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THE EFFECTS OF PERSON-ENVIRONMENT FIT ON EMPLOYEES' KNOWLEDGE CONTRIBUTION

Completed Research Paper

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Abstract

Various individual and organizational factors influencing employees' knowledge contribution to electronic repositories have been identified but their effects often vary across employees and studies. This study proposes that examining the fit between employees and their organizations may explain the variations. Analysis of data from a survey of 211 employees using polynomial regression and response surface methodology indicates that when employees' ideals about the level of skill variety, task identity, organizational innovativeness fit with those in their organizations, they develop strong commitment and engage in more knowledge contributions. In contrast, person-environment (PE) misfit in these aspects (i.e., shortfall or excess) has deleterious effects. Interestingly, excess in job autonomy, task significance, and generalized trust does not have negative impact. The PE fit theory accounts for both employee-side and organization-side effects and enriches our conceptual understanding of the antecedents of knowledge contribution. It also highlights new directions for promoting knowledge contribution in practice.

Keywords: Knowledge contribution, electronic knowledge repository, person-environment fit, polynomial regression, response surface analysis

Introduction

Electronic knowledge repositories have emerged as a prevalent means for capturing, organizing, disseminating, and reusing knowledge in organizations. A recent study of knowledge management (KM) in Ecopetrol, IBM, Intel, Rockwell Collins, and The Toro Company emphasizes that building and maintaining a centralized, searchable repository is a best practice for knowledge-intensive activities such as product development (APQC 2012). The success of a knowledge repository relies primarily on employees' willingness to contribute their knowledge since knowledge dissemination and reuse cannot occur if employees do not actively provide content (Kankanhalli et al. 2005). Yet, knowledge contribution is seldom amenable to managerial mandates. It seems more appropriate to view knowledge contribution as a pro-social organizational behavior (Jarvenpaa and Staples 2001) that is engendered by affective commitment (O'Reilly III and Chatman 1986; Pee 2011) rather than rational cost and benefit evaluations. Similarly, King and Marks (2008) note that the rational view may not account for the variation in contributions to a KM system. Accordingly, this study focuses on examining affective commitment's antecedents and its effect on employees' knowledge contribution.

An interesting theoretical framework for understanding the antecedents of affective commitment is the person-environment fit (PE fit) theory. The theory suggests that employees are likely to develop strong affective commitment when they perceive a congruence between their personal characteristics and their organizations' characteristics (Kristof-Brown 1996). In contrast, when there is a person-environment *misfit*, employees are likely to develop dysfunctional attitudes. For example, the theory implies that although the norm of collaboration is an important factor driving knowledge contribution (Kankanhalli et al. 2005), only employees who are predisposed towards collaboration are likely to form positive commitment and are more willing to contribute knowledge. In contrast, employees who prefer less collaboration may feel put off. Examining PE fit enhances our understanding of employees' knowledge contribution in two ways. First, by accounting for the fit between employees and their environments, this study recognizes that an environment may not influence all individuals the same way. It can explain why employees working in the same organizational environment have different knowledge contribution behaviors. The theory also avoids the assumption that the employee-side and organization-side effects are separate and independent and is more in line with the reality where one's behavior results from the interplay between individual characteristics and the environment. Second, it may help to explain inconsistent findings in prior studies on knowledge contribution. For instance, the norm of collaboration and generalized trust were found to have significant effects in some studies (e.g., He and Wei 2009; Wasko and Faraj 2005) but not in others (e.g., Kankanhalli et al. 2005). These anomalies may be due to the omission of the effect of fit between employees and their organizations.

In summary, this study aims to address the research question of "*how does person-environment fit influence employees' knowledge contribution to electronic repositories?*" Based on the PE fit theory, we examine the effects PE fit and misfit in terms of excess as well as shortfall in the organizational environment. Using the advanced data analysis techniques of polynomial regression and response surface methodology, we obtained a richer and more accurate understanding of the effects of PE fit and misfit. As will be detailed later, our survey of 211 employees indicated that PE fit in job characteristics (i.e., skill variety and task identity) and organizational value (i.e., innovativeness) strengthens employees' affective commitment and in turn increases knowledge contribution. In contrast, PE misfit in these aspects has deleterious effects. Interestingly, we found that PE misfit may not always be detrimental, as the job characteristics of job autonomy and task significance and the organizational value of generalized trust do not have negative impact when they exceed employees' preferences.

This study is one of the earliest to consider PE fit in KM research. It enhances our theoretical understanding of employees' knowledge contribution by looking beyond the separate influences of employee-side and organizational-side effects to examine the fit between individuals and their organizational environments. Accounting for effect of PE fit can help to explain the disparities among employees in their knowledge contribution behavior. It also contributes to cumulative theoretical development by providing a potential explanation for the inconsistent findings in prior studies. This study also demonstrates the applicability of the PE fit theory to KM research by operationalizing it in terms of constructs relevant to the context of KM. As one of the first KM studies to apply polynomial regression and response surface analyses, we show how these advanced techniques provide a more nuanced understanding of relationships among several variables. As will be explained later, these techniques also address the pitfalls of conventional measures of fit. For practitioners, findings of this study highlight the need to carefully manage contingencies related to PE fit when designing jobs and

shaping organizational environments to promote knowledge contribution. Simply enriching job design (e.g., increasing skill variety) and shaping organizational values and norms without considering employees' dispositions may backfire and have undesirable effects.

Conceptual Background

Person-Environment Fit Theory

The theoretical concept of PE fit was first proposed by Plato (Kaplan 1950) and further developed by vocational psychologists such as Dawis, Lofquist (Dawis et al. 1964), and Holland (Holland 1959). The concept has its roots in the interactive perspective in psychology (Kaplan 1950), which recognizes that individuals' attitudes and behaviors are determined *jointly* by their personal characteristics and their environments. In studies of PE fit, persons are operationalized in terms of individual traits such as abilities or preferences. Environments usually refer to some characteristics of a setting such as demands or norms (Yang et al. 2008). The core premise of the PE fit theory is that when individuals and their environments are compatible, their attitudes and behaviors are likely to be positive (Kristof-Brown et al. 2005). In contrast, PE misfit can generate dysfunctional attitudes and behaviors. PE fit has been conceptualized in terms of complementary fit and supplementary fit and they are discussed next.

Complementary Fit

Complementary fit occurs when individuals' *needs and desires* are satisfied by their organizations (Kristof-Brown 1996). Complementary fit has also been referred to as "needs-supplies fit" (Kristof-Brown 1996) and "psychological needs fulfillment" (Cable and Edwards 2004). As suggested by Kulik et al. (1987), we conceptualize complementary fit in terms of the job characteristics theory, which identifies job autonomy, skill variety, task feedback, task identity, and task significance as five important job characteristics that satisfy employees' psychological needs (Hackman and Oldham 1976).

Job autonomy refers to the degree of freedom, independence, and discretion in scheduling work and determining the procedures for carrying out activities in a job (Hackman and Oldham 1976). In high-autonomy jobs, job outcomes depend more on employees' efforts, initiatives, and decisions rather than on the adequacy of instructions from supervisors or adherence to standard operating procedures. High-autonomy jobs offer personal control, which refers to the amount of control employees perceive to have over their environments to make it less threatening and more rewarding (Ganster and Fusilier 1989). Personal control is a basic human need that has been shown to have strong effect on wellbeing (Sheldon et al. 2001). *Skill variety* refers to the diversity of skills and talents required to carry out activities in a job (Hackman and Oldham 1976). When a job draws upon several skills of employees, they are likely to experience meaningfulness psychologically. *Task feedback* refers to the degree to which carrying out the activities in a job results in employees obtaining direct and clear information about the effectiveness of their performance (Hackman and Oldham 1976). Receiving feedback on one's performance is a critical element of feeling competent (Deci et al. 1999). *Task identity* refers to the degree to which employees complete a "whole" and identifiable piece of work, that is, doing a job from beginning to end with a visible outcome (Hackman and Oldham 1976). A job with high task identity allows employees to follow through the main stages to "provide a complete unit of product or service" (Hackman and Oldham 1976, p. 257) instead of just an indistinguishable part. *Task significance* refers to the degree to which a job has a substantial impact on the lives or work of other people, whether within the immediate organization or in the external environment (Hackman and Oldham 1976). Task significance thus allows employees to experience their job as being more meaningful.

