The Effects of Project Management Certification on the Triple Constraint

Joseph T. Catanio, Department of Management Information Systems, John L. Grove College of Business, Shippensburg University, Shippensburg, PA, USA

Gary Armstrong, Department of Management Information Systems, John L. Grove College of Business, Shippensburg University, Shippensburg, PA, USA

Joanne Tucker, Department of Supply Chain Management, John L. Grove College of Business, Shippensburg University, Shippensburg, PA, USA

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

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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 manage 
ment 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 ad 
vanced 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 Manage 
ment Institute (PMI) Project Management 
Professional (PMP®) certification credential 
is the most widely recognized project manage 
ment 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 (Lauffer, 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 manage 
ment 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 proj 
yect 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 func 
tionality 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 docu 
ment requirements ranging from one-on-one 
interviews between stakeholders and develop 
ners 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 proj 
jects 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
Directing Equal Pay in the UK ICT Labour Market
www.igi-global.com/chapter/directing-equal-pay-ict-labour/22873?camid=4v1a

Enhancing the Disaster Recovery Plan Through Virtualization
Dennis Guster and Olivia F. Lee (2011). *Journal of Information Technology Research* (pp. 18-40).
www.igi-global.com/article/enhancing-disaster-recovery-plan-through/68960?camid=4v1a