Employee Innovative Behavior: A Conceptual Framework

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This article attempts to synthesize the results of previous research on innovative behavior at work that appeared scattered and integrate such results into a cohesive whole. The proposed framework is a multi-component construct which provides holistic view of various factors that affect employee innovative behavior. Such factors have been categorized into individual, interpersonal and contextual. Psychological capital and psychological empowerment have been identified as individual factors whereas transformational leadership and leader-member exchange, and knowledge sharing in social network are put under the category of inter-personal factors. Job context and supportive organizational climate emerged as contextual factors.

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Introduction

Innovative behavior on the part of a large number of employees is significant for sustainable performance for all kinds of enterprises and for a variety of jobs therein. Therefore, the philosophy of innovation needs to be embedded in the organizational culture. "The foundation of innovation is ideas, but it is people who develop, carry, react to, and modify ideas" (Van de Ven 1986:592) and they require novel and divergent thinking whereby they contribute to transform their novel and useful ideas into developing processes, products or services of better quality. "Employees can contribute to innovation in organizations in numerous ways, but the three are particularly common and stand out as important across a wide array of organizations and industries: generating new ideas, sharing ideas with colleagues / supervisors and spreading innovation throughout the organization, and working to implement those innovations themselves or helping others to do so" (Ng & Feldman, 2010 :1068). All these actions constitute innovative behavior at work. It may be defined as "individuals' behaviors directed towards the initiation and intentional

introduction of new and useful ideas and processes, products or procedure within a work role, group or organization" (De Jong, 2006: 19). Innovation is the process by which new and applicable ideas generated through one's creativity and then such ideas are captured, recognized, filtered, clarified, modified, further developed, and finally commercialized and the process also includes overcoming a variety of obstacles that come in the way and it is the creativity that fuels the conduits of innovation process. Innovative behavior may be understood "as a multiple-stage process in which an individual recognizes a problem for which she or he generates novel or adopted ideas and solutions, works to promote and build support for them, and produces an applicable prototype or model for the use and benefit of the organization or parts within it (Carmeli, Meitar & Weisberg, 2006: 78). Creativity is a critical element of our capability to innovate. And innovation is a crucial factor to improve quality of work life, to enhance the level of our competitiveness and to ensure the sustainability of our development. "Creativity is the first step in the process of innovation starting with generation of novelty (invention) and moving on to 'exploitation' of it what we call 'insertion' into a functioning system" (Cropley, 2009: 260). Creativity is the process of producing or developing novel ideas whilst innovative behavior is about putting them into action. The base of innovation is new and applicable ideas, but it is innovative behavior of the employees through which such ideas are adopted, and implemented for achieving some business or social purposes. Organizations must stabilize their innovation process by creating and nurturing an environment in which creativity of the employees is flourished and it is reflected in their actions. Previous researchers have studied organizational variables, such as perceived organizational support, influence and leadership factors, and contextual /cultural variables. However, some empirical studies have revealed that psychological capital or competencies or self-efficacy of the employees generally decide the end results of incremental innovation.

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Psychological Capital & Employee Innovative Behavior

Psychological Capital is one's optimistic and development oriented psychological mind state indicated by: "(i) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (ii) making a positive attribution (optimism) about succeeding now and in the future; (iii) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (iv) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans, Youssef & Avolio, 2007: 3). In recent research studies (e.g., Abbas & Raja, 2011; Jafri, 2012), psychological capital and innovative behavior were found positively correlated. "Self-efficacy refers to

beliefs in one's capabilities to organize and execute the courses of action required to produce desired results" (Bandura, 1997:3). Bandura (1997:239) suggests that "self-efficacy as a generative capability is essential for creative productivity…. innovativeness requires an unshakable sense of efficacy…" Extant research (e.g., Jafri, 2012; Kumar & Uzkurt, 2010; Waenink, 2012) indicates that employees with high self-efficacy are creative and tend to demonstrate creative behavior. It has been suggested in the general framework of West & Farr (1989) that individual characteristics, intrinsic job factors, group factors, relationships at work, and organizational factors all have an impact on individual innovation or employee innovative behavior. Such a framework has been upheld in a study carried out by Axtell et al. (2000:.280). An emerging line of thinking suggests that employees may inspire and lead themselves towards achieving their predetermined goals through self-leadership. 'Self-leadership' encompasses a set of skills that include self-consciousness, self-goal determination, self-motivation, self- morale building, self-direction, self-control, self-feedback (e.g., positive or negative self-criticism), self-reflection on work experience and task accomplishments, self-counseling, and developing constructive thought patterns and auto-suggestion system for self-influence and self-development. In the study of Prussia, Anderson, & Manz (1998:523), "self-efficacy perceptions were found to fully mediate the self-leadership / performance relationship". The findings of the study carried out by Carmeli, Meitar & Weisberg (2006:85) "lend support to the role of self-leadership skills in fostering innovative behavior at work".

In nutshell, (i) psychological capital and innovative behavior are positively correlated; (ii) there exists a positive linkage between self-efficacy and innovative behavior of the employees; (iii) cognitive ability positively contributes to innovative behavior of the employees (iv) self-leadership skills foster innovative behavior at work; and (iv) expected positive results on one's performance have significant impact on employee innovative behavior.

Psychological Empowerment

Psychological empowerment is an internal mind state characterized by the feeling of self-confidence or enhanced job motivation at intrinsic level. The perceived organizational or management support available to empower employees certainly affects their willingness and capability to innovate and the sufficient resources provided in time to them further facilitate ideas to emerge. Psychologically empowered employees perceive themselves as capable to change their surroundings in meaningful ways, fostering pro-active behavior, taking personal initiative, and demonstrating their independent action. Earlier research indicates that self-perception of empowerment, (i.e. meaning, competence, self-determination, and impact) is significant for innovative behavior of the employees. Extant research (e.g., Kelly & Lee, 2010; Lari, Shekari & Safizadeh, 2012; Bhatnagar, 2012) revealed that there exists a positive

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correlation between psychological empowerment and employee innovation behaviors. The results of a recent study carried out by Fernandez & Moldogaziev (2012:177) also shows that "as a multifaceted managerial approach, empowerment increases encouragement to innovate". Thus, employee empowerment and innovative behavior of the employees are inextricably linked.

Transformational Leadership & Leader-Member Exchange

A transformational leader promotes exploring novel ways of getting things done, to test fresh products, processes and services, or in other words, to abandon old ways of doing things and provide way-outs for newer ones. Transformational leadership means "broadening and elevating followers' goals and providing them with confidence to perform beyond the expectations specified in the implicit or explicit exchange agreement" (Dvir, Eden, Avolio & Shamir, 2002:735). "Bass & Avolio (1994) characterized transformational leadership as being composed of four unique but interrelated behavioral components, viz., inspirational motivation (articulