How Does Contingent Reward Affect Enterprise Resource Planning Continuance Intention? The Role of Contingent Reward Transactional Leadership

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Abstract
During the past decade, an increased focus on charismatic and transformational leadership has led to a diminished recognition of the importance of transactional leadership behaviours for successful information systems. We say that this is important because recent studies have shown that transactional leadership, in the form of contingent reward behaviour, can have substantial effects on employee attitudes, perceptions and behaviour. Therefore, in this study we discuss how contingent reward transactional leadership behaviour influences enterprise resource planning (ERP) users' continuance intention by proposing a research model that explains how contingent reward has a positive effect on ERP users' satisfaction and perceived usefulness which leads to ERP continuance intention. We further argue that distributive justice mediates this relationship. This study calls for managers to pay attention to the importance of contingent reward leadership behaviour in continuous intention of ERP.

Keywords
ERP continuance intention, contingent reward, transactional leadership, distributive justice

INTRODUCTION

Despite decades of research on IT adoption identifying the circumstances which leading to optimal IT use remains foremost important (Benbasat and Barki 2007). Recently, there has been increased research exploring individuals’ decisions to continue or discontinue usage of enterprise resource planning (ERP) systems (Amoako-Gyampah 2007; Chou and Chen 2009). This focus highlights the critical role of ERP continuance intention for the ultimate success and long-term viability of an ERP system (Liang et al. 2007; Liu et al. 2011). However, some firms successfully adopt their ERP system and achieve flourishing outcomes, more firms find the promising benefits far beyond reach and fall victim to the long, costly, unsuccessful adoption process (Markus et al. 2000; Scott and Vessey 2000; Xue et al. 2005). Thus, it can be seen that successful ERP implementation does not necessarily lead to ERP post-adoption success (Rajagopal 2002). For example, in one study, only 10 to 15% of the surveyed firms had achieved expected performance improvement; the remaining firms were experiencing significant discrepancies between goals and results in ERP operations (Lee 2003). Due to the complexity of ERP systems, ERP users’ reactions may be dissimilar from the reactions of other types of IT users, so it is urgent for researchers to theorize the important predictor effects on ERP users’ post-adoption behaviour and unpacking the benefit realization in ERP post-adoption (Chou and Chen 2009). While initial acceptance of an ERP system is a very important step toward recognizing ERP success, the long-term viability of an ERP system and its desired outcome rely on its continued use rather than first-time use (Liang et al. 2007). This is because, given its crucial role in today’s business processes, inconsistent and inefficient use of an ERP often contributes to corporate failure.
Another factor that deserves more attention is leadership behaviour. The evolution of ERP into a strategic organizational resource has resulted in changes in the role of leadership style and information system (IS) management processes (Sheu et al. 2004). Scholars have recognized a link between transformational and charismatic leadership and various relevant work attitudes and behaviours in ERP implementation and IS success (Cho et al. 2011; Ke and Wei 2008; Neufeld et al. 2007). Surprisingly little attention has been given to leader reward behaviour which might influence ERP users’ attitudes and behaviours regarding ERP continuance intention. This would suggest that we need to understand how leader reward behaviours influence ERP users’ continuance intention. Contingent reward transactional (CRT) leadership behaviour has been a subject of considerable importance in organizational research (Podsakoff et al. 2000; Podsakoff et al. 2006). Recent studies have reached reliable and positive outcome concerning the significant unique effect of transactional contingent reward behaviour on employee behaviors, perceptions and attitudes (Judge and Piccolo 2004; Podsakoff et al. 2010).

To the best of our knowledge, hardly any empirical research has looked at which well-defined CRT leadership behaviour may act in tandem with ERP continuance intention. This study attempts to address this gap by integrating leadership, organizational justice and ERP continuance literatures. Therefore, the purpose of this study is twofold, as it addresses the following questions: 1. How does CRT leadership behaviour affect ERP continuance intention? 2. What is the underlying mechanism by which this relationship is transmitted?

