

December 2003

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Recommended Citation

Ching, Russell and Niehoff, Brian, "A Proposed Model of the Effects of Organizational Citizenship Behavior on Sustained Information Technology Innovations" (2003). *AMCIS 2003 Proceedings*. 213.
<http://aisel.aisnet.org/amcis2003/213>

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A PROPOSED MODEL OF THE EFFECTS OF ORGANIZATIONAL CITIZENSHIP BEHAVIOR ON SUSTAINED INFORMATION TECHNOLOGY INNOVATIONS

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Abstract

Electronic business (e-business) presents several new opportunities and challenges to business organizations through the expansion and enhancements of their markets. However, competing in global electronic markets (e-markets) has forced organizations to continually invest in information technology (IT). Although IT can provide a competitive advantage, its edge is only temporary and lost as competitors adopt it. Therefore, success in e-business might be linked to an organization's ability to continually innovate IT applications, especially those that leverage and exploit its information and knowledge. To effectively innovate, though, the organization must foster good citizenship among its people and direct their activities toward building its knowledge. This paper proposes that sustained IT innovation results from organizational citizenship behavior (OCB) and absorptive capacity, and absorptive capacity mediates the effects of OCB on IT innovation.

Keywords: Organizational citizenship behavior, absorptive capacity, IT innovation, e-business

Introduction

Electronic business (e-business) presents several new opportunities and challenges to business organizations through the expansion and enhancements of their markets. Its Internet-enabled global reach has opened many new highly competitive information technology (IT) driven marketplaces. To capitalize on these opportunities, organizations have learned to deploy IT to new heights to secure competitive advantages or preemptive positions. Consequently, organizations have made greater investments in IT. However, continuous advances in IT have also challenged them. As a technology matures, its presence becomes common and available among all competitors. The competitive edge that it once yielded dulls and becomes less effective. Thus, IT alone can only provide an organization with a temporary advantage. For market leaders, the limited life of IT poses continual challenges.

To sustain their competitive drive and ensure future gains in their markets, organizations must continually seek innovative applications of IT, particularly those that exploit and leverage their information and knowledge. Most executives draw upon the talents of their IT people to *invent* applications that improve the organization's position in its environment. However, the challenge lies in creating an organizational climate conducive to innovation. An important element for establishing innovative thinking is shared knowledge. For the most part, IT personnel must work together in group settings and apply their knowledge in aggregate toward achieving innovative solutions. Each member contributes his/her experiences and knowledge to ensure the group's success. As individuals, these members may not be capable of moving the organization. However, working together in a concerted effort, they can achieve greater strides. Many studies that have examined underlying behavioral elements contributing to an organization's successful functioning have focused on organizational citizenship behavior (OCB).

The purpose of this study is to propose a model that represents the relationship between positive organizational citizenship behavior and an organization's ability to sustain the continual introduction of effective innovative IT applications. The three primary factors examined in this study include OCB, organizational absorptive capacity and IT innovation. Past studies suggest that positive organizational behavior among employees frequently impacts an organization's performance and outcomes (Borman and Motowidlo, 1993; George and Bettenhausen, 1990; Karambayya, 1989; Organ, 1988; Podsakoff and MacKenzie, 1994; Smith et al., 1989). Given the need to harness the coordinated and cooperative efforts of everyone, OCB may prove to be a major contributor to innovative success. Specifically, does the presence of good citizenship behavior promote and facilitate innovation within the IT function and as a result help the organization better leverage IT to gain distinct competitive advantages, empower end-users by satisfying their continually changing information needs required of their tasks, and significantly contribute to the organization's competitiveness within its industry? Assuming the fundamental IT components are readily available to all organizations to acquire, the difference may lie in OCB.

Organizational Citizenship Behavior

OCB is a prosocial behavior that benefits the organization. It is voluntary, discretionary, spontaneous and not formally part of an employee's role or function. Organ provides the following description:

"OCB represents individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in aggregate promotes the effective functioning of the organization." (Organ, 1988, p. 4)

Katz (1964) proposed that three basic types of behaviors must be present for an organization to function: people must be induced to enter and remain with the organization, they must be assigned specific roles to ensure dependable role performance, and they must engage in innovative and spontaneous activities that help the organization achieve its goals and objectives, and are beyond their role specifications. Behavior, such as the third, becomes a vital resource to the organization that may ultimately provide it with a competitive edge. Conditions conducive to innovative and spontaneous activities promote job satisfaction and in turn help internalize organizational goals and objectives (Katz, 1964).

