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# Relationship bonding for a better knowledge transfer climate: An ERP implementation research

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ABSTRACT

While prior studies on ERP implementation have largely focused on the importance of best practices, the purpose of this paper is to examine the impact of the knowledge transfer climate and relationship bonding. The model categorizes the factors that influence the result of knowledge transfer during ERP implementation into three types: those implemented by the firm, those implemented by the consultant, and those related to the impact of the knowledge transfer climate. The bonding factors from the two former aspects facilitate the building of a better knowledge transfer climate. A total of 174 respondents are surveyed with results subjected to multivariate analysis. The significance of bonding factors is verified, and the role that the knowledge transfer climate plays in the knowledge transfer process and the impact on the transfer process are developed. This paper provides a broader, richer model of knowledge transfer networks to promote insight into successful ERP implementation. In practice, the key to effective knowledge transfer is the establishment of a positive knowledge transfer climate. To achieve a successful ERP implementation, practitioners should focus on developing a positive relationship with ERP implementation partners.



## 1. Introduction

Enterprise resource planning (ERP) is a powerful and sophisticated software package supporting a wide range of organizational transaction information and processes [62]. In comparison with traditional information systems, the major difference of ERP lies in its power to provide integrated and streamlined internal information to synergize work in the supply chain for businesses to create new competitive advantages [14,24,77,87]. Improper implementation of ERP, on the other hand, can cause considerable trouble for the implementing companies [65]. Therefore most companies rely on external consultants and best practices to assure successful implementation [12,21,26,38, 62,90].

However, even the use of consultants and best practices does still not guarantee success. Recent studies reported that the failure rate of ERP projects still exceeds 50%, even when supported by consultants and following best practices [39,54,94]. This indicates that something is missing from the whole picture of successful ERP implementation. From a knowledge learning perspective, Ko et al. [50] suggested that the main reason for this high failure rate is the complexity of restructuring unique logistics operations by the implementing firm, as well as the adoption of a new system.

Members of an ERP implementation project team, composed of staff from the implementing firm and consultants, bring different levels of understanding of current processes and the system to be implemented. Therefore, a prerequisite to a successful ERP implementation is to ensure that all team members have certain key knowledge. For example, once a firm has decided to implement an ERP system, the firm's staff needs to learn from the consultants the skills required to operate this new system; the consultants also need to map the firm's existing organizational processes to configure the system to suit the particular organizational context [50,61,68]. Hence, a successful ERP project may not assured by the implementation of best practices alone, and the degree of knowledge transfer between those two participating parties is also critical.

How high a degree of knowledge transfer can be achieved between stakeholder parties? Prior studies in social exchange theory proposed that, when different parties seek to exchange proprietary information to accomplish a common goal, a basic premise is a consensus of willingness to exchange [10,50,68,95]. Moreover, prior studies in knowledge management theory noted that a positive learning climate makes participants willing to share their knowledge and plays an important antecedent role for a high degree of knowledge transfer [13,15,28,76].

Based on previous discussions, this paper proposes that a positive knowledge transfer climate may be a necessary condition to enable a

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high degree of knowledge transfer, so as to achieve a successful ERP implementation. In addition, through relationship bonding theory, this paper explores the factors that promote or inhibit a positive knowledge transfer climate. The research questions are presented as follows.

1. How does the knowledge transfer climate affect the outcome of ERP knowledge transfer?
2. What conditions are required to foster a positive knowledge transfer climate?

The rest of the paper is organized into five sections. The next section reviews the literature on knowledge transfer in ERP implementation and the factors affecting the outcome of knowledge transfer. It then presents and develops a literature-based framework and hypotheses for explaining how the knowledge sender and receiver influence the outcome of knowledge transfer. The subsequent section describes the research methodology used to test the proposed hypotheses, and is followed by presentation of the data analysis and results. Finally, this paper discusses the research contributions and implications for both academics and practitioners.

## 2. Literature review and hypotheses

This section presents an overview of knowledge transfer in ERP implementation, reviews related theory and derives hypotheses. The transfer climate is then discussed, followed by an illustration of the role of relationship bonding in the research. Fig. 1 depicts the cause and effect model and corresponding hypotheses.

