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ScienceDirect

International Journal of Project Management 32 (2014) 202 – 217

International Journal of Project Management

www.elsevier.com/locate/ijproman

Exploring the value of project management: Linking Project Management Performance and Project Success

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Received 21 February 2013; received in revised form 4 May 2013; accepted 14 May 2013

Abstract

The literature on Project Management (PM) shows that, in spite of advancement in PM processes, tools and systems, project success has not significantly improved. This problem raises questions about the value and effectiveness of PM and PM systems. This paper reports a research study which tests the relationship between PM performance and project success drawing from empirical data on PM professionals working in UAE project-based organisations.

Multi-dimensional frameworks are validated and used in this study to measure PM performance and project success. A total of 154 completed questionnaires were analysed. Bi-variate correlation and multiple regression tests found a positive influence of PM performance and its contributing variables on project success. Additionally, new variable relationships that have not previously been identified are explored between individual variables of PM performance and project success.

Keywords: Project management performance; Project success; PMPA framework; Performance assessment; UAE organisations

1. Introduction

Project management (PM) has developed into a subject discipline alongside other management functions such as operations, information technology, or finance (Kenny, 2003) and the research literature in this discipline is growing (Besner and Hobbs, 2006; Thomas and Mullaly, 2007). Organisations are increasingly using PM as a tool to increase their productivity (Frame, 1995). The popularity of PM methodologies is confirmed by a partial longitudinal study conducted by Fortune et al. (2011) that reports a significant increase in 2011 from 2002 in the use of PM methodologies and tools within PM professionals. However, there is still limited research evidence that links PM performance with the value resulting from investment in PM. The literature suggests that multiple benefits can be achieved from having a mature PM system in place (Bryde, 2003a; Kwak and Ibbs, 2000) and that PM is more effective than traditional functional management (Avots, 1969; Munns and Bjeirmi, 1996) but limited quantifiable evidence is available on these benefits (Thomas and Mullaly, 2007).

The Project Management Institute (PMI) conducted an in-depth study spanning 4 years and involving 65 case study organisations from 14 countries to find what value PM delivers to organisations (Thomas and Mullaly, 2009). The PMI study confirmed the value of PM but indicated that value is dependent on culture, implementation 'fit' with organisation needs and raised questions about the sustainability of value generation. This study concludes that PM creates tangible and intangible benefits (Thomas and Mullaly, 2008). This result is supported by many other researchers (Bryde, 2003a; Kwak and Ibbs, 2000; Phillips, 1998) but the value is defined differently from one study to another.

There is also some evidence that the value sought from a high performing PM system is associated with the success of projects

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0263-7863/$36.00
http://dx.doi.org/10.1016/j.ijproman.2013.05.012

(Cooke-Davies, 2004; Munns and Bjeirmi, 1996). The link between PM performance and project success (Cooke-Davies, 2004; Din et al., 2011; Stefanovic, 2007) is hard to model involving complex constructs often with insufficient accuracy and detail leading to findings that are fragmented and incomplete. The complexity of the issue is substantiated by the modelling effort made by Brown and Adams (2000) linking Building Project Management (BPM) to construction project success outputs of time, cost and quality, which surprisingly showed no beneficial effect of BPM upon cost and time delivery and indicated a negative relationship between BPM and the delivered quality. These findings raise questions about the value of PM as well as the appropriateness of the models used to measure the constructs of PM and Project Success. This lack of clarity on appropriate models and the need to comprehend more the value of PM forms the basis of our research study.