Smith et al. (1983) describe OCB as consisting of two dimensions: altruism and compliance (i.e., impersonal conscientiousness). Altruism includes all discretionary behaviors that are directed toward helping a specific person, such as another employee, customer, client, vendor or supplier, in the context of an organizationally relevant task or problem. Because it involves prosocial behavior, it is nonobligatory; a person does not expect a reward or anything in return from performing the act (Berkowitz, 1972; Krebs, 1970). However, it is intended to promote the welfare of the person, group or organization toward which it is directed, and not that of the individual (Brief and Motowidlo, 1986).

Compliance or impersonal conscientiousness focuses on behaviors that extend beyond those prescribed by individual roles and responsibilities. Although it is impersonal and directed toward the welfare of the organization (Schnake, 1991), compliance is guided by an individual's sense of do what is right or perform well, and conducted under the purview of social norms (i.e., socially desirable behavior).

The presence of OCB not only enhances interactions between people by reducing tensions and miscommunications, it also improves group effectiveness and ultimately, group performance (Podsakoff et al., 1997). In team environments, OCB promotes the coordination of activities both within and between groups (Karambayya, 1989; Smith et al., 1989). George and Bettenhausen (1990) found that prosocial behavior improves group performance through group cohesiveness characterized by heightened group attraction, friendliness, mutual liking, cooperation and positive feelings, leader's mood, and the socialization of new members into the group. Karambayya (1989) and Podsakoff and MacKenzie (1994) also concluded that higher levels of certain OCB forms are related to higher levels of group performance.

It appears OCB fosters an atmosphere conducive to camaraderie, collaboration, and coordination. High levels of OCB tend to focus employee attention toward helping one another, such as engaging in altruistic behavior, and on the welfare of the organization instead of the individual (i.e., neuroticism). The open communication it brings facilitates the exchange and sharing of ideas and knowledge between people and groups, disseminates the organization's goals and objectives, and helps direct individual energies toward achieving these goals and objectives through creative thought and innovations.

IT Innovation

Innovations stem from several sources, including responses to changes in the external environment, the proactive adoption of organizational strategy, improvements or enhancements to performance and efficiency, and the need for market differentiation (Subramanian and Nilakanta, 1996). Generally, innovation can be defined as the development and successful implementation of new and creative ideas (Amabile, 1988; Daft, 1978; Van de Ven, 1986). It includes process involved with the generation (i.e., search and discovery) and acceptance of new ideas, processes, products or services (Dosi, 1988; Frambach and Schillewaert, 2002; Kanter, 1983; Thompson, 1965). Innovations characteristically yield new techniques that are most likely superior to the ones they succeed (Dosi, 1998), and lead to the achievement of higher levels of performance (Hurley and Hult, 1998). Hence, they embody improvements. However, the propensity toward adopting the innovation lies in the perceived benefits that exceed those of alternatives (Anderson and Narus, 1999) and the value they add (Seagal and Horne, 1997). In their absence, adoption is less likely. Organizational innovation depends on the creativity of the organization's individual employees and three basic factors: the motivation to innovate (i.e., competitive orientation manifested in the organization's vision and mission), availability of resources, and innovation management skills (i.e., management support and skills that nurture creativity) (Amabile, 1988).

A vital element underlying innovation is organizational knowledge. Kanter (1985, 1988) characterizes innovation as being knowledge-intensive. Innovations principally rely upon advances in and the accumulation of knowledge. New information of the relevant domain that is captured through searches of the environment (i.e., publicly available information), partnerships with external entities, or new employees introduces new knowledge into the organization (Amabile, 1988; Dosi, 1988; Simon, 1991).