In summary, job autonomy contributes to the extent to which one experiences personal control; skill variety, task identity, and task significance contribute to the perceived meaningfulness of a job; and task feedback contributes to the feeling of competence and need for learning (Hackman and Oldham 1976). Autonomy, meaningfulness, competence, and growth (through learning) have been identified as innate human psychological needs (Sheldon et al. 2001). In seeking to fulfill these needs, employees are likely to have their own ideals about the desirable level of each job characteristic. Complementary fit occurs when an individual's ideals match the actual situation. That is, their psychological needs are fulfilled by doing their work in their organizations.

Supplementary Fit

Supplementary fit occurs when individuals' *values and norms* match (i.e., is similar to) those of their organizations (Kristof-Brown 1996; Muchinsky and Monahan 1987). Values and norms refer to beliefs about desirable behaviors or end states. They guide the selection of behavior and transcend specific events or objects (Cable and Edwards 2004). Supplementary fit has also been referred to as "person-culture fit" (O'Reilly III et al. 1991) and "value congruence" (Cable and Edwards 2004) in prior studies. In the context of this study, we consider supplementary fit in terms of values and norms relevant to knowledge contribution. Our review showed that prior studies have identified values and norms such as generalized trust, fairness, pro-sharing norm, innovativeness, openness, norm of collaboration, norm of reciprocity, and (organizational) identification. An examination of their definitions indicates that some of them overlap conceptually. Specifically, fairness has been defined in terms of trust (Brock et al. 2005; Yu et al. 2010), pro-sharing norm has been defined to include innovativeness, openness, and the norm of collaboration (Kankanhalli et al. 2005), the norm of reciprocity is closely related to the norm of collaboration (Gächter and Herrmann 2009), and identification overlaps conceptually with affective commitment (a mediating variable in this study, as discussed later). Therefore, we focus on generalized trust (which was used to define fairness in prior studies), innovativeness (which include openness, as detailed later), and norm of collaboration (which is closely related to the norm of reciprocity) in this study to resolve conceptual overlaps. Table 1 summarizes the values and norms identified in prior studies, their definitions, and how they can be mapped onto constructs in this study. It also shows the similarities or relationships among values and norms identified in disparate prior studies.

Generalized trust refers to the extent to which members in an organization believe that other members are benevolent and their actions will not be detrimental to one another's interest (Mayer et al. 1995; Robinson 1996). It has been shown that employees in organizations with strong generalized trust contribute knowledge more often because they believe that the knowledge contributed is not likely to be misused by others and others would give them credit for their contribution (Kankanhalli et al. 2005). In line with this, Brock et al. (2005) suggest that trust promotes knowledge contribution by addressing the public good dilemma where knowledge contributed can be used by others regardless of whether or not they make a contribution in return.

Innovativeness refers to the extent to which an organization is creative, emphasizes learning, is open to conflicting views, and encourages experimentation and risk taking (Brock et al. 2005; Kankanhalli et al. 2005). Hurley and Hult (1998) emphasize that innovativeness involves the notion of openness to new ideas. The respect for diversity and tolerance for experimental failures create an open atmosphere where employees feel comfortable contributing novel ideas. Accordingly, we conceptualize innovativeness to include openness. Innovativeness promotes knowledge contribution by instilling it as a "way of work", a part of how an organization pursues its goals, such that there is little need to promote knowledge contribution explicitly (McDermott and O'Dell 2001). There has been some empirical evidence that employees in innovative organizations are more likely to contribute knowledge and creative ideas (e.g., Brock et al. 2005).

Norm of collaboration refers to the extent to which members in an organization cooperate with one another and engage in teamwork (Kankanhalli et al. 2005). Reciprocity is a key element in sustaining collaborations as free riding (i.e., lack of reciprocity) is likely to be viewed as an unkind act that prompts others to withdraw cooperation to punish the free rider (Gächter and Herrmann 2009). It has been suggested that when the norm of collaboration is strong, employees are less bothered about the effort required to contribute knowledge since others may be likewise contributing in reciprocity (Kankanhalli et al. 2005). Accordingly, norm of collaboration is conceptualized to include the norm of reciprocity.

In this study, supplementary fit occurs when individuals' expectations about the ideal level of generalized trust, innovativeness, and norm of collaboration match the actual situation in their organizations. The PE fit theory suggests that an employee will find it comfortable working in an organization where the values and norms important to the employee are also significant to other members in the organization (O'Reilly III et al. 1991). This is because sharing common values and norms enables one to communicate more effectively with others and better predict the outcomes of social interactions. To ensure readability, hereafter individuals' needs, and ideal values and norms will be preceded by the word "preferred" (e.g., preferred job autonomy) and their organizations' supplies, values, and norms will be preceded by the word "actual" (e.g., actual job autonomy).

Table 1. Review of Values and Norms Examined in Prior Knowledge Contribution Studies and their Mapping to Constructs in This Study

Study	Construct and Definition			
This Study	<u>Generalized trust</u> : the extent to which members in an organization believe that other members are benevolent and their actions will not be detrimental to one another's interests	<u>Innovativeness</u> : the extent to which an organization is creative, emphasizes learning, is open to conflicting views, and encourages experimentation and risk taking	<u>Norm of collaboration</u> : the extent to which members in an organization cooperate with one another and engage in teamwork. Collaboration is sustained by the norm of reciprocity	<u>Affective commitment*</u> : an employee's emotional attachment to, identification with, and involvement in the organization
Bock et al. (2005)	<u>Fairness</u> : A trusting climate, reflects the perception that organizational practices are equitable and neither arbitrary nor capricious	<u>Innovativeness</u> : Reflects the perception that change and creativity are actively encouraged and rewarded, emphasizes learning, open information flows, and reasoned risk-taking	<u>Affiliation</u> : The perception of a sense of togetherness among members in an organization, reflects the caring and pro-social behavior critical to inducing members to help one another	N.A.
Burgess (2005)	N.A.	N.A.	<u>Norm of reciprocity</u> : The expectation that the recipient will pay benefits back to the giver	<u>Identification</u> : A part of self-concept derived from group membership that leads individuals to hold attitudes and behave in ways that benefit the group
Kankanhalli et al. (2005)	<u>Generalized trust</u> : The belief in the good intent, competence, and reliability of employees with respect to contributing and reusing knowledge	(Part of) <u>Pro-sharing norm</u> : Willingness to value and respond to diversity, openness to conflicting views and tolerance for failure	(Part of) <u>Pro-sharing norm</u> : Norms of teamwork, collaboration and sharing	<u>Identification</u> : Similarity of values, membership in the organization, and loyalty towards the organization
Lin and Huang (2009)	<u>Trust</u> : Cognitive-based trust, benevolence-based trust, integrity-based trust	N.A.	N.A.	N.A.
Wasko and Faraj (2005)	N.A.	N.A.	<u>Norm of reciprocity</u> : A sense of mutual indebtedness, so that individuals usually reciprocate the benefits they receive from others	N.A.
Yu et al. (2010)	<u>Fairness</u> : A trusting climate	<u>Openness</u> : A climate where information flows freely	<u>Identification</u> : A climate characterized by pro-social norms	N.A.
* Due to the conceptual overlap between Identification and a mediating variable (Affective Commitment) in this study, Identification is excluded from our conceptualization of values/norms related to supplementary fit.				

