visibility for the project (Ariyachandra & Frolick, 2008). The analysis of the feedback received in this study shows that 62% of managers mentioned the importance of management commitment and support in the successful implementation of PMSs. Nevertheless, 58% reported weak commitment in the current situation. Only 19% believed that the current level of commitment and support was sufficient for successful PMS implementation. For instance, one respondent noted that '*People don't see strong leadership in this area. I would like to emphasise the importance of leadership*.' Another respondent recalled that *'Senior management were heavily involved at the beginning of the project but they withdrew later on.'*

Figure 8 illustrates the contribution of management commitment and support to the successful implementation of PMSs. Five motives were found that positively affected their level of commitment and support: (1) early-stage involvement and engagement in setting PMS targets and objectives, which heightens managers' sense of ownership and results in better products; (2) the importance of the responsibility of top managers in allocating the right resources for PMS implementation, which motivates them to prioritise their projects and identify the best skills for completing them; (3) ensuring that the PMS is the main source for reporting data, which will direct managers toward using PMSs as trusted sources, and which will in turn help them understand its value and lend

it more support; (4) positioning PMS as a main agenda item in business meetings, which will promote increased top management commitment toward its successful implementation; and (5) convince top managers to champion the use of PMSs in their departments, as this will enhance their feeling of ownership and lead to better support and commitment. If top managers give PMS the right amount of attention, staff will follow suit, and system implementation will be successful. Top management commitment can be measured by auditing their actions and involvement in implementing PMS initiatives.

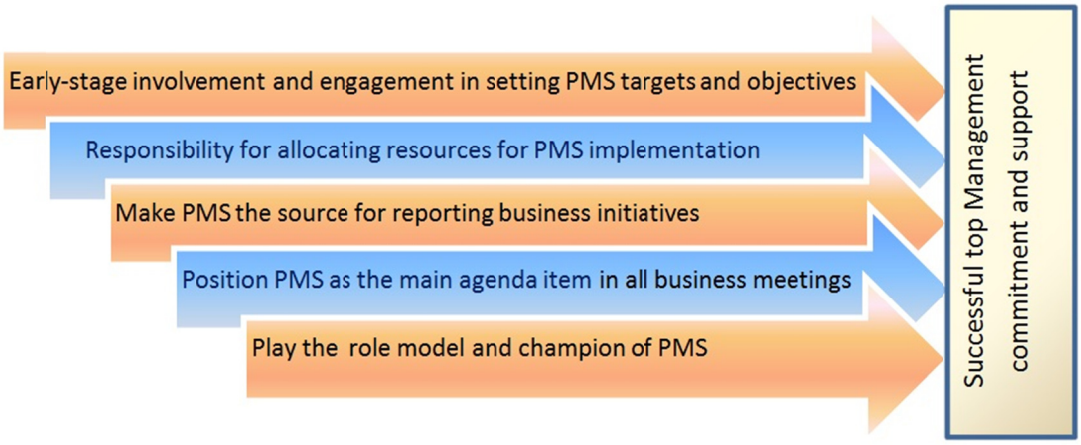

Figure 8. Top management commitment and support for PMS implementation

As a result, the proposed framework highlights the top CSFs that need to be addressed and can assist organisations in focusing their attention on those areas that will have the most significant impact on successful PMS implementation. In addition, this research also makes a theoretical contribution by expanding our understanding of how CSFs influence successful PMS implementation. The results and outcomes of this study thus extend current theories while helping organisations plan properly for successful PMS implementation by focusing their efforts and resources on the most relevant CSFs. This study is of great benefit to organisations because the data can help them to avoid the risk of failed PMS implementation, while also encouraging top management to better utilise their resources and better understand areas of concern. Figure 9 shows the full proposed model for PMS CSFs in UAE government organisations, with sub-models for individual CSFs.

The modified proposed model (Figure 9) produced by this study can be considered as a framework for the CSFs needed to successfully implement PMSs in UAE government organisations. It features a simple design to support easy implementation and consists of five CSFs that are essential for the successful implementation of PMSs. The outcome can be measured according to business expectations and adjusted if needed, and the closed loop supports continuous monitoring and assessment. If the outcome is deemed unacceptable, the design of the model allows for the CSFs to be analytically reviewed and altered accordingly. The model is both flexible and dynamic, permitting updates where and when they are required. The small number of CSFs allows for a greater degree of focus so that organisation can prioritise their efforts and budgets with regards to the most important factors. As shown in the sub-models, the CSFs are clearly defined and can be easily measured, which helps facilitate the effective implementation of the proposed model.

