Key Competences of Information Systems Project Managers

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ABSTRACT

Project managers have a main role in all kinds of projects, and information systems (IS) projects are not an exception. In order to perform their activities well, project managers need to develop several complementary competences, including technical, contextual and behavioral competences. In literature we find important references on the project managers’ general competences as, for instance, the ICB from IPMA. However, very little attention has been paid to the eventually distinctive features of IS project managers. In order to identify the most important competences of these project managers, we carried out a questionnaire-based survey. The results show that the top 12 competences are: communication; engagement and motivation; project requirements and objectives; leadership; reliability; results orientation; conflict and crisis; project orientation; teamwork; interested parties; resilience (emerging as a new competence); and ethics. Furthermore, results indicated that the project management bodies of knowledge are suitable to characterize the IS project manager’s competences.

KEYWORDS
Competences, ICB, Information Systems, Profile, Project Manager

INTRODUCTION

Project Management is fundamental for the development of successful Information Systems (IS) projects. This is particularly true in large projects, where the need for a competent project management structure becomes more evident and truly indubitable due to the complexity involved (Varajão and Cruz-Cunha, 2013).

Despite the attention that has been devoted to project management in recent years, there are many cases where projects are not providing the desired success (Varajão, 2018). In fact, IS projects should enhance firm performance (González-Gallego et al., 2014), but evaluations frequently reveal that organizations are not achieving the intended benefits from their investments (Coombs, 2015; Varajão et al. 2017) and projects continue to fail.

A common characteristic of failed projects is the lack of effective project management (Applegate et al., 1996; Langer et al., 2008). In a study of Information Technology (IT) project risks conducted...
by Schmidt et al. (2001), the lack of required project management knowledge/skills was ranked as one of the top five risks that can affect the success of a project (Napier et al., 2009; Keil et al., 2013).

Project managers play a crucial role in all kinds of projects and influence projects’ success (Wateridge, 1997; Crawford, 2005; Yang et al., 2011; Taylor and Woelfer, 2012; Jalocha et al., 2014). Wateridge (1997) argued that the skills of IT project managers are critical factors to ensure the success of IT projects and that organizations should focus on developing these skills to successfully execute projects.

In order to support the need for competent project managers, professional bodies such as the International Project Management Association (IPMA) and the Project Management Institute (PMI), respectively created in 1965 and 1969, have established standards and related professional certification systems (IPMA framework since 1987 and PMP since 1984 (Bredillet et al., 2015)). However, the published project management body of knowledge and competency standards have not specified the competencies that project managers are required to possess in each phase of a project, or in a certain type of project (Zhang et al., 2013) as, for instance, information systems projects. In other words, although the PMI and IPMA have created training and certification programs for project managers, they “only” address generic competences.

However, there is some evidence that the skill set of successful IS project managers may be unique (Vaas, 2002), and an exploratory study by Wirth (1996) found that IS projects have higher levels of uncertainty than projects from the construction, utilities, pharmaceutical, or manufacturing industries (Napier et al., 2009). Despite these considerations, little empirical research has been conducted to investigate the skill requirements for successful IS project management (Jiang et al., 1998; Skulmoski and Hartman, 2010; Keil et al., 2013; Napier et al., 2009) and whether or not the competency standards are adequate for IS project managers.

This study, which is part of a wider international study seeking to characterize several dimensions of IS projects success, complements existing research by providing a deeper understanding of the competences that are important for IS project managers to possess. This research addresses the gap in the literature by examining the following research questions:

**RQ1:** Are the project management “bodies of knowledge” and competency standards suitable to characterize the IS project manager’s competences?

**RQ2:** What are the most important competences of an IS project manager?

**RQ3:** What competency categories (technical, behavioral or contextual) are the most important for IS project managers?

To answer these questions, we conducted an international survey with 107 experienced IT project managers. We asked each of them to classify the relative importance of a list of competences (for their work success).

With the increasing complexity of organizations, requiring more elaborate projects to meet their needs, the selection of well-trained managers ready to lead the projects becomes a critical success factor. The preference for a poorly prepared project manager, without the necessary knowledge and experience, is something that could jeopardize the success of the project (Pinto and Slevin, 1987), given that s/he probably will not be able to properly manage the project in all its dimensions (Varajão and Cruz-Cunha, 2013). By identifying the most important competences, this article provides a useful basis for developing training programs and academic curriculum, and to identifying research opportunities.

This paper is organized as follows. First, the relevant literature on project managers’ competences is summarized. Next it is described the research design and methodology. Then, the key findings and results are presented, followed by the discussion of results. Finally, we conclude with implications from this study for further practice and research and with some highlights for future research.
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