Effects of Person-Environment Fit

The PE fit theory posits that when there is a fit between employees' preferences and the actual situation in their organizations, employees are likely to develop positive attitudes and behaviors such as strong organizational commitment, high job satisfaction, and pro-social behavior. It is therefore important for organizations to design jobs and nurture desirable values and norms in a way that maximizes PE fit. When there is a misfit such that the actual environment falls short of employees' preferences, increasing PE fit by improving the actual environment is likely to enhance employees' attitudes and behaviors. When there is a misfit such that the actual environment exceeds individuals' preferences (e.g., actual job autonomy is greater than preferred job autonomy), employees' attitudes may continue to develop positively, start to develop negatively, or remain constant (Harrison 1978; Yang et al. 2008). Attitude is likely to continue to develop positively when the excess can be preserved to meet future or other needs. This is referred to as the *monotonic* model of fit. For example, generalized trust is the basis for a variety of social contracts and exchange behavior. Excess in generalized trust can be used to meet needs other than satisfying individuals' ideals. The effect of generalized trust is therefore likely to follow the monotonic model of fit. When the excess hinders the fulfillment of other needs or creates strain, attitude is likely to start developing negatively. This is depicted by the broken line in Figure 1. For example, when the norm of collaboration in an organization exceeds one's preference, it may hinder one's need for independence. When the skill variety required by a job exceeds the level preferred by an employee, the employee may experience stress in trying to fulfill the requirement and his/her attitude is likely to be negatively impacted. This is referred to as the *optimal* model of fit. When the excess cannot be preserved to meet future or other needs but does not hinder the fulfillment of other needs or creates strain, attitude is likely to remain constant, that is, it will neither develop more positively nor start to develop negatively. This is depicted by the solid line in Figure 1 and is referred to as the *asymptotic* model of fit. Each aspect of complementary fit (e.g., job autonomy) and supplementary fit (e.g., generalized trust) can follow only one of the three models of fit.

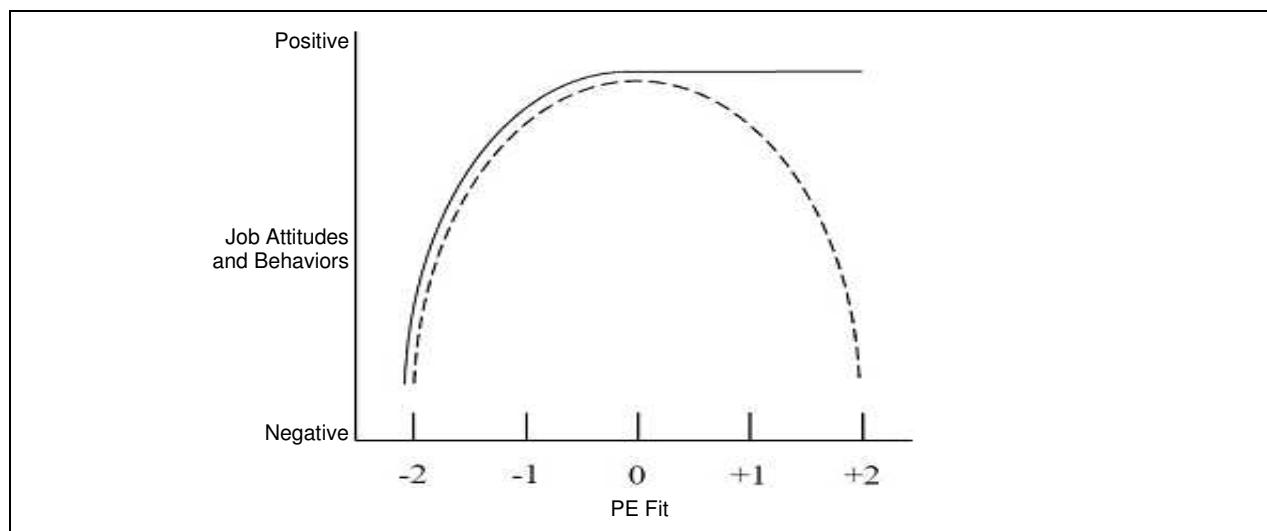


Figure 1. Effect of PE Fit on Job Attitude

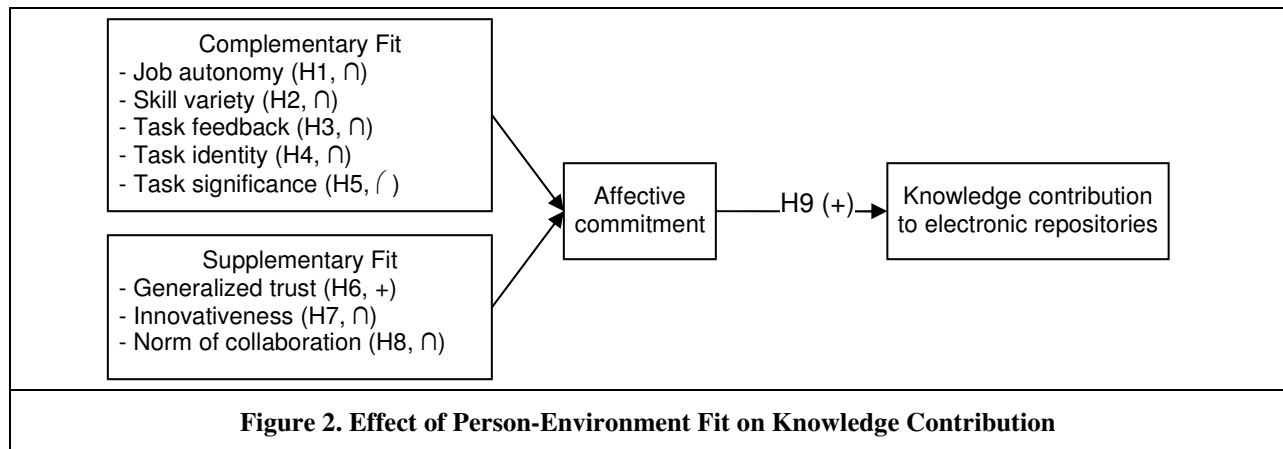
While the PE fit theory posits that PE fit influences individuals' attitudes and behaviors (Kristof-Brown et al. 2005), it is widely accepted that external variables influence individuals' behaviors through shaping attitudes (Fishbein and Ajzen 1975; Glasman and Albarracín 2006). Therefore, we posit that PE fit influences employees' attitude, which in turn influences their knowledge contribution behavior. Employee attitudes that have been examined as effects of PE fit include organizational commitment, job satisfaction, and intention to quit (Hoffman and Woehr 2006; Kristof-Brown et al. 2005; Verquer et al. 2003). Among them, job satisfaction and organizational commitment have been found to influence employees' intra-organizational knowledge contribution (include but not limited to knowledge contribution to electronic repositories) directly (e.g., Lin 2007) or indirectly (e.g., de Vries et al. 2006). Although job satisfaction

and organizational commitment are strongly correlated (Meyer and Allen 1991), they differ conceptually (Mowday et al. 1979) and demonstrate discriminant validity (Mathieu and Farr 1991). While organizational commitment reflects a general affective response to the employing organization as a whole, job satisfaction reflects one's response to specific and tangible aspects of one's job (Mowday et al. 1979). Since we intend to assess the effects of both complementary fit (defined in terms of job characteristics) and supplementary fit (defined in terms of values and norms related to knowledge contribution), organizational commitment is considered to be a more suitable attitudinal factor. Further, organizational commitment has been shown to be more stable than job satisfaction in that it develops slowly but consistently over time while job satisfaction reflects more immediate reactions to specific aspects of the work environment and is therefore more transient (Mowday et al. 1979). In line with this, prior studies have shown that organizational commitment influences knowledge contribution directly (Lin 2007) whereas job satisfaction influences knowledge contribution through shaping employees' attitude (de Vries et al. 2006).