Organizational Learning and Absorptive Capacity

Although OCB has a positive effect on performance, its relationship with IT innovation must be facilitated by an intervening variable. Given knowledge is a prerequisite to innovation, OCB cannot directly impact IT innovation. OCB creates an atmosphere that promotes sharing information and knowledge, but does not provide the processes for acquiring and accumulating knowledge. It fosters good communication and collaboration among individuals, but does not address learning. This study proposes that organizational learning transforms OCB's effect on IT innovation

Organizational absorptive capacity can be described as an organization's ability to recognize, acquire, assimilate, apply and exploit information to a commercial ends (Cohen and Levinthal, 1990). It involves the cumulative learning activities of individuals through interactions with the environment and the transfer of knowledge within and across functional domains via a shared language. Learning activities help develop knowledge that can be used to recognize, acquire and assimilate information, and apply the ensuing knowledge. The more frequent learning occurs, the greater the accumulation process, which in turn reinforces prior knowledge, increases the capacity to retain new knowledge and yields the application of knowledge to new scenarios (Bower and Hilgrad, 1981). Continuous learning builds over time a wealth of knowledge that eventually becomes available to the entire organization as a shared resource.

Absorptive capacity allows the organization to leverage and exploit its knowledge for innovative output and other outcomes directed toward creating a competitive advantage (Zahra and George, 2002). The insights it has gathered through learning enhance its ability to develop innovative applications (or products and services). The greater the organization's knowledge, the greater are its chances to innovate (Cockburn and Henderson, 1998; Cohen and Levinthal, 1990; Lane and Lubatkin, 1998; Lane et al., 2001). Absorptive capacity may provide a crucial link between OCB and IT innovation as it forms the foundation for the latter.

Proposed Research Model

As more business organizations transition to e-business, greater demands will be placed on their ability to compete in global electronic markets (e-markets), including responding quickly to changes in the environment and staving off competitive threats. Although IT can provide distinct competitive advantages, its edge is only temporary. Over time IT tends to equalize the presence of all competitors as they quickly acquire and learn to deploy it. To retain its competitive advantage, an organization must learn to sustain its innovativeness, not only to reduce production and operating costs or improve its agility in responding to change, but also to enhance its ability to produce new products and services for its customers. An organization must work as a team to improve its competitive position through learning (i.e., knowledge building). Success in e-markets may hinge on OCB, absorptive capacity and IT innovations.

The research model of this study (Figure 1) proposes that OCB indirectly affects an organization’s IT ability to innovate (IT innovation). An intervening variable, absorptive capacity, mediates the effects of OCB on IT innovation. This relationship suggests that absorptive capacity enhances the effect of OCB on IT innovation through process changes. Three propositions have been developed to test this relationship.

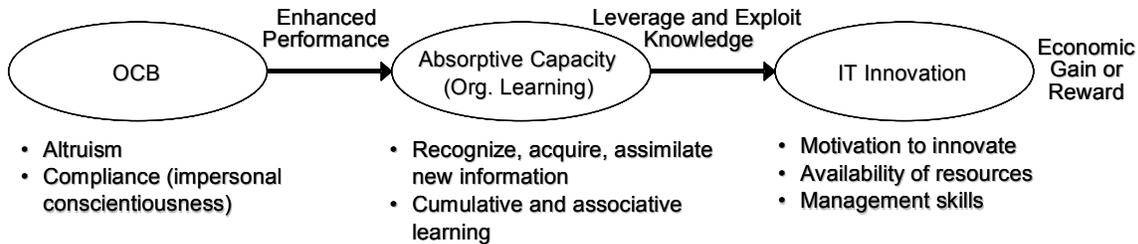


Figure 1. Proposed Research Model

As people work together in groups, they begin to take ownership in their activities and learn to share knowledge and ideas to ensure the longevity of the group. Altruism suggests that people place the welfare of the group above their own and help each other to advance the position of the group (i.e., business unit, functional unit, organization). The shared language that facilitates communication among group members reflects the group’s cohesiveness as it signifies inclusion (i.e., membership). Compliance (i.e., impersonal conscientiousness) involves working beyond the prescribed duties of a role and responsibilities, and in accordance to social norms. As in the case of altruism, compliance is directed toward advancing the welfare of the group or organization. Both altruism and compliance enhance the interactions of people through open communication and consequently improves the performance of the group.