This study proposes a remarkable integration of two of the dominant streams in the literature in organizational behaviour and information systems – leadership and ERP continuance intention. The study achieves this integration by theorizing a model in which individual-level distributive justice perceptions mediate the effect of CRT leadership behaviour on ERP users’ satisfaction and perceived usefulness, which lead to enhanced continuance intention of ERP. Specifically, we argue that because both CRT leadership behaviour and justice are theoretically rooted in social exchange theory and expectancy theory (Cropanzano and Mitchell 2005; Issac et al. 2001), justice perceptions may act as a powerful mediator of the influence of CRT leadership behaviour on ERP continuance intention.

**THEORETICAL BACKGROUND AND RESEARCH MODEL**

The theoretical model supporting this study is presented in Figure 1. The model proposes that CRT leadership behaviour positively affects ERP user satisfaction, perceived usefulness and continuance intention. Further, we provide insight into the relationships relevant to distributive justice in the context of ERP continuance intention. The following sections provide details on the constructs in the model and the proposed relationships among them.

**ERP Continuance Intention**

IS continuance intention or usage behaviour is the most widely investigated post-adoption behaviour (Deng et al. 2010; Furneaux and Wade 2011; Limayem and Cheung 2008; Sun 2012). Base on expectation confirmation theory, Bhattacherjee (2001) proposed the IS continuance model to explain user post-adoption of information technologies. Bhattacherjee made a distinction between technology initial acceptance and continued use, referred to as continuance. We developed a research model based on the IS continuance model which was used as an analytical lens to explain how CRT leadership behaviour affects ERP users’ satisfaction, perceived usefulness and continuance intention.

Users’ intentions to continue to use an IT system have been said to be determined by their satisfaction and perceived usefulness (Bhattacherjee 2001), which implies a positive relation between the usual indicators of IT post-adoption, namely continuance and usage. A comparable rationale can be made in the context of ERP continuance where satisfaction with an ERP would reinforce a user’s intention to continue using the system (Chou and Chen 2009). In the literature user satisfaction has been linked to several important outcomes such as IS continued use (Bhattacheejee 2001); and information system success (DeLone and McLean 2003). According to Melon (1990), IS researchers and practitioners extensively used user satisfaction to measure user attitudes about a system, evaluate IS effectiveness, and determine user behaviour or behavioural intention. In addition, perceived usefulness has been defined as an indicator of individual performance in using an ERP system, with the logic that enhanced performance is instrumental in achieving various rewards that are extrinsic to the task context, such as promotions or monetary gains (Bhattacherjee 2001).

We conceptualized ERP continuance intention as consisting of two factors: perceived usefulness (the degree to which the user believes that using a particular system has enhanced his or her job or group’s performance), and ERP satisfaction (end-users’ overall affective and cognitive evaluation of their fulfilment when using the ERP). Because the goal of our study was to focus on exploring ERP users’ perceptions and attitudes regarding ERP continuance, these two factors were needed to explore the antecedents of ERP continuance intention. The model
reflected current thinking that satisfaction and perceived usefulness are two of the significant constructs consistently influencing ERP users’ continuance intention.

Contingent reward Transactional Leadership

CRT leadership behaviour refers to leadership behaviours emphasizing and clarifying role and task requirements, and providing subordinates with material or psychological rewards contingent on the completion of contractual regulation (Bass et al. 2003). Such leadership behaviour is emphasized on explaining effort-reward relations and engages exchanges that take place among a leader and subordinates: that is, a leader argues with employees what is required and clarifies how these outcomes are to be achieved and the reward they will receive in exchange for their satisfactory effort and performance. CRT leaders recognize risk-taking, continuous learning and collegial support and teamwork; they provide an environment where correct behaviour is prized and where rewards serve as extrinsic motivation for desired behaviour (Natter et al. 2001). Generally, CRT leaders offer resources, tangible or intangible support to subordinates in exchange for their performance and efforts, maintain standards, define rules regarding work obligations, and determine the consequences of goal achievement. These have been shown to relate to both individual-level and organizational-level outcomes. Thus, CRT leadership behaviour is positively related to organizational justice perception, commitment, follower motivation, organizational citizenship behaviours, organization performance, and leader effectiveness (Bass et al. 2003; Walumbwa et al. 2004; Podsakoff et al. 2000; Podsakoff et al. 2006).