Organizational commitment has been conceptualized in terms of affective, continuance, and normative commitment (Meyer and Allen 1991). *Affective commitment* refers to an employee's emotional attachment to, identification with, and involvement in the organization. *Continuance commitment* refers to an awareness of the costs associated with leaving the organization. *Normative commitment* reflects a feeling of obligation to continue employment. Among them, affective commitment has been found to be a strong predictor of employees' willingness to share knowledge whereas normative and continuance commitment do not have significant effects (Meyer and Allen 1991). Employees who *want* to belong to an organization (affective commitment) are likely to exert extra effort to maintain their membership in the organization than those who *need* to belong (continuance commitment) or *feel obligated* to belong (normative commitment). Therefore, we conceptualize organizational commitment in terms of affective commitment.

Research Model and Hypotheses

The proposed research model is shown in Figure 2. Based on the PE fit theory, we expect complementary fit and supplementary fit to influence affective commitment. As will be detailed later, we hypothesize that the effects of job autonomy, skill variety, task feedback, task identity, innovativeness, and the norm of collaboration to follow the optimal model of fit, the effect of task significance to follow the asymptotic model of fit, and the effect of generalized trust to follow the monotonic model of fit. Affective commitment, in turn, is hypothesized to be positively related to employees' knowledge contribution to electronic repositories. The effects of age, education, gender, job position, and organization tenure will be controlled for in data analysis.



The effects of complementary fit on affective commitment is partly explained by Warr's (1994) Vitamin Model. The model suggests that job characteristics influence employees' affective wellbeing in a way that is analogous to the non-linear effects that vitamins have on people's physical health (Warr 1994). In general, vitamin intake initially improves health but beyond a particular level of intake no further improvement will be observed. Continued intake of vitamins beyond the level may produce a constant effect or additional decrement effect. A *constant effect* occurs when health neither improves nor

deteriorates (similar to asymptotic fit discussed earlier). An *additional decrement effect* occurs when overdose causes a decline in health (similar to optimal fit discussed earlier). Accordingly, Warr (1994) suggests that employees' affective wellbeing initially improves as the levels of job autonomy, skill variety, task feedback, task identity, and task significance increase. Beyond a certain level, increase in each job characteristic may have either a constant or additional decrement effect on affective wellbeing. In a study of 1,686 employees, Warr (1994) found that task significance has constant effect while other job characteristics have additional decrement effects. The additional decrement effect of the job characteristics may be explained by the theory of activation, which states that both under- and over-stimulation generate stress (Scott 1966) in the form of emotional exhaustion and anxiety (Xie and Johns 1995) that are likely to impact the affective wellbeing of employees.

Although Warr's Vitamin Model focuses on the effects of *actual* job characteristics rather than the effects of *fit* between actual and preferred job characteristics, it resonates with the PE-fit theory in that certain job characteristics are believed to have detrimental effects when they are in excess (which can be interpreted as a misfit between actual and preferred job characteristics). Specifically, when actual *job autonomy* exceeds preferred job autonomy, employees' jobs are more unstructured and they need to make more decisions regarding how their work is carried out than they would like. Research on empowerment suggests that this may result in feelings of high uncertainty (Menon 1995) and causes stress (Honold 1997). When actual *skill variety* exceeds preferred skill variety, employees are likely to experience mental overload and job pressure (Chen and Chiu 2009; Xie and Johns 1995). Such mental strain is likely to decrease affective commitment. Too much *task feedback* may also have negative effects. Deci (1972) suggests that too much negative feedback can threaten an employees' sense of competence and self determination whereas too much positive feedback can cause an employee to feel ingratiated. When actual *task identity* exceeds preferred task identity, employees are likely to experience stress as they are more accountable for the results of their work than they would like (Lin and Hsieh 2002). Based on these findings and the Warr's Vitamin Model, we expect the effects of job autonomy, skill variety, task feedback, and task identity to follow the optimal model of fit. There has been some indirect empirical evidence for the optimal effect of fit in job autonomy, skill variety, task feedback, and task identity. For example, Xie and Johns (1995) found that employees who perceived a misfit between job demands and their abilities (measured in terms of all five job characteristics) consistently experienced higher stress than those who perceived better fit. This suggests that the affective commitment of employees experiencing complementary misfit is likely to be limited. Also, Shaw and Gupta (2004) found that depression is more severe when there is a misfit in job complexity (measured in terms of skill variety). In summary, we hypothesize that:

H1: An employee's affective commitment decreases as actual job autonomy falls short of or exceeds preferred job autonomy (i.e., optimal fit).

H2: An employee's affective commitment decreases as actual skill variety falls short of or exceeds preferred skill variety (i.e., optimal fit).

H3: An employee's affective commitment decreases as the actual task feedback falls short of or exceeds preferred task feedback (i.e., optimal fit).

H4: An employee's affective commitment decreases as actual task identity falls short of or exceeds preferred task identity (i.e., optimal fit).

Unlike other job characteristics, we do not expect excess in *task significance* to be dysfunctional. This is in line with Warr's Vitamin Model, which posits that task significance has a constant effect. As mentioned earlier, the PE fit theory suggests that when excess in a job characteristic cannot be preserved to meet future or other needs but does not hinder the fulfillment of other needs or creates strain, employees' attitude will neither develop more positively nor start to develop negatively (i.e., asymptotic model of fit). It has been shown that jobs high in task significance are perceived as meaningful in that they fulfill the needs for social worth and impact (defined as the degree to which employees feel that their actions benefit and are valued by other people; Grant 2008). However, there is a lack of evidence that task significance can fulfill other needs. Further, prior studies have shown that task significance does not have significant negative effects (e.g., emotional exhaustion, tedium; Gaines and Jermier 1983). Unlike task identity (which emphasizes that one is responsible for producing a noticeable piece of work), task significance focuses on the belief that one's job has a positive impact rather than one's accountability. Therefore, it is not expected to have negative impact even when in excess. Accordingly, we expect the effect of task significance to follow the asymptotic model of fit:

H5: An employee's affective commitment decreases as actual task significance falls short of preferred task significance but remains constant as actual task significance exceeds preferred task significance (i.e., asymptotic fit).

Generalized trust is the extent to which members in an organization believe that other members are benevolent and their actions will not be detrimental to one another's interests (Mayer et al. 1995; Robinson 1996). When employees work in an organization that has less generalized trust than they would prefer, they may experience other members' wary behavior as skepticism and cynicism (Lewicki et al. 1998). They are likely to perceive their environments as antagonistic and are therefore less likely to develop strong affective commitment (Crossen 1993). When the level of generalized trust exceeds employees' preference, their affective commitment is expected to continue to increase (i.e., follow the monotonic model of fit) because trust can be used to fulfill many needs other than one's dispositional preference. Trust is the basis of a variety of relational contracts and social exchange behaviors. For example, Kramer (1999) has identified three key benefits of trust. First, trust can be used as a social decision heuristic which reduces the costs of transacting with others (e.g., negotiation time). Second, trust works as the basis for cooperative, altruistic, and extra-role behavior by increasing spontaneous sociability among organizational members. Third, trust can serve to ensure appropriate forms of deference to organizational authorities in relationships such as leader-follower, manager-subordinate, and employer-employee. The PE fit theory suggests that when excess in a characteristic can be preserved to meet future or other needs, the development of employees' attitude will follow the monotonic model of fit. Accordingly, we hypothesize that:

H6: An employee's affective commitment decreases as the level of actual generalized trust falls short of preferred generalized trust but increases as actual generalized trust exceeds preferred generalized trust (i.e., monotonic fit).