### 2.1. Knowledge transfer in ERP implementation

The major purpose of ERP is to integrate a wide range of information regarding organizational resources to create synergies with business partners, meet customer requirements, and enhance operational performance [8,21,37]. For several decades, ERP implementation literature has been dominated by experimental work emphasizing proper steps and procedures [12,21,23,26,38,62,90].

A great number of prior studies, however, have found that the failure rate for ERP implementation is still abnormally high. In certain cases, ERP implementation even threatened the sustainability of organizations [37,39,51,58]. More recent studies have observed that an ERP system is not just software to be tailored to an organization, but an organizational infrastructure that affects how an organization's processes are structured [78,95,96]. Therefore, researchers and practitioners have shown a growing interest in how an organization implements ERP systems through different perspectives. Several researchers have noted that the core issues in ERP implementation failure could be explored from a knowledge perspective [60,79,89]. They argued that implementing ERP requires a firm to map key knowledge from the current system to the new system to ensure a good fit with its current business logic [53,57]. For example, during the implementation process, consultants must provide relevant knowledge because the firm lacks internal knowledge about ERP systems. On the other hand, the consultants also need the implementing firm's collaboration to make sense of the firm's characteristics or specific production processes so as to tune the system and to ensure a best fit [33,50].

As participants in ERP implementation begin to recognize the importance of knowledge transfer, the focus of ERP implementation changes as well. Knowledge transfer (KT) is defined as "how knowledge acquired in one situation applies to another" [80]. In organizations, it is the process through which one unit is affected by the experience of another. Firms that are effective in transferring knowledge from one unit to another are reckoned to be more productive and profitable [6,18,22,56]. Lin et al. [60] expanded this perspective to include sender–receiver game literature from information economics. According to their viewpoint, knowledge can be seen as a valuable asset held by individuals. Those who possess knowledge can leverage it to create benefits for themselves.

In the case of ERP implementation, consultants, who have the knowledge required to operate the new system, will be the knowledge sender and, ideally, endeavor to earn rewards by transmitting the related knowledge to the knowledge receiver – the implementing firm [18,66]. Hence, the key to a successful ERP implementation is no longer merely the duplication of best practices, but also the facilitation of knowledge transfer between the implementation participants.

### 2.2. Knowledge transfer climate in ERP implementation

A growing body of research has proposed that new IT implementation is a matter of communication and uncertainty reduction [33,40], and should require investigation of the knowledge transfer flow between the participating parties [30,31,55,57,89]. This approach emphasizes the

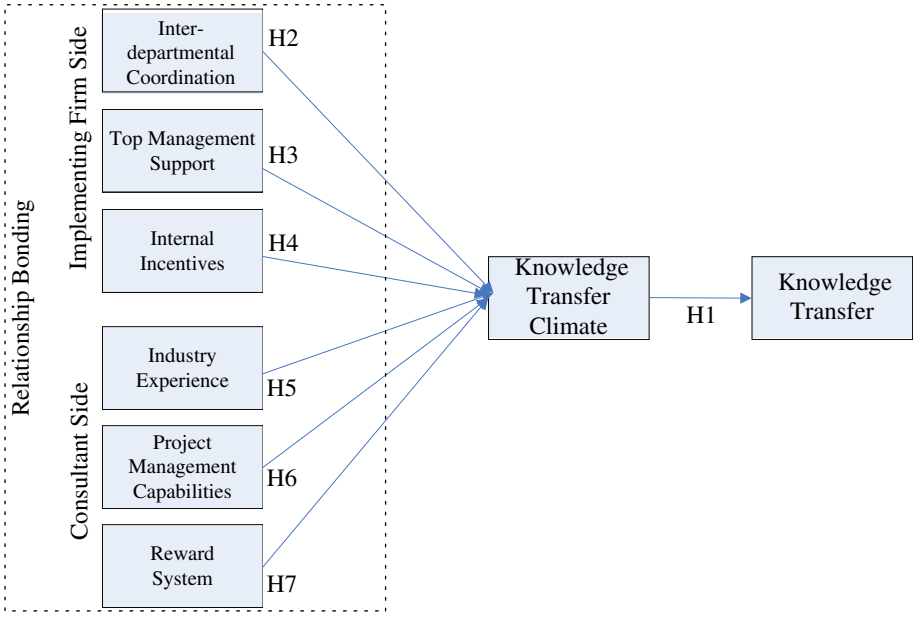


**Fig. 1.** ERP knowledge transfer model.