Organizational absorptive capacity draws upon the cumulative knowledge of everyone and underscores cooperation. Because it builds on individual learning that leads to the sharing and exchange of ideas and knowledge, and the accumulation of knowledge, it depends on people focused on achieving the organization’s goals and objectives to flourish. People exhibiting high levels of OCB have internalized these goals and objectives, which enhances their performance and motives their learning. The following proposition proposes this relationship:

Proposition 1: *High levels of OCB will positively affect absorptive capacity.*

Absorptive capacity represents a human resource investment in the future. Organizational learning creates a repository of knowledge that will benefit the organization in the future. It involves recognizing pertinent information, assimilating it to further expand existing knowledge and applying the knowledge toward a commercial end through innovation. Greater levels of accumulated knowledge lead to a deeper and more diversified knowledge, which positions the organization to *absorb* more information. A more complete knowledge-base promotes creative thought (i.e., innovativeness) and offers a broader understanding of innovations. Maintaining absorptive capacity may be a key factor in sustaining IT innovations. Proposition 2 reflects this relationship.

Proposition 2: *Higher levels of absorptive capacity will positively affect IT innovation.*

The effect of OCB on IT innovation is hypothesized to be indirect and mediated by absorptive capacity. A mediating effect suggests that variations in OCB account for variations in absorptive capacity, and variations in absorptive capacity account for variations in IT innovation. A direct relationship between OCB and IT innovation would be non-significant. Because absorptive capacity depends on a conscious group (learning) effort to acquire information and knowledge that will benefit the organization, it assumes people are placing the welfare of the group (or organization) above their own interests. OCB directs learning by adding passion to work activities (i.e., for the better of the whole). Its underlying compliance to social norms imposes work performance standards on everyone. As OCB increases (in practice) learning increases since it represents a means to improve the organization or move it closer towards achieving its goals and objectives. Greater levels of absorptive capacity open more opportunities and enable the organization to innovate using its accumulated knowledge. However, these levels may be only attained through higher levels of OCB. Thus, OCB helps develop absorptive capacity, which in turn improves the ability to innovate. Proposition 3 summarizes the role of absorptive capacity in this relationship.

Proposition 3: *Absorptive capacity will mediate the effects of OCB on IT innovation.*

Discussion

Two recent major changes to business practices underscore the importance of understanding the relationships between organizational factors and IT innovative success. The first centers on e-business while the second stems from the current push toward relationship marketing (and related practices). E-business imposes a new business paradigm on organizations. As a result, the requirements of e-business models dramatically differ from those of traditional business models. In contrast to traditional business models that emphasize the management of physical resources (i.e., efficiency, logistics, etc.), e-business models regard information as the organization's primary resource. The information- and IT-driven e-business paradigm defines how organizations must approach their problems and develop their solutions in terms of information leveraging; the better organizations can leverage their information, the greater their success. Furthermore, the fast-pace of e-business dictates that they act or respond quickly.

Relationship marketing marks a change in the way organizations must approach IT-enabled marketplaces to effectively compete. Rather than mass marketing their products and services to broadly defined market segments, organizations must now interact with their customers (and suppliers) as individuals. The new era of mass customization requires organizations to engage in learning relationships to understand and satisfy their customers' needs and expectations with products and services that cannot be easily duplicated, imitated or substituted. Innovative IT applications must be developed to capture, retain, analyze and profile customer information, interact with customers, provide services that retain customers and build loyalty, quickly disseminate information and knowledge throughout the organization, and overcome competitive threats.

The proposed model of OCB, absorptive capacity and IT innovation supports the new business and marketing paradigms, and sustained innovations. It strongly suggests that gains in e-business and relationship marketing are not attributed to technology investments alone, but also to investments directed toward developing human resources. More importantly, the model proposes that organizational behavior issues underlie the innovative application of IT. Creating a work environment supportive of OCB and directing investments toward knowledge accumulation and sharing through absorptive capacity may be essential elements to an organization's sustained IT innovation and ability to successfully compete in global marketplaces. A study to empirically test the relationships with instruments developed in previous studies will be conducted in the next step.

Summary

Competing in Internet-enabled global e-markets opens many business opportunities for organizations. Although IT can provide a distinct competitive advantage, its effectiveness is only temporary. As the technology matures, it becomes readily available (affordable) to all competitors. Thus, to retain a competitive advantage, organizations must continually innovate. Sustaining IT innovation may rely upon organizational factors rather than advances in technology. This study proposes that sustained IT innovation can be achieved through good organizational citizenship (OCB) and commitments to long-term learning (absorptive capacity).

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