International Journal of Information Technology Project Management
Volume 9 • Issue 1 • January-March 2018

Increasing Project Success in China from the Perspectives of Project Risk, Methodology, Tool Use, and Organizational Support

Charlie C. Chen, Department of Computer Information Systems & Supply Chain Management, Appalachian State University, Boone, NC, USA

Makoto Nakayama, College of Computing and Digital Media (CDM), DePaul University, Chicago, IL, USA

Yongyi Shou, School of Management, Zhejiang University, Hangzhou, China

Danuvasin Charoen, NIDA Business School, Bangkok, Thailand

ABSTRACT

Besides lack of organizational support, using project risk management tools and methodology effectively has been one major challenge to project success. As China is extending its project management (PM) concepts from mainly construction and national defense projects to many other industries, project managers in those new industries rely on the use of PM tools and methodologies. However, it remains unclear to what extent the use of them can increase project success. To address the research questions, this study surveyed 93 project managers in China and found that success of project execution is contingent upon: (a) project risks, (b) PM methodology, (c) organizational support, and (d) PM tool use. The presence of project risk can stimulate increased use of PM tools, thereby helping achieve project success. Organizational support and PM tool use also remain conditions for project success. This study contributes to the current literature by assessing project success from the perspectives of organizational support, PM methodology, and PM tools.

KEYWORDS

Organizational Support, PM Methodology, Project Management (PM) Tool, Project Risk, Project Success

INTRODUCTION

According to McGrath (2013), the innovation of new business models enabled by information technology is disrupting existing competition and giving new companies transient competitive advantage. In the face of volatile and uncertain business environments, both dominant and emerging companies need to be able to quickly propose innovative projects in order to cope with intensifying competition. However, a quick introduction to new projects can result in poor requirement management, which is considered the root cause of many dynamic risks, including scheduling and budgeting, as well as operational, technical, and programmatic risks (Angelow, 2015). These dynamic risks are highly

DOI: 10.4018/IJITPM.2018010103

complex and unpredictable in today's creative economy, and the inability to manage and mitigate these risks can wreak havoc on IT projects (Cooper & Chapman, 1987).

An effective assessment of project risks needs to consider structural (e.g. hierarchy of authority, centralization) and contextual characteristics (e.g. corporate culture and size) (F. Warren McFarlan, 1981). PM tools and methodologies have been commonly employed to minimize project risks because they can be adapted to different project characteristics. For instance, qualitative methods can be used to rate the magnitude of potential risks resulting from tangible and intangible threats on a low, medium or high scale (Lanfranchi, Giannetto, De Pascale, & Hornoiu, 2015). Other researchers favor the use of quantitative risk management tools (e.g. Monte Carlo simulation) because of their strength in managing projects that have uncertain project schedules and low budgets (Purnus & Bodea, 2014). One study has shown that software tools that comply with capability maturity model integration (CMMI) or project management body of knowledge (PMBOK) can effectively manage project management processes and achieve project success (Pereira, Gonçalves, Von Wangenheim, & Buglione, 2013). Although the literature has emphasized the importance of using the right tools and methods, it is not clear the extent to which their use can contribute to containing project risks and helping with project success (H. Thamhain, 2013). The lack of formal risk management tools could become a barrier to the execution of a risk management program (Parker & Mobey, 2004).

In addition, organizational support consists of the cognitive and emotional involvement of the management and is indispensable for the success of projects (Liu., Wang, & Chua, 2015). This study provides insight into the relative influence of organizational support on project success in comparison with project risks, tools, and methodologies.

The remaining sections are organized as follows: first is a literature review, followed by the development of a theoretical model. Hypotheses are proposed against the research model, and the research methods are presented with a detailed discussion of the data collection and analysis methods. Analysis of the results is reported with their theoretical and practical implications. The paper concludes with a discussion of its limitations and suggestions for future research.

THEORETICAL BACKGROUND

Project is defined as the achievement of specific objectives within a set of specifications and time constraints (Munns & Bjeirmi, 1996). Since each objective is time-limited, all projects are considered temporary endeavors and need to go through five stages of a project life cycle. A typical project life cycle consists of initiation, planning, execution, monitoring and closing phases (Morris, 2013). The establishment of a logical structure across the life cycle is critical to the successful delivery of a project (Andersen, Birchall, Arne Jessen, & Money, 2006). For instance, during the initiation phase, alignment of organizational and project objectives can help define and outline a project by understanding stakeholder needs – from defined goals to project outcomes. However, most projects fail in the attempt to achieve a high degree of strategic alignment before initiating a project, and these failures are primarily caused by poor internal logic of causalities and unrealistic expectations (Samset & Volden, 2016). Other issues, such as lack of a shared understanding among all stakeholders, poor quality control, and lack of risk assessment, can surface in other stages of the project life cycle. Therefore, PM is the process of managing all project issues across the project life cycle and controlling the achievement of the project objectives (Munns & Bjeirmi, 1996).

Project Success

Many studies have examined what constitutes project success. There are two general perspectives on defining project success in these studies: holism and realism (Jugdev & Müller, 2005). The holistic perspective considers project success as a comparison of actual performance with target performance against criteria pertinent to each project. In contrast, the realistic perspective attempts to reflect the reality of project conditions without a clear-cut classification of project success or failure.