For example, in the ERP context during the post-adoption phase, CRT leadership behaviour may enhance employees’ motivation to explore ERP system features and transfer what they have learnt into their work, and encourage the generation of innovative ideas and cooperation among peers. The way CRT leadership behaviour allocates reward is a clear signal to ERP users about what is important. Care should be taken to make sure that rewards are consistent with targets at departmental and organizational levels (Podsakoff et al. 2010). A poor fit can lead to goal conflicts and decreased incentives for teamwork and collegial support (Andres and Zmud 2002). Therefore, it is critical to striking a balance between contingent rewards based on desired behaviour and individual performance. Based on these explanations, it is easy to see that CRT leadership behaviour exerts a commanding influence on how ERP users perceive usefulness as well as satisfaction and how they behave in relation to ERP continuance intention.

Figure 1. CRT leadership behaviour and ERP continuance intention

CRT Leadership and ERP Continuance Intention

There is evidence that the manner in which leaders administer rewards affects internal cognitive processes on the part of employees, and that this subsequently influences employee satisfaction, attitudes, behaviours and several important outcomes (Podsakoff et al. 2006; Walumbwa et al. 2004; Podsakoff et al. 2010; Judge and Piccolo 2004; Bass et al. 2003). In terms of the impact of CRT leadership behaviour on the perceptions of ERP users, we contend that contingent reward will contribute to continuance intention and greater user effectiveness for two reasons.

First, contingent reward is delivered in response to good performance or acceptable behaviour, with the intention of improving and continuing desired behaviour. Particularly in correlative studies, any association between
leadership behaviour and followers’ effectiveness has been interpreted as a measure of the impact of the leader’s action on subordinate satisfaction, motivation or performance (Bass 2003; Yukl 2010). According to Cho et al. (2011), there is an association between leadership styles toward the information system user attitudes related to positive behavioural intentions. In the context of ERP post-adoption or ERP continuance, the focus has been mainly on cognition-oriented behavioural models, such as the technology acceptance model which focuses on beliefs and attitudes, Fishbein and Ajzen’s (1975) theory of reasoned action (which includes attitudes and subjective norms), so better understanding of the effects of CRT leadership behaviour could be obtained if more emphasis was placed on cognition (Ball et al. 1994). Cognition means the mental process of knowing, including aspects such as perception, reasoning and judgment (Kim et al. 2007). CRT leadership behaviour has been found to effect the recipient’s positive emotional reaction and subsequent performance (Podsakoff et al. 2010). Positive emotion towards a behaviour reflects the direct emotional response to the thought of the behaviour (Limayem and Hirt 2003), so intentional behaviour and continuing use intention are the result of emotional response (Ortiz de Guinea and M.Lynne 2009). Depending on the feelings generated, behavioural intentions emerge to activate plans for avoiding undesirable outcomes (discontinuance intention) or increasing positive outcomes (Kim et al. 2007). Therefore, it is likely to affect ERP users’ positive moods (continuance intention) so they typically are more creative and more motivated to perform with a high level of effort.

Second, and related to our first point, equity theory (Adams 1963) as well as principles of justice (Timothy et al. 2004) rest on the assumption that individuals make contributions and make judgments about what they should fairly receive in return. Good performers should therefore receive different outcomes; for example, desired behaviour and good performance should be rewarded. ERP continuance intention behaviour when characterized by perceived contingent reward is expected to positively influence ERP users’ continuance intention. Leaders whose behaviours emphasize contingent rewards and reinforce the importance of meeting performance expectations create a shared norm that encourages efficient, systematic and organized behavioural regularities (Hofmann and Jones 2005). In short, we conclude that ERP continuance intention is the result of some mixture of rational analysis and emotional response that leadership style creates in subordinates. Given this evidence, we argue that CRT leadership behaviours promote desirable behaviour and high levels of effort among ERP users. Therefore we hypothesize:

Hypothesis 1 – CRT leadership behaviour is positively associated with perceived usefulness.
Hypothesis 2 – CRT leadership is behaviour positively associated with ERP users’ satisfaction.
Hypothesis 3 – CRT leadership behaviour is positively associated with ERP continuance intention.
Hypothesis 4 – Perceived usefulness is positively associated with ERP continuance intention.
Hypothesis 4 – Satisfaction is positively associated with ERP continuance intention.

