The Effects of Project Management Certification on the Triple Constraint

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ABSTRACT

This research paper describes key information technology (IT) project management activities in terms of project scope, time, and cost management, namely the triple constraint. The authors contend that the ability to properly manage and execute these activities is the quintessential component that oftentimes drives whether projects succeed or fail. The literature shows that IT projects have a dismal success rate but successful projects have been on the rise. The authors attempt to determine if the increase of successful projects correlates to the increase in the number of certified project managers. Empirical evidence is presented that indicates certified project managers do not perform project scope, time, and cost management activities better than project managers without professional certification credentials.

Keywords: Business Management, Certification, Cultural Aspects, Information Systems, Information Technology, Project Management, Socio-Psychological Elements, Triple Constraint

INTRODUCTION

IT projects are constrained in various ways based primarily on their scope, time, and cost goals. These three project dimensions are known as the triple constraint and must be balanced in order to increase the likelihood of successful project outcomes. Failure to consider the triple constraint throughout the life-cycle of IT projects generally leads to failed projects (Collyer et al., 2010; Collyer & Warren, 2009; Chua, 2009). IT project failures typically manifest themselves as late deliverables, exploded budget costs, a desired system not functioning as intended, namely not meeting project scope, as well as project cancellations (Schwalbe, 2010; Gibbs, 1994; Abdel-Hamid & Madnick, 1989). Practitioners sometimes apply improved variants of structured analysis and design or object-oriented analysis and design techniques to address and help correct these issues (Gelbard et al., 2002). However, IT project failures represent more of a systematic managing problem not solely analysis and design issues and therefore must be...
addressed at the project management level (Nie
naber & Cloete, 2003). The published literature
describes that the primary reasons for project failures are due to various inadequacies in the project management process (Lind & Culler, 2011; Burch, 2010). Therefore to help correct these failures ways are needed to ensure that project managers are properly trained in their discipline to avoid common pitfalls.

In recent years, failed IT projects have been decreasing, thereby leading to a higher number of successful projects. In 1995, only 16% of IT projects were successful in meeting the triple constraint (The Standish Group, 1995). In 2002, the number of successful IT projects increased and approximately 34% of IT projects did meet project scope, time, and cost goals (The Standish Group, 2003). In a more recent study, Anderson (2010) reported that in 2000, successful projects were at 28% and increased to 32% in 2008. The numbers reported in these studies represent a 112.5% and 14.3% improvement respectively, which naturally asks the question, why the improvement? One explanation is better skilled project managers (The Standish Group, 2001). The project management profession has been improving due to advances in project management training, tools and techniques. In addition, project managers are beginning to follow a more systematic and holistic approach to project management, especially in the area of project scope management. A systematic process is an essential element to process improvement (Becker-Kornstaedt, 2001).

There are many programs that provide advanced training and certification in the project management profession. The focus of these programs is to train project managers to take a systematic, repeatable and verifiable approach to all activities of the project development process. For example, the Project Management Institute (PMI) Project Management Professional (PMP®) certification credential is the most widely recognized project management certification and one of the post popular (Starkweather & Stevenson, 2011; Carr, 2009; Tucker, 2006). In addition, the PMI has played, and continues to play a central role in the project management profession (Laufer, 2009). In 1993, there were 1,000 PMP® certified project managers, in 2008 that number grew to 318,289, and at the end of 2010, there were 412,503 (PMI, 2011; PMI, 2009). This represents a continually large increase in the number of trained project managers certified as PMP®s. Other institutes offer similar certifications based on providing similar training. Clearly the project management profession recognizes the need to provide advanced training. Does the increased number of successful projects correlate to the increased number of certified project managers? This research paper attempts to answer this question by surveying 93 project managers and provides results that examine the effects of certification and project success rate based on effective project scope, time, and cost management.

LITERATURE REVIEW

Project Scope Management

Perhaps the most difficult aspect of project management is determining and documenting project scope. Scope refers to project functionality or system functional requirements and project scope management involves all activities utilized to collect, define, verify, and control project scope. Eliciting and documenting project requirements are easier said than done. Many techniques exist to collect and document requirements ranging from one-on-one interviews between stakeholders and developers to focus group discussions to evolutionary prototype development.

Results of the collected information are compiled into documents that drive subsequent project development phases. Regardless of the approach taken, the process is time consuming and expensive. However, it is the essential first step that generally determines whether projects are successful or not. Poor requirements gathering generally leads to problems down the line that must be addressed prior to project delivery. The relative cost to correct a defect is significantly higher the later in the development phase the problem is detected and is depicted.
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