Innovativeness refers to the extent to which an organization is creative, emphasizes learning, is open to conflicting views, and encourages experimentation and risk taking (Bock et al. 2005; Kankanhalli et al. 2005). Employees working in organizations with less innovativeness than they would prefer are likely to feel that their creativity and learning are suppressed and their work is unexciting. There has been some evidence that a fit in actual and preferred innovativeness is related to affective commitment. For example, O'Reilly III et al. (1991) found that person-culture fit (whose measures include innovativeness and propensity to take risk) is significantly related to value-based commitment (measured in terms of affective commitment). Westerman and Cyr (2004) also found that value congruence (whose measures include innovativeness) significantly influence organizational commitment (measured in terms of affective commitment). However, since innovative work often requires complex problem solving and involves high uncertainty, strong innovativeness quickly turns into a demand when it exceeds employees' preference. In line with this, a review of innovativeness and employee wellbeing has shown that innovativeness can have negative effects such as increasing employees' workload and contributing to the development of burnout (Huhtala and Parzefall 2007).

H7: An employee's affective commitment decreases as the level of actual innovativeness falls short or exceeds preferred innovativeness (i.e., optimal fit).

Norm of collaboration refers to the extent to which members in an organization cooperate with one another and engage in teamwork (Kankanhalli et al. 2005). Collaboration allows employees to work in groups and develop relationships with one another. This provides them opportunities to fulfill the need for relatedness, which refers to individuals' inherent propensity to feel connected to others and be integrated in the social matrix (Van den Broeck et al. 2010). When the actual norm of collaboration is less than preferred, employees are likely to feel unsatisfied and their affective commitment is likely to be low. However, when the actual norm of collaboration exceeds employees' preferences, they are likely to feel that their needs for independence and individual judgment are hindered. Further, collaborations and teamwork often require interpersonal skills such as effective communication and conflict resolution (Neuman and Wright 1999). These may turn into a demand when employees feel compelled to work with others to adhere to the norm of collaboration. The PE fit theory suggests that when excess in a characteristic hinders the fulfillment of other needs or creates strain, attitude is likely to start developing negatively. Therefore, we hypothesize that:

H8: An employee's affective commitment decreases as the level of actual norm of collaboration falls

short or exceeds preferred norm of collaboration (i.e., optimal fit).

Employees with high affective commitment have strong emotional attachment to, identification with, and involvement in their organization (Meyer and Allen 1991). Prior studies have shown that affective commitment motivates employees to contribute to their organizations' development by engaging in organization citizenship behaviors (e.g., Paré and Tremblay 2007), which are voluntary behaviors that are neither part of an employee's role requirements nor formally rewarded by the organization (Organ and Ryan 1995). Knowledge contribution to electronic repositories is largely an organization citizenship behavior as the contributor's personally-held knowledge becomes a "public good" that may be used by anyone having access to the repositories (King and Marks Jr 2008). Some evidence suggests that affective commitment may be related to knowledge contribution to electronic repositories. For example, Lin (2007) found that organizational commitment (measured in terms of affective commitment) is positively related to employees' sharing of job experience, expertise, ideas, and tips with co-workers. Matzler et al. (2011) found that affective commitment influences the documentation of knowledge in written form.

H9: Employees' affective commitment is positively related to their knowledge contribution to electronic repositories.

Research Method

Measurement of Fit

Data for assessing the hypotheses were collected in a survey. To measure fit, both direct and indirect measures have been used in prior studies (Kristof-Brown 1996). A *direct measure* asks respondents explicitly whether they believe that a fit exists between them and their environments. For example, respondents may be asked to indicate the extent to which their values are compatible with those of their organizations, or the extent to which they need to compromise their personal values to meet organizational expectations. Direct measures have been criticized to confound the "person" and "environment" components of PE fit and preclude the estimation of their independent effects (Kristof-Brown 1996). Further, direct measures may be subjected to consistency bias, where the consideration of "fit" itself causes respondents to adjust their reported attitude (e.g., "I think there is a fit, so I must like my organization").

An *indirect measure* asks respondents to indicate the level of "person" and "environment" components separately (Kristof-Brown 1996). Fit is then assessed by comparing the two components. The "person" and "environment" measures should be commensurate (i.e., have the same content) since it makes little sense to compare measures with different content (Edwards et al. 2006). For example, if the "person" component of job autonomy is assessed by asking respondents to indicate how much job autonomy they *want* in their job ideally, the "environment" component of job autonomy should be assessed by asking respondents to indicate the extent to which they *have* autonomy in their current job. Based on indirect measures, fit is often assessed by calculating difference scores (e.g., subtracting actual job autonomy from preferred job autonomy) or by analyzing interactions (e.g., multiplying actual job autonomy and preferred job autonomy). However, these approaches have been criticized to conceal the individual effects of the "person" and "environment" components of fit. They also place restrictive constraints on the sign and magnitude of coefficients in regression analysis that cannot be justified theoretically (Edwards et al. 2006). To avoid these problems, this study assesses fit using polynomial regression analysis, which accounts for the joint effects of "person" and "environment" constructs without reducing them into a single measure (Edwards et al. 2006).

Construct Operationalization

In the survey instrument, *job autonomy, skill variety, task feedback, task identity, and task significance* were measured with items validated by Morris and Venkatesh (2010), which were adapted from Hackman and Oldham's (1975) job diagnostic survey. Hackman and Oldham's (1975) job diagnostic survey is the most commonly used job characteristic measure (Morgeson and Humphrey 2006). Morris and Venkatesh (2010) improved the reliability and validity of the original version by removing reverse-coded items. To ensure that the items read neutral, we eliminated adjectives whenever appropriate (e.g., "considerable" in "considerable opportunity for independence").