CRT Leadership Behaviour and Distributive Justice

Previous studies on organizational justice have confirmed that concerns about fairness can affect the attitudes and behaviours of employees (Podsakoff et al. 2010). Justice scholars have focused on distributive justice, which is the perceived fairness of decision outcomes and resource distributions (Hausknecht et al. 2004). Distributive justice refers to the perceived fairness of actual or tangible outcomes relative to inputs (Ok et al. 2005). This definition of distributive justice is grounded on the social identity theory of leadership (Hogg 2001), which proposes that key group attribute such as leadership influence employees’ cognitive states. Distributive justice have been linked meta-analytically to a different range of outcomes, including commitment, satisfaction, citizenship and withdrawal (Colquitt 2001). In addition, the perceived distributive justice of rewards has been linked empirically with reduced stress (Timothy et al. 2004) and acts as a proxy for trust by providing employees an incentive to cooperate in the face of uncertainty as well as increased individual self-efficacy (Bernerth et al. 2005) and demonstration of extra effort behaviours (Podsakoff et al. 2006). However, unfair treatment causes employees to doubt their ability to cope with work demands (Vermunt and Steensma 2001). This perception admits that unfair treatment can have a significant effect on employees, thereby disrupting work attitudes and behaviours (Timothy et al. 2004).

According to the justice judgment model (Leventhal 1980), decision-making in organizations is a complex and multi-faceted process. The theory proposes that there are several criterions for judging distributive justice including decision accuracy, consistency and setting of ground rules. We argue that CRT leaders are expected to create perceptions of fairness among the ERP users because of their clear enunciation of the exchange rules that facilitate consistency and accuracy. CRT leaders are likely to enhance and create strong perceptions of distributive justice, because followers of CRT leaders are exposed to the norm of fairness as a result of the leaders’ consistency in honouring and clarifying the exchange rules. Thus, distributive justice does not refer to the quantity of rewards distributed by the organization, but rather to the fairness of the rewards divided among
the employees. Podsakoff and his colleague (2006) also suggest that if subordinates perceive their leader to be consistent and fair in the setting of the exchange policies, they will work towards the more performance outcome that the leader desires.

CRT leaders tend to fulfill and promote the rules of fairness as defined by Leventhal (1980), so we expect CRT leadership behavior to foster strong and favorable behavioral intentions through the use of ERP. Under these conditions, we anticipate there would be low levels of discrepancy in ERP users’ perceptions of distributive justice, and therefore high level of effort and continuance intention. Therefore, we hypothesize:

Hypothesis 6 – CRT leadership behavior is positively associated with distributive justice.

Distributive Justice and ERP Continuance Intention

Drawing from the justice literature, it has been shown that employee perceptions of workplace fairness are positively related to employee satisfaction, perceived organizational support, individual work performance, citizenship behaviors and several important outcomes (Wayne et al. 2002; Podsakoff et al. 2010; Judge and Piccolo 2004). Distributive justice affects employee reactions to new IT from a motivational point of view (Mitchell et al. 2012). One study showed that the satisfaction of psychological needs predicted e-learning continuance intentions (Roca and Gagné 2008); in turn, those whose needs were satisfied put in greater effort toward achieving organizational goals (Nyhan 2000). Negative feelings of perceived distributive justice are likely to lead to distress and dissatisfaction. Distress and dissatisfaction will be ultimately reflected in user behaviors and attitudes towards information systems (Joshi 1990). Since distributive justice focuses on the perceptions of the fairness in providing rewards in exchange for meeting agreed-upon objectives and affects the satisfaction of psychological needs (Boudrias et al. 2011; Mitchell et al. 2012), it increases ERP users’ positive attitudes and behaviors toward ERP continuance intention.

