

# Chapter 57

## Project Managers' Profile Influence on Design and Implementation of Cost Monitoring and Control Systems for Construction Projects

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### ABSTRACT

*“Cost Monitoring and Control Systems” (CMCS), are important for every construction project, in order to keep cost at completion, within budget. Uniqueness of every project requires a corresponding uniquely planned, organized and operating CMCS. Perception and realization of content and context of the CMCS are affected by experience and knowledge of the project manager (PM). This paper examines the influence of PMs’ stereotypes on the CMCS. A prototype questionnaire was designed and a following survey took place. Statistical analysis highlighted several PMs’ properties and conceptions that correlate with the setup and implementation of the CMCS.*

### INTRODUCTION

PMBok (2000, p.4) defines project as “a temporary endeavor undertaken, to create a unique product or service”. Success or failure of projects,

according to Crosby (2012a), attracts the intense attention of project theoreticians and practitioners. Both parties agree that one critical function associated with the project performance is project management. The latter has become an increas-

DOI: 10.4018/978-1-4666-9619-8.ch057

ingly important function in many organizations (Chang & Torkzadeh, 2013). Angelides (1999), Al-Jibouri (2003), Rozenes (2011), Antoniou, Aretoulis, Konstantinidis, and Kalfakakou (2013), Abudayyeh, Temel, Al-Tabtabai, & Hurley (2001), Hajeih (2013) and finally Motaleb and Kishk (2013) highlight the parameters of project time, cost, and quality. Moselhi et al. (2004) focus on time and cost, as essential management functions for achieving successful delivery of engineering, procurement and construction projects. Koushki, Al-Rashid and Kartam (2005) and Al-Jibouri (2003) include time – delays and cost overruns among the most common phenomena in the construction industry. Mubarak (2010) agrees and adds departure from the scope.

Zaneldin (2009) suggests that design and construction are the most important stages in a project's life cycle and have the greatest impact on overall performance and cost. Chen (2013) highlights the planning/design phase as the most important component in delivering a successful project. Al-Jibouri (2003) emphasizes that when the differences between plan and actual work performance are significant, control action is required to bring the actual performance on the desired course. As a result construction projects require cost monitoring and control systems (CMCSs). Monitoring and controlling the cost of projects is a responsibility of PMs (Adler and Smith, 2009) which is part of project management and involves among other things project control. "Control", according to Betts (1992, p.4), "is the capacity that a system has for the continual attainment of its objectives through management". Kerzner (2003) emphasizes that the goal of project control is to ensure the completion of projects on time and within budget. Furthermore, it is considered as a complex task, undertaken by PMs and includes continuous project performance assessment and corrective actions.

Effective management of construction projects according to Denmead (1980), Abudayyeh (1993), Abudayyeh, Temel, Al-Tabtabai, & Hurley (2001), depends on good access to and control of

information. A system for monitoring and controlling a construction project is based on real-time data. Shahid and Froese (1998, p.1) refer to: "effective control of information flow as a critical ingredient throughout the life of construction projects". They explain that PMs rely on ready access to a large amount of project information which is important in avoiding problems, delays and claims. Eweje, Turner and Müller (2012), emphasize the significance of the PM's decision on the strategic value of the delivered project and highlight the fact that those decisions depend on the information feed. Cheung, Suen and Cheung (2004) also emphasize that the PM relies heavily on a reliable monitoring system that can provide timely signaling of project problems. Taylor and Woelfer (2010) suggest that an experienced project manager, with the right project tools and methodology, can increase the likelihood of a successful project. On the other hand, Jakubu and Ming (2010) argue that despite the availability of tools and methods for controlling construction projects and the software applications, projects are still suffering cost and time overruns.

In fact, it is people who are one of the critical success factors. The focus is on the ones managing cost issues and balance of income and expenses. PM has been identified as the person responsible for orchestrating the whole construction process (Cheung, Suen, & Cheung, 2004). Successful CMCS is the product of the PM who applies knowledge, experience and intuition for the design and implementation of the best performing system.

Research is driven to facilitate critical decision making and problem solving for PMs. Studies have also focused on the attributes of PMs, particularly their experience, knowledge, cognitive abilities, skills, personality and leadership qualities (Fraser, 2000; El-Sabaa, 2001; Dainty, Cheng & Moore, 2003; Haynes & Love, 2004; Jha & Iyer, 2006; Aretoulis, Aretouli, Angelides & Kalfakakou, 2009; Aretoulis, Aretouli, Xenidis, Striagka & Kalfakakou, 2010; Natovich, Derzy, & Natovich, 2013; Ruano-Mayoral, Colomo-Palacios, García-Crespo, & Gómez-Berbís, 2010).

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