Table 2. Survey Instrument
<p>Job Autonomy (all items adapted from Morris and Venkatesh 2010)*: Ideally, how much of the following do you want in your job? - JAP1: job autonomy. Having autonomy means that you are allowed to decide on your own how to go about doing the work; JAP2: independence and freedom in doing your work; JAP3: chances to use your personal initiative and judgment in carrying out your work Currently, to what extent does your job... - JAE1: ... have autonomy? JAE2: ... give you opportunity for independence and freedom in how you do the work? JAE3: ... give you chances to use your personal initiative and judgment in carrying out the work?</p>
<p>Skill Variety (all items adapted from Morris and Venkatesh 2010): Ideally, how much of the following do you want in your job?[#] SVP1: job variety. Having variety means you are required to do many different things at work, using a variety of your skills and talents; SVP2: requirement to use a number of complex or high-level skills; SVP3: complexity and non-repetitiveness</p>
<p>Task Feedback (all items adapted from Morris and Venkatesh 2010): Ideally, how much of the following do you want in your job? TFP1: provision of clues about how well you are doing – aside from any feedback that coworkers or supervisors may provide; TFP2: chances for you to figure out how well you are doing your job; TFP3: knowledge of whether you have performed well after you finish a job</p>
<p>Task Identity (all items adapted from Morris and Venkatesh 2010): Ideally, how much of the following do you want in your job? TIP1: completion of a whole and identifiable piece of work. A whole and identifiable piece of work means a complete piece of work that has an obvious beginning and end rather than only a small part of the overall piece of work; TIP2: chance to completely finish the pieces of work you begin; TIP3: job arrangement that allows you to do an entire piece of work from beginning to end</p>
<p>Task Significance (all items adapted from Morris and Venkatesh 2010): Ideally, how much of the following do you want in your job? TSP1: job significance. A significant job means that the results of your work are likely to significantly affect the lives or wellbeing of other people; TSP2: effect on a lot of other people; TSP3: job significance and importance in the broader scheme of things</p>
<p>Generalized Trust: Ideally, how much do you think people in your organization should ... GTP1: have high integrity (adapted from Robinson 1996)? GTP2: be honest (adapted from Robinson 1996)? GTP3: behave in a consistent and predictable way (adapted from Robinson 1996)? GTP4: use others' knowledge appropriately (adapted from Kankanhalli et al. 2005)? GTP5: give credit for other's knowledge where it is due (adapted from Kankanhalli et al. 2005)?</p>
<p>Innovativeness: Ideally, how much do you think an organization should ... INP1: ...value creativity (developed based on Hurley and Hult 1998)? INP2: ...facilitate learning (developed based on Hurley and Hult 1998)? INP3: ...be open to conflicting views (adapted from Kankanhalli et al. 2005)? INP4: ...be willing to take risks to experiment with new ideas (developed based on Hurley and Hult 1998)?</p>
<p>Norm of Collaboration: Ideally, how much you think an organization should have ... NCP1: ...the norm of collaboration (adapted from Kankanhalli et al. 2005); NCP2: ...the norm of teamwork (adapted from Kankanhalli et al. 2005); NCP3: ...the norm of rewarding employees for joint accomplishments (developed based on Chatman and Barsade 1995)</p>
<p>Affective Commitment (adapted from Rhoades et al. 2001): To what extent... AF1: ...would you be happy to work at your organization until you retire? AF2: ...do you feel that the problems faced by your organization are also your problems? AF3: ...do you feel a sense of belonging to your organization? AF4: ...do you feel personally attached to your organization? AF5: ...does working at your organization have personal meaning to you? AF6: ...are you proud to tell others that you work at your organization?</p>
<p>Knowledge Contribution to Electronic Repositories (adapted from Hsu et al. 2007 and Kankanhalli et al. 2005) KC1: How often do you contribute work-related knowledge to your organization's electronic knowledge repositories? (<i>Never- Sometimes-Always</i>); KC2: How much time do you spend contributing work-related knowledge to your organization's electronic knowledge repositories? (<i>Very little – Some – Very much</i>); KC3: To what extent do you involve yourself in discussion of various topics rather than specific topics on your organization's electronic knowledge repositories?</p>
<p>* All items were measured with seven-point Likert scale anchored by "not at all" – "moderate" – "to a very great extent" unless otherwise indicated in italic parentheses. # The "environment" measures are commensurate with the "person" measures and are thus omitted in view of space constraint</p>

Generalized trust was assessed with items adapted from Kankanhalli et al. (2005) and Robinson (1996). *Innovativeness* was assessed with items adapted from the scale of pro-sharing norms developed by Kankanhalli et al. (2005). We developed additional items based on the conceptual description of innovative organizations by Hurley and Hult (1998) to measure the extent to which an organization values creativity, facilitates learning, and is willing to take risks to experiment with new ideas. Items measuring *norm of collaboration* were adapted from Kankanhalli et al. (2005). We added an item based on the description of cooperative organizational culture by Chatman and Barsade (1995) to measure the norm of rewarding employees for joint accomplishments. *Affective commitment* was assessed with items adapted from the scale of affective organizational commitment validated by Rhoades et al. (2001). Items measuring *knowledge contribution to electronic repositories* were adapted from the scale of knowledge sharing behavior validated by Hsu et al. (2007) and the scale of knowledge repository usage validated by Kankanhalli et al. (2005).

Instead of asking respondents to indicate whether they agreed or disagreed with a statement, we worded all items in the question form in order to capture very low and very high levels of “person” and “environment” characteristics (Edwards et al. 2006; Kristof-Brown 1996). All constructs were assessed with at least three items. Each item was measured with seven-point Likert scales anchored by “not at all” – “moderate” – “to a very great extent” except for some items measuring knowledge contribution, as shown in Table 2. In this paper we list all items measuring job autonomy to demonstrate the wording of “person” and “environment” measures. The “environment” measures of the other constructs were commensurate and were thus omitted due to space constraint.

It is important to note that we measured the environment component in terms of respondents’ subjective perception (e.g., perceived level of innovativeness) rather than the objective situation (e.g., average number of new products launched per month). The main reason for this is that perception is the means by which individuals attribute psychological meaning to their environments. An objective situation is unlikely to influence one’s attitudes and behaviors if it does not exist in one’s perception of reality (Kristof-Brown 1996).

Data Collection

The target population of this study is employees working in organizations that have implemented electronic knowledge repositories, especially those involved in knowledge-intensive professional work. To generate a suitable sample, we randomly selected 600 professionals working as doctors, engineers, and lawyers from several directories of certified professionals in Singapore. We contacted them by mail and invited those working in organizations that have implemented electronic knowledge repositories to complete a web-based survey. We received a total of 211 complete responses, representing a response rate of 35.2 percent. Most of the respondents were employed as engineers (85 respondents, 40.3 percent), followed by lawyers (67 respondents, 31.8 percent) and doctors (59 respondents, 28.0 percent). The sample comprised of 73.9 percent males (156 respondents) and 26.1 percent females (55 respondents). Of the respondents, 45.0 percent (95 respondents) attained a doctoral degree and the remaining have a bachelor or master degree. The median age of the respondents was between 35 to 40 years old and the average organization tenure was 4 years.

Data Analysis

Assessment of Reliability and Validity

The survey instrument was tested for reliability, convergent validity, discriminant validity, and common method bias. Reliability was assessed with Cronbach’s alpha coefficient. We found that all constructs achieved scores above the recommended 0.70 (Hair et al. 2009). Convergent validity was assessed by examining composite reliability and average variance extracted (AVE) by each construct. We found that all composite reliabilities and AVEs were above the recommended level of 0.70 (Hair et al. 2009). Discriminant validity was assessed by factor analysis and comparing construct correlations and square root of AVE. Similar to Morris and Venkatesh (2010), we conducted a factor analysis with direct oblimin rotation to allow for possible correlations among job characteristics. The results indicated that all items

loaded highly on their stipulated constructs but not highly on other constructs. We assessed the extent of common method bias with Harman's one-factor test by entering all constructs into an unrotated principal components factor analysis. The threat of common method bias is high if a single factor accounts for more than 50% of the variance. Our results indicated that none of the factors significantly dominated the variance and common method bias was therefore unlikely. We also assessed the extent of multicollinearity by calculating variance inflation factor (VIF). The resultant values of VIF ranged from 1.13 to 3.74, which were close to the threshold value of 3.33 (Diamantopoulos and Winklhofer 2001). In general, the survey instrument has satisfactory reliability and validity.

Assessment of Hypotheses

The hypothesized positive linear effects of generalized trust and affective commitment were assessed using linear regression. To assess the hypothesized asymptotic fit and optimal fit effects, we analyzed equations in the following forms using hierarchical polynomial regression:

First step/linear regression : $Y = b_0 + b_1 P + b_2 E + e$

Second step/polynomial regression : $Y = b_3 + b_4 P + b_5 E + b_6 PE + b_7 P^2 + b_8 E^2 + e$

where Y is affective commitment, P is a "person" component (e.g., preferred job autonomy), and E is the corresponding "environment" component (e.g., actual job autonomy). Three-dimensional response surfaces were then plotted based on the estimated coefficients to facilitate visual interpretations of the results (see Edwards and Parry 1993 for a more detailed discussion of polynomial regression and response surface analysis). To minimize multicollinearity between the "person" and "environment" components and their higher-order terms in regression, we scale centered all data prior to analysis.