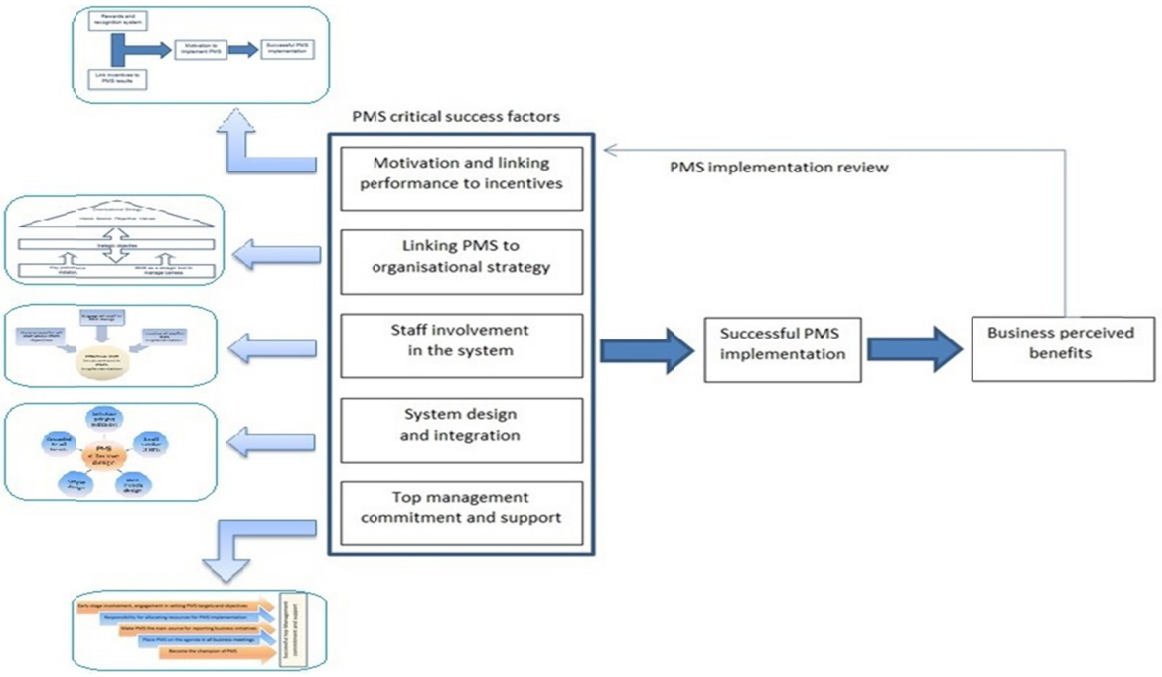

Figure 9. Proposed CSF framework for successful PMS implementation in UAE government organisations with individual CSF sub-models

6. Conclusion

PMSs and their implementation in the UAE is a relatively new research area. This study attempted to reduce the gap in the literature on PMSs in the UAE in the public sector (Amir & Amizawati, 2010; Jamil et al., 2011; Ruzita, Azhar, & Hasan, 2009; and others). The study was specifically undertaken to shed more light on the CSFs that influence the implementation of PMSs, as the process of successfully implementing a performance management system is currently under-researched (Cheng, Dainty, & Moore, 2005). This research thus presents a valuable contribution to the study of PMSs in government organisations, yielding important information for performance management researchers, local government practitioners, and policy makers. The study began by reviewing the literature, which produced a list of the common CSFs that support PMS implementation, and then identified some gaps in this area, including the lack of research on the subject in developing countries as compared to developed countries, and in the government sector versus the private sector.

This study makes several contributions to the literature on CSFs that influence successful PMS implementation in the public and government sector, principally in the UAE, by evaluating the impact of CSFs in this context and the complex relationship between CSFs and the implementation of PMSs. Although the present research extends the work of others who explored CSFs in relation to PMS – Ariyachandra and Frolick (2008), Bourne et al. (2002), Cheng et al. (2005), de Waal (2003), Ferreira and Otley (2009), Goh Swee (2012), Hawke (2012), and Radnor and Barnes (2007), among others – it used a different approach to identify the specific CSFs in the context of UAE government organisations. Such an approach can be applied to developing countries in general, but the outcomes could vary from country to country. After investigating the causes of the weaknesses and gaps in the critical factors in UAE government organisations, this study recommended means of improvement and brought to light the ubiquity of performance management in government organisations. The study also contributed to the literature on PMSs in the government sector in developing countries, presenting a theoretical model for CSFs that supports the successful implementation of PMSs and using the model to arrive at the findings and conclusions discussed herein.

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