An Assessment for IT Project Maturity Levels

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ABSTRACT

The statistical assessments point out that approximately half of information technology (IT) projects cannot provide basic necessities and a quarter of them fail. Therefore, the necessity of effective project management tools to enhance the project management practices increases day by day. “Project management maturity model” as one of these tools is attached more importance in IT firms. This study aims to present a framework for IT project maturity level measurement and indicate how project management maturity level differs in terms of firm characteristics. Within the scope of the research, Kerzner’s Hexagon of Excellence is extended with additional questions related with firm characteristics, and a case study including 16 firms from Istanbul Technical University (ITU) ARI Techno Park is conducted. In the light of responses, (1) problems which are realized in the project management processes revealed out, (2) relation between firm characteristics and project management skills are discussed and (3) results are interpreted in order to provide managerial insights.

KEYWORDS
Information Management, Kerzner’s Hexagon of Excellence, Project Management, Project Management Maturity Level

1. INTRODUCTION

IT (Information Technology) project management includes vital decisions to conclude a project within a satisfactory budget, time and quality. In comparison to measurement of budget and time, measurement of quality for a project is more complicated because it includes some distinctive variables such as to meet main goals of project and to perform expectations of partners. As it is stated by PM Solution Project Management Ins., each year 37% of projects cannot be achieved in satisfactory manner because of five main reasons: lack of requirements, ineffective resource management, lack of schedule practicability, and weakness of planning and unrevealed risks (PM Solutions, 2011). Difficulties caused from fast developments experienced in IT sector give no chance to project managers for making mistakes. In order to adapt easily to the dynamic structure of IT projects, managers should benefit from supportive tools for overcoming difficulties resulted from changing conditions. As academic literature and managerial experience point out, the convenient utilization of specific tools is critical to improve a successful project management (Golini et al., 2015)

Firms can manage their projects successfully by implementing proper project management methodologies that forces firms utilize standard procedures and/or methods. Especially the firms which conduct IT projects should attach more importance to project management methodology because
IT projects require user involvement, proper planning, and clear statement of requirements (The Standish Group, 2014). Standards of organizations are characterized in project management maturity which is a project management tool to improve project management practices by developing project success with organizational performance (Crawford, 2007). In order to enhance project practices of the firms, it is necessary to utilize a multi-functional project management maturity model that helps to point out deficiencies of the project.

In order to measure project management maturity, a lot of studies are proposed in relevant literature and industrial practices. However, there is a lack of studies which are conducted specially for IT projects. Therefore, this study aims (1) to design a project management maturity model for firms which perform in IT sector, (2) to demonstrate how project management maturity differs in regard to firm characteristics, and (3) to provide managerial insights. The methodology of Kerzner is taken into account for leveling project maturity because it enables firms to determine the synergistic impacts of integration of all corporate methodologies into singular one. That makes the process control be improved easily rather than multiple methodologies and make the decision makers have foresights not only from managerial but also from engineering perspective. The project management maturity model is developed regarding to Kerzner’s Hexagon of Excellence questionnaire which is prepared by Kerzner (Kerzner, 2001). In order to determine the relation between firm characteristics and project management maturity level, the questionnaire is extended by adding new questions about firm characteristics. The extended Kerzner’s Hexagon of Excellence questionnaire is conducted in IT firms from Istanbul Technical University (ITU) ARI Techno Park in which there are both of new-established and well-established firms.

Within the scope of this study, first of all, brief information on project management maturity models is given and a literature review on project management maturity is presented. In the research methodology, it is clarified how an extended Kerzner’s Hexagon of Excellence model is adopted to measure IT project management maturity level. For that purpose, the results revealed out from a survey conducted to 16 firms located in ITU ARI Techno Park is evaluated. The study ends with conclusion and suggestions for future research.

2. PROJECT MANAGEMENT MATURITY MODELS

Project management maturity is capability of an organization on the management of time, scope, quality within all phases of the project life cycle (Ibbs and Kwak, 2000). It is a multi-directional concept which improves project management approach, methodology, strategy, and decision making processes (Crawford, 2007). Success of project management maturity directly affects and strengthens competencies of firms in the challenging business area. Organizations with high maturity level in terms of project performance have stronger competitive advantage in the market (Yazıcı, 2009a). There are some models such as Capability Maturity Model Integration (CMMI), Project Management Maturity Model (PMMM) and Kerzner’s Hexagon of Excellence which are utilized in order to determine project management maturity level by specifying the positions of firms in the market.

CMMI is developed in 1986 by Software Engineering Institute which belongs to Carnegie Mellon University and it was firstly applied in military. CMMI allows for making assumptions about project management techniques at the present and in the future of the firms. Also, CMMI presents which strategies should be applied and which applications should be overviewed. The most critical point of this model is that, while deficiencies of the firm can be determined, it cannot help on management of these deficiencies. Because, information on deficiency can be specified according to the firm, sector or project (Boehm, 2002). CMMI consists of five main steps: initial, repeatable, defined, managed and optimizing. These steps include five different maturity levels. CMMI implementation requires too much time to conclude (Yazıcı, 2009b).

Besides CMMI, according to PMBOK Guide, PMMM was introduced by PM Solutions to help organizations on determination of logical path for their further status and to design a strategic plan.
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