The argument that distributive justice is related to ERP continuance intention is grounded in equity theory (Adams 1963), which suggests that a person will judge a situation as equitable when the person’s effort-to-outcome ratio is equal to that of another person’s which in turn is posited to reinforce subordinate attitudes and behaviors. Accordingly, we theorize that ERP users who perceive high levels of fairness may develop increased positive behavioral intentions as well as higher ERP satisfaction, because they feel indebted to their CRT leaders. It is expected that satisfied ERP users are more likely to form continuance intentions (Chou and Chen 2009; Kim and Steinfield 2004; Thong et al. 2006). We build upon this line of argument and suggest that a user who perceives distributive justice might have a higher level of satisfaction and ERP continuance intention. Thus, perceived distributive justice is an important factor in determining ERP users’ continuance intention. Therefore we hypothesize:

Hypothesis 7 – Distributive justice mediates the relationship between CRT leadership behavior and ERP perceived usefulness (a), ERP users’ satisfaction (b), and ERP continuance intention (c).

CURRENT RESEARCH DIRECTION

This research-in-progress will be carried out in industrial organizations that have implemented an ERP package. The sector is seeing a high increase in the implementation of ERP packages. This study will apply a quantitative approach and survey to collect data. ERP users from two industries are the target of this study. Responses will be transferred from the survey to SPSS. The structural equation modelling tool of SPSS and partial least square are the main analysis methods used to test the hypotheses and to identify the direct and indirect effects between the constructs of the proposed model.

ANTICIPATED RESEARCH CONTRIBUTIONS

To the best of our knowledge, this is the first study to theoretically articulate the relationships among CRT leadership behavior and ERP continuance intention. The present study offers various important contributions in the emerging area of CRT leadership behavior and ERP continuance intention. First, a distinctive contribution could be made to IS practitioners, particularly client firms whose revenue streams and business models are established upon long-term usage of ERP, by exhibiting a theoretical model to clarify the influence of CRT leadership behavior on continuance intention. Second, distributive justice in the management information system (MIS) context may be an additional factor which influences ERP users’ satisfaction and perceived usefulness. Distributive justice has been identified as an important factor for individuals’ satisfaction in different non-MIS environments, though slight concentration has been paid to justice issues in the MIS context. In light of the little studies that have been published on the importance of distributive justice, our study joins a growing number of studies by explaining the relationships between CRT leadership behavior, distributive justice perception and ERP user continuance intention. In addition, our study suggests that businesses need to pay
further consideration to policies and programs that promote fairness in order to increase satisfaction and continuance intention. For example, one way to foster continuance intention among ERP users is by ensuring that rewards are given out accurately and consistently. ERP users can make an precise image of whether the procedures used to provide reward systems are just and fair, also the way those rewards are viewed by the recipients. Third, this study suggests that management selection should not only assess transformational and charismatic leadership behaviours but also assess reward leadership behaviours such as contingent reward transactional behaviours when choosing individuals for management or supervisory positions. This may assist augment the positive perceptions of distributive justice, which would subsequently influence ERP users’ satisfaction and continuance intention.

CONCLUSION

A greater focus on charismatic and transformational leadership has led to a diminished recognition of the importance of transactional leadership behaviours for the success of information systems. We say that this is important because recent research has shown that transactional leadership, in the form of contingent reward behaviour, can have substantial effects on employee attitudes, perceptions and behaviours. Therefore, we propose a research model that explains how contingent rewards have a positive effect on ERP users’ satisfaction and, perceived usefulness which leads to ERP continuance intention. In addition, a perception of justice was identified as a potentially important mediator of the effects of this leadership behaviour on ERP users. We suggest that leadership reward behaviours have significant unique effects on ERP users’ attitudes, perceptions and behaviours, and that the manner in which leaders administer rewards is a critical determinant of the effectiveness of this leadership behavior. This study calls for managers to pay attention to the importance of contingent reward leadership behaviours in enhancing continuance intentions in ERP systems.

REFERENCES