Results of hypotheses testing are shown in Table 3. We found that the effects of skill variety (H2), task identity (H4), and innovativeness (H7) followed the optimal model of fit while the effect of task significance (H5) followed the asymptotic model of fit as hypothesized. The effect of generalized trust (H6) was positive as hypothesized. We also found that affective commitment was significantly related to employees' knowledge contribution to electronic repositories (H9). Contrary to our hypotheses, the effect of job autonomy (H1) was linear, and the effects of task feedback (H3) and norm of collaboration (H8) were insignificant. None of the control variables (i.e., age, education, gender, job position, organization tenure) had significance effect.

Table 3. Result of Hypothesis Testing

Hypothesis	Linear Regression		Polynomial Regression		Result
	Coefficients	R ²	Coefficients	R ²	
Job autonomy → Affective Commitment (AF)	b ₁ = 0.25*** b ₂ = 0.55***	0.54	b ₄ = 0.28***; b ₅ = 0.54***; b ₆ = 0.12; b ₇ = 0.03; b ₈ = -0.10	0.52	H1 (∩) was not supported
Skill variety → AF	b ₁ = 0.13** b ₂ = 0.31***	0.45	b ₄ = 0.12***; b ₅ = 0.30***; b ₆ = 0.14***; b ₇ = -0.10***; b ₈ = -0.06	0.47	H2 (∩) was supported
Task feedback → AF	b ₁ = -0.11 b ₂ = 0.16	0.01	b ₄ = -0.11; b ₅ = 0.14; b ₆ = 0.00; b ₇ = 0.00; b ₈ = -0.08	0.03	H3 (∩) was not supported
Task identity → AF	b ₁ = 0.22*** b ₂ = 0.53***	0.50	b ₄ = 0.22***; b ₅ = 0.49***; b ₆ = 0.27***; b ₇ = -0.18**; b ₈ = -0.17**	0.53	H4 (∩) was supported
Task significance → AF	b ₁ = 0.21** b ₂ = 0.46***	0.36	b ₄ = 0.15; b ₅ = 0.64***; b ₆ = 0.19**; b ₇ = -0.12; b ₈ = 0.11*	0.42	H5 (∩) was supported
Generalized trust → AF	b ₁ = 0.18** b ₂ = 0.40***	0.26	N.A.	0.23	H6 (+) was supported
Innovativeness → AF	b ₁ = 0.19** b ₂ = 0.42***	0.45	b ₄ = 0.20***; b ₅ = 0.41***; b ₆ = 0.35***; b ₇ = -0.16**; b ₈ = -0.11*	0.49	H7 (∩) was supported
Norm of collaboration → AF	b ₁ = 0.05 b ₂ = -0.09	0.02	b ₄ = 0.02; b ₅ = -0.09; b ₆ = -0.09; b ₇ = -0.03; b ₈ = 0.00	0.02	H8 (∩) was not supported
AF → Knowledge Contribution	b ₁ = 0.41***	0.27	N.A.	N.A.	H9 (+) was supported

*p<0.05, **p<0.01, ***p<0.001

The response surfaces of constructs that have significant effects are shown in Figure 3. We observed that affective commitment decreased as actual skill variety, task identity, and innovativeness fell short of or exceeded employees' preferences. Employees' affective commitment was stronger when both their preferences and the actual situation were high (e.g., both preferred skill variety and actual skill variety were high) than when both were low. Overall, affective commitment was strongest when both preferences and the actual situation were high and weakest when preferences were high but the actual situation were low (e.g., very high preferred skill variety but very low actual skill variety). For PE misfit, employees who experienced excess (see left half of figure) had stronger affective commitment than employees who experienced shortfall (see right half of figure). That is, shortfall was more detrimental than excess. For task significance, we observed that excess (see left half of figure) had much less negative impact on affective commitment than shortfall. This supported the hypothesis that its effect follows the asymptotic model of fit. Interestingly, affective commitment improved at a faster rate when actual task significance increased.

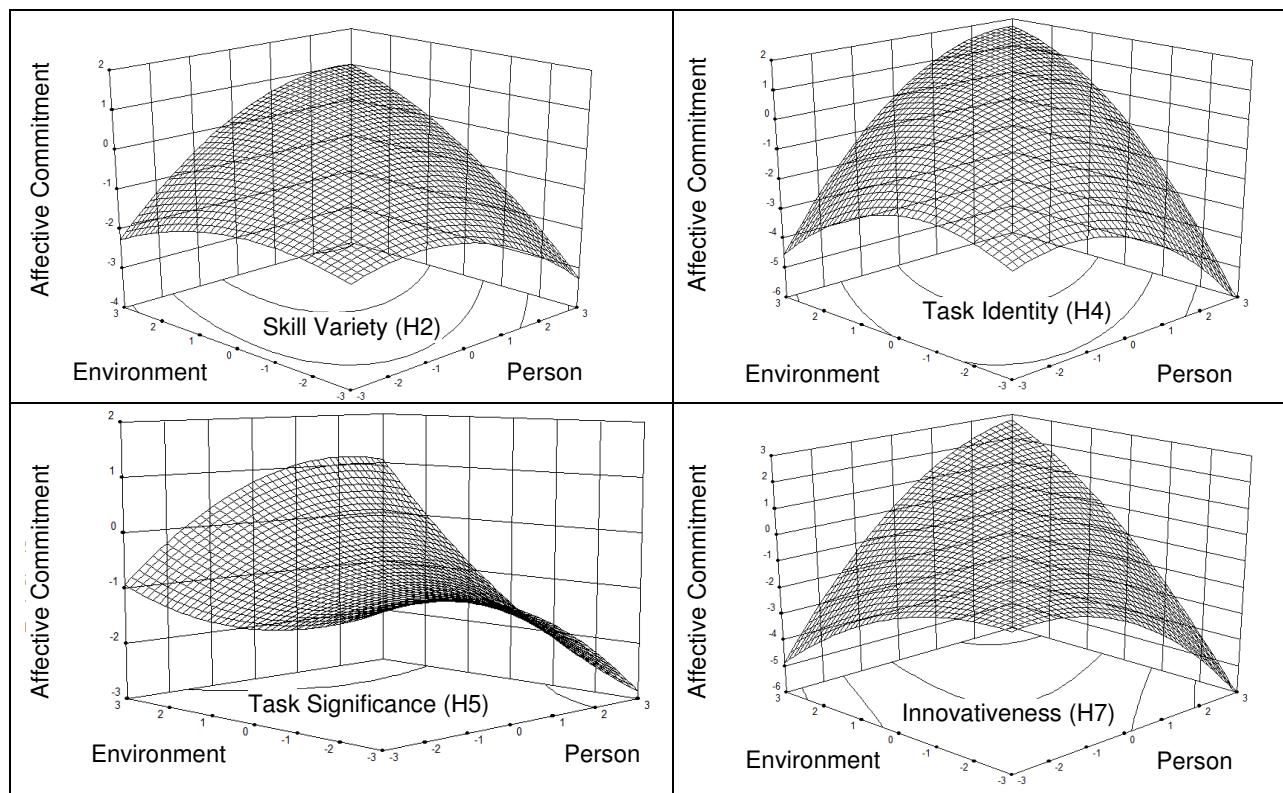


Figure 3. Response Surface of Significant Fit Effect

We also examined whether affective commitment fully mediated the effect of PE fit on employees' knowledge contribution to electronic repositories. Based on the suggestion of Edwards and Cable (2009) for analyses involving polynomial regression, we compared the change in variance explained of models with and without the independent variables (i.e., constructs related to PE fit in this study). The results indicated that the model with PE fit had significantly higher variance explained in knowledge contribution compared to the model without (difference=0.19, $F=1.49$, $p<0.05$). This suggests that affective commitment does not fully mediate the effects of PE fit on knowledge contribution.