A number of studies investigate the nature of the term 'Project Success'. Some conceptualise it as a uni-dimensional construct concerned with meeting budget, time and quality (Brown and Adams, 2000; Bryde, 2008; Fortune et al., 2011; Müller and Turner, 2007; Turner, 2009; Wateridge, 1995) whereas others consider project success a complex, multi-dimensional concept encompassing many more attributes (Atkinson, 1999; Jugdev and Muller, 2005; Lim and Mohamed, 1999; Lipovetsky et al., 1997; Shenhar et al., 2001). Despite attempts in the PM literature to define project success and to assess it meaningfully many studies conclude that numerous projects do not meet their objectives and some fail altogether (Cicmil and Hodgson, 2006; Lee and Xia, 2005; Papke-Shields et al., 2010; Pich et al., 2002; The Standish Group, 2009). Therefore, there is a continuing need to identify the factors that positively influence project success. Some researchers have focused on identifying Critical Success Factors (CSFs) (Belassi and Tukel, 1996; Cooke-Davies, 2002; Fortune and White, 2006; Pinto and Slevin, 1987). Their research has provided a list of potential factors that assist with understanding the phenomenon of project success. However, a major limitation is that it is difficult to categorise and reduce the factors to a manageable number (Stefanovic, 2007).Though some CSF's do stand out in this long list of potential factors, there is only limited agreement among authors on critical factors and their individual influence on Project Success (Fortune et al., 2011). Hence, these studies have not yet identified a compelling model of the CSFs. Based on an extensive review of the project success literature, Muller and Jugdev (2012) concluded that a clear definition of project success does not exist and there is a need to develop meaningful and measurable constructs of project success. They indicated that the research theorising CSFs is not sufficient in meeting this objective.

Just like project success, researchers have modelled PM in many ways to determine how best to enhance PM performance. Interestingly, many of the CSFs that are identified in studies are actually the PM practices applied during project execution. However, the limitations of using CSFs for modelling, as discussed above, limit the applications of these models.

Other studies have focused on PM Maturity models based on a PM Body of Knowledge (PMBOKs) such as 'a Guide to the Project Management Body of Knowledge' (PMBOK® Guide, PMI, 2004). These models are criticised for being limited to short-run gains and exclude intangible benefits (Jugdev and Thomas, 2002; Thomas and Mullaly, 2007).

Another approach uses established models from other fields, for example, Total Quality Management (TQM). The complementary nature of TQM and PM (Broetzmann et al., 1995; Bryde, 2003a; Choi and Eboch, 1998; Hides et al., 2000) provides some justification for adapting TQM-based models such as the European Foundation of Quality Management's Business Excellence Model (EFQM, 2011). The PM Performance Assessment Model proposed by Bryde (2003a) and the PM Excellence Model proposed by Westerveld (2003) are adaptations of the EFQM model to PM environments. However, these models have not been extensively researched.

Summarising the above review, there is an insufficient understanding of the relationships between PM Performance and Project Success. Relationships between these constructs are heavily dependent on the subjective and objective nature of how project success is perceived and defined. The inherent complexity of the constructs results in problems with modelling and in analysing their inter-relationships. Hence, this study focuses on finding empirical evidence for this relationship by selecting and validating appropriate models to measure these constructs and then analysing the relationship between these models.

2. Conceptual framework

2.1. Project Success

Projects differ in size, uniqueness and complexity, thus the criteria for measuring success vary from project to project (Müller and Turner, 2007) making it unlikely that a universal set of project success criteria will be agreed (Westerveld, 2003). Individuals and stakeholders often will interpret project success in different ways (Cleland and Ireland, 2006; Lim and Mohamed, 1999). Furthermore, viewpoints about performance also vary across industries (Chan and Chan, 2004). Muller and Jugdev's (2012) study which focuses on the evolution of the project success literature over the last decade neatly summarise this issue by asserting that it is a multi-dimensional and networked construct. They assert that perceptions of success and the relative importance of success dimensions differ 'by individual personality, nationality, project type, and contract type' (p. 768).

Consequently, a number of alternative frameworks are available for measuring project success. Pinto and Mantel (1990) recommend measuring: the success in the implementation process; the perceived value of the project; and client satisfaction with the result. In the context of the defence industry, Lipovetsky et al. (1997) propose measuring project success across four dimensions of: meeting design and planning goals; customer benefits; benefit to the developing organisation; and benefit to the defence and national infrastructure. Lim and Mohamed (1999) group project success by the use of micro and macro criteria. Whereas, Atkinson (1999) divides project success into three categories: doing the process right; getting the system right and getting the benefits right.