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Rating defence major project success: The role of personal attributes and stakeholder relationships

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Abstract

In this paper we develop and test a model of the associations between major project managers' personal attributes and project success in the context of the Australian Defence industry. In our model, emotional intelligence, cognitive flexibility and systemic thinking were hypothesised to relate to project success, mediated by internal and external stakeholder relationships. The model was tested in an online survey with 373 major project managers. Emotional intelligence and cognitive flexibility were found to be related to the development, quality and effectiveness of major project managers' relationships with both internal and external stakeholders; and these in turn were associated with their ratings of project success. Systemic thinking, however, had no relationship with either stakeholder relationships or project success. Additional research is needed to examine the contribution of a wider range of personal attributes to stakeholder relationships and project success, and to assess whether this model is applicable in other industries and types of projects.

Keywords: Major project; Project manager; Competence; Personal attributes; Project success; Stakeholders

1. Introduction

Australian organisations are currently involved in over 200 Defence-related major projects, many of which do not meet time, budget or quality requirements, resulting in large time and/or cost project overruns. In 2008 the Australian Defence Minister announced that one third of Defence acquisitions totalling $23 billion were at risk of failure (Fitzgibbon, 2008).

The context of this research is Australian aerospace and Defence industry major projects. The rational for the decision to focus on one type of industry and project is based on research that has found project manager competencies and critical project success factors to differ between industries and project type (Abdullah et al., 2010; Dvir et al., 1998; Müller and Turner, 2007; Pinto and Mantel, 1990). There are many instances where these major projects have not met their business objectives and/or projects have had to be cancelled; to the extent that such outcomes have come to be considered commonplace. For example, the Australian Defence sector Seasprite Helicopters major project was cancelled after 11 years at a cost of $1.3 billion to Australian tax payers. Similarly, the Collins Class Submarine (CCS) project (1989–2003) was plagued by controversy. The project's size and complexity, unmet organisational capabilities and a lack of individual competencies were offered as the cause of the project's difficulties (Report to the Australian Minister for Defence by Macintosh and Prescott, 20 June 1999). As these examples attest, these problematical projects tend to be complex in nature, with multiple project factors interacting and impacting each other within a complex systems environment.

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The Project Management Body of Knowledge (PMBOK) (PMI, 2008: 5) defines a project as "a temporary endeavour undertaken to create a unique product, service, or result". According to Müller and Turner (2010), project type is defined by complexity, size, contract, culture, importance, urgency, life-cycle, budget and uniqueness. Major projects differ from other types of projects in terms of five key elements operating throughout the project life cycle, namely: (1) having a budget exceeding AUD 500 million; (2) being characterised by complexity, uncertainty, ambiguity and dynamic interfaces; (3) running for a period that exceeds the technology cycle time of the technologies involved; (4) potentially attract a high level of public and political interest; and/or (5) defined by effect rather than by solution (Chang et al., 2013; Flyvbjerg, 2009; Müller and Turner, 2010; Zhai et al., 2009). We adopt this definition of major projects for this study. The heart of this paper concerns a permanent organisation with temporary and permanent project managers, and multiple projects of every size, complexity and duration. While all projects, by definition, are considered temporary in nature with set start dates and end dates, and are managed as temporary entities, the projects of interest to this study are of a longer duration with end dates that may extend from 10 to 20 years into the future. Our focus is on their multiple major projects and those people with a project manager role within them.

The decision to constrain this research to major projects was informed by several factors. First, the primary focus of this research is the development, quality and effectiveness of project managers' stakeholder relationships. Effective stakeholder management is considered of even greater importance for global projects than for national or state based projects as they typically involve larger numbers of stakeholders who are often dispersed around the world (Aaltonen et al., 2008). Second, the likelihood of project failure has been found to increase as the size, duration and complexity of the project increase (Marrewijk et al., 2008; Sauer et al., 2007). For example, in a recent study Eweje et al. (2012) suggest that major project managers have the ability to influence the strategic direction of organisations, where a poor decision from the major project manager can potentially wipe out the annual profit of the organisation. Third, there is evidence to suggest that due to the unique features of major projects, analysis within the framework of smaller scale or more traditional projects may not be effective (Dvir et al., 2006; Hass, 2009; Shenhar et al., 1997; Tatikonda and Rosenthal, 2000). Indeed, Müller and Turner (2007, 2010) found the competency and attribution requirements of project managers differ as a function of project type. It could, therefore, be argued that major projects warrant their own research.

However, despite an increased interest and the potential for significant time and monetary savings, empirical research within the context of major projects remains limited. The implication of this is that there is an urgent need for better management and leadership of such projects. In this respect, Henley (2007) pointed out that Australian, the United Kingdom and the United States Governments, and Defence industries have supported initiatives that deliver a comprehensive competency standard for the assessment and development of managers of major projects; and moreover that these standards emphasise advanced management skills and processes. However, empirical evidence of the project manager attributes and behaviours required for competent performance (that impact on the success of these projects) is quite limited (Sohmen et al., 2008). This study aims to provide empirical data to address this shortcoming.

In this research we explore how Australian major project managers' stakeholder relationship competence influences project success, and how an underlying set of attributes assist in the effective management of both internal and external stakeholders.

1.1. Theoretical framework

1.1.1. Competency theory

There are several definitions as to what constitutes a competency in the literature. Mulder (2008) was able to classify the definitions into two types of competency; task-orientated and behaviour-orientated. Gadeken (1994) has differentiated between task-based competencies and personal competencies using the analogy of a standard pilot and a 'top gun' pilot. The basic set of skills needed to fly can be broken down into tasks while the skills required for an exceptional pilot also require an analysis of personal competence. Gadeken (1994) considers a project manager's job to involve sufficient complexity to render a task-analysis approach too simplistic. Therefore, the conceptualisation of competency employed by this research and most commonly used in the project manager competency literature (Shao and Müller, 2011) most closely aligns with the second type of competency, which has been defined by Turner et al. (2009: 199), as "a combination of knowledge (qualification), skills (ability to do a task) and core personality characteristics (motives, traits and self-concepts) that lead to superior results". According to Erpenbeck and Heyse (1999 as cited in Ley and Albert, 2003), individuals employ a self-organising process whereby they combine their knowledge, skills and attributes to suit the situation.

Boyatzis (2009) argues performance-based competencies are a behavioural indication of emotional, social and cognitive intelligence, as competencies can be observed through an individual's actions and the underlying intent that governs the action. According to Boyatzis (2009), once the environmental demands have been understood, competencies may be indicative of an individual's potential performance. Subsequently, knowledge of the major project environment in which major project managers are required to develop high quality, effective relationships with their internal and external stakeholders has been used to identify the attributes that may facilitate the skills that the project managers require. This reasoning adheres to contingency theory, whereby superior performance is achieved when an individual's capability matches the demands created by their environment (Boyatzis, 2009; Fiedler, 1964).

Competence performance theory, an extension of the theory of knowledge spaces, suggests that competencies can predict performance outcomes and explain poor performance (Ley and