Discussion

We found that PE fit related to skill variety, task identity, task significance, generalized trust, and innovativeness had significant effects on employees' affective commitment and subsequently their knowledge contribution to electronic repositories. Although prior studies have found that increasing the

levels of these factors can promote knowledge contribution, our findings suggest that they can be dysfunctional when their levels exceed the preferences of employees. Examining PE misfit can also help to explain why employees in the same organization may have different knowledge contribution behavior despite facing the same organizational environment – only employees who experience PE fit have strong affective commitment and are willing to contribute to electronic knowledge repositories.

We found that the hypotheses involving job autonomy, task feedback, and norm of collaboration were not supported. Specifically, the fit between preferred and actual *job autonomy* did not have a significant effect on affective commitment. We expected that excess job autonomy might cause employees to experience more uncertainties and stress than they would prefer and thereby decrease their affective commitment. However, it might also be that autonomy itself provided opportunities for employees to reduce uncertainties by scheduling work such that more information can be gathered before making decisions. Further, learning in the process of information search might increase the perceived meaningfulness of their job and effectively offset negative sentiments associated with uncertainties.

Our findings also indicated that PE fit related to task feedback did not significantly influence affective commitment. In retrospect, a possible reason for this unexpected finding may be that it is necessary to consider the valence of feedback. Recent studies have shown that positive and negative feedback have differential effects on affective commitment (e.g., Belschak and Den Hartog 2009). Positive feedback is likely to generate emotional comfort which motivates attachment to an organization while negative feedback may create discomfort that induces avoidance (Maertz and Griffeth 2004). These two effects might have cancelled each other out in our analysis where they were not distinguished, leading to the finding that task feedback had no significant effect. To better understand the true effect of task feedback, further studies may need to conceptualize and measure positive and negative task feedback separately.

PE fit related to the norm of collaboration also did not have a significant effect on affective commitment. We expected collaboration to influence employees' affective commitment by fulfilling their need for relatedness. This finding suggests that collaboration may not be a key means through which the need for relatedness is fulfilled. This finding also indicates that employees' affective commitment and knowledge contribution are not significantly impacted even when there is a misfit in the norm of collaboration. This is in line with Kankanhalli et al. (2005), who found that the norm of collaboration did not have a significant effect on employees' knowledge contribution to electronic repositories.

Implications for Research and Theoretical Development

This study contributes to KM research in four ways. First, by examining the effects of fit between persons and their environments, the results can explain why some employees in an organization enthusiastically contribute knowledge to electronic repositories while others remain inactive. Specifically, we showed that an employee's attitudes and behaviors represent a reciprocal interplay between personal characteristics and environment. Second, this is one of the first studies to apply the theory of PE fit in KM research. We adapted the theory to the context of KM in organizations by operationalizing supplementary fit in terms of values and norms relevant to KM (i.e., generalized trust, innovativeness, norm of collaboration). This can serve as a stepping stone for future studies of PE fit in KM research. Third, the theory of PE fit provides a basis for better understanding the effects of various job characteristics and organizational values and norms on knowledge contribution to electronic repositories. In particular, the theory suggests that misfit in terms of shortfall is detrimental, but excess can be dysfunctional as well. For example, we found that when an organization is more innovative than that preferred by its employees, employees may experience the emphasis on innovativeness as a demand and cognitive strain. This negatively impacts employees' affective commitment and subsequently discourages them from contributing knowledge. An initiative to increase knowledge contribution by promoting innovativeness may not be successful if it overlooks the disposition of employees. It may be interesting for future research to develop fit profiles that can be used by organizations to determine the best way for promoting knowledge contribution. Fourth, this is one of the earliest studies to use polynomial regression and response surface analyses in KM research. As explained earlier, these advanced analysis techniques allow us to avoid the pitfalls of using direct measures of fit and aggregating indirect measures of fit. They also enable us to look beyond linear effects and examine complex effects anticipated in the PE fit theory (e.g., optimal versus asymptotic models of fit). Overall, they can provide a richer and more accurate empirical assessment of relationships and future studies should further explore their applicability to KM research.

This study has several limitations that may present opportunities for future research. First, as mentioned earlier, we did not distinguish between positive and negative task feedback and this might have affected the findings. It may be fruitful for future studies to conceptualize and measure them differentially. Second, as one of the initial studies, we examined only a limited set of factors related to complementary and supplementary fit. Future studies may consider other factors such as those related to managerial style and reward structure. Further, while factors related to complementary fit are exemplified by the job characteristics theory and Warr's Vitamin Model, there is a lack of theoretical bases for factors related to supplementary fit. This points to the need for theoretical development related to supplementary fit to clarify its conceptual domain. Third, while prior studies have shown that job satisfaction, continuance commitment, and normative commitment do not have significant or direct effects on knowledge contribution, measuring and statistically controlling for their effects will constitute a more rigorous way to rule out their effects in future studies. Further, our findings indicate that factors other than affective commitment may mediate the effects of PE fit on knowledge contribution. It may therefore be fruitful to consider other mediators related to organization citizenship behaviors such as job involvement. Fourth, findings of this study were based on data collected from individuals working in knowledge-intensive professions (i.e., doctors, engineers, and lawyers) who might have higher tolerance for PE misfit. Thus, more studies of other professions are needed to ascertain whether the findings (especially the insignificant effects of job autonomy, task feedback, and norm of collaboration) are generalizable. Further, it may be interesting to identify factors influencing employees' tolerance for PE misfit. Fifth, this is a cross-sectional study and we could not examine how employees' preferences evolve. Longitudinal studies might provide additional insights into whether and how employees adjust themselves to regain fit with their environments.

Implications for Practice

The findings of this study suggest that employees' knowledge contribution is influenced by their PE fit. Therefore, it is beneficial to maximize PE fit across employees. To a certain extent, job characteristics may be adjusted to increase PE fit. For example, we found that PE fit related to skill variety and task identity has significant effect on affective commitment. These job characteristics can be fine-tuned by redefining job scope or assigning more or less people to complete a unit of work. We also found that the effect of task significance follows the asymptotic model of fit. Further, response surface analysis revealed that increasing actual task significance enhances affective commitment at an increasing rate. This suggests that task significance should be enhanced as much as possible. Task significance may be increased by clarifying employees' individual contribution to moral ideals and higher-order goals such as department or organizational objectives. Managers may also provide more opportunities for employees to have direct contact with the (internal or external) beneficiaries of their work to better understand the impact of their work on others (Grant 2008) through organizing focus groups, presentations, and other socializing events.

Organizations may also design their recruitment process to attract individuals who share their values and norms. This may be achieved by assessing the values and norms of candidates using personality tests or value profiles during job interviews and selecting only compatible individuals. Site visits and meetings with potential coworkers may also be organized to provide candidates with a candid image of the organizations' values and norms (Kristof-Brown 1996). These are likely to increase the chances of hiring employees who will develop positive attitude and be more willing to contribute knowledge.

Conclusion

This study shows that promoting knowledge contribution to electronic repositories requires a consideration of the determining factors as well as the dispositions of employees. Understanding PE fit can help managers choose among alternatives for promoting knowledge contribution and avoid pursuing fads that have limited effectiveness due to the lack of fit. In an era when the most innovative organizations such as Google and Boston Consulting Group attract talents with their unique cultural values and norms (CNN Money 2009), fit matters.

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