Effects of internal support and consultant quality on the consulting process and ERP system quality

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Abstract

ERP implementation, as a change initiative, is a challenge facing any organization and requires strong support from top management and users. However, internal support is inadequate to overcome client deficiencies in the resources and abilities essential to ERP implementation, implying that the assistance of outside experts is inevitable. This study presents a conceptual framework to investigate how human inputs (top management, users, and external consultants) are linked to communication effectiveness and conflict resolution in the ERP consulting process, as well as the effects of these factors on the quality of the system implemented. Through a survey of 85 ERP implementation projects in Taiwanese manufacturers, the study demonstrates that competent consultants can facilitate communication and conflict resolution in the ERP consulting process and assist in improving ERP system quality. The findings indicate that top management support indirectly enhances ERP system quality through its positive effect on conflict resolution in the consulting process. The results also show that high user support enhances communication effectiveness; however, communication effectiveness does not influence conflict resolution and ERP system quality. The implications and the limitations of the study are discussed.

Keywords: Enterprise resource planning; Consultant quality; Communication; Conflict resolution

1. Introduction

In the recent decade, companies have spent billions of dollars and countless hours implementing Enterprise Resource Planning (ERP) systems. ERP systems are comprehensive packages designed to integrate a wide range of business functions to provide a holistic view of the firm from a single information technology architecture [26]. The integrative nature of ERP systems makes their implementation more complicated than that of traditional packages, and firms typically find themselves lacking adequate internal resources to implement an ERP system. Owing to this knowledge gap and resource constraints, mediating entities such as consulting firms play an important role in almost all ERP implementations. External consultants, who provide technical and business expertise, reduce client knowledge or learning burden [45]. Their expertise allows clients to configure an appropriate ERP system and helps train users to fully exploit the technology. When the knowledge gap between a client and consultants is salient, the management of consulting process is at the core of ERP implementation.
Researchers, such as Thong and colleagues [47, 46, 45], recognized the importance of external consultants in traditional Information System (IS) implementation. For example, Thong [47] found that high-quality external experts were more crucial to IS effectiveness than top management support in small businesses. However, to transfer the knowledge and business practices embodied in an ERP package into the client organization, consultants must have diverse knowledge and skills, such as system knowledge and industry-specific expertise, making the function and role of consultants in ERP implementation different from those in traditional IS contexts. Thus, more systematic investigation into the role of consultants in ERP consultation and implementation is needed. Equally important is the influence of internal stakeholders, top management and users, in the ERP consulting process, because internal stakeholders must understand and learn to use what is embedded in the system. External consultants, top management, and users are the critical persons that will significantly impact the process and outcome of an ERP implementation [36]. To our knowledge, no other empirical studies have directly investigated the influence of clients, consultants and the consulting process on ERP implementation. Consequently, this study constructs an ERP consulting processing model (see Fig. 1), investigating whether such human inputs affect the consulting process related to effective communication and conflict resolution and whether these factors lead to a higher quality system.

This study contributes to ERP implementation research in two ways. First, while many ERP related studies have centered on client aspects, such as change management [1, 48], this study stresses the impact of the consulting process on ERP implementation. Second, even though every ERP package incorporates numerous best practices, “[s]tandard software by definition can never include every function every company or industry needs” [38]. Since local organizational exigencies need to be crystallized into the workable ERP solutions, extensive client inputs and efforts are required for any ERP implementation [12, 14]. This study highlights the contribution of “people”—top management, users, and outside consultants, to the process of ERP consultation.

The rest of this paper is organized as follows. The following section discusses the conceptual background and the research model. Section 3 explains the study methods, and Section 4 constructs a structural model to test the hypotheses. Finally, Section 5 discusses the findings and Section 6 presents conclusions.

2. Conceptual background and hypotheses

This section discusses the research constructs and derives the hypotheses. Fig. 1 depicts the research model and summarizes the hypotheses derived.

2.1. ERP system quality

Theorists are still wrestling with the question of which constructs best represent the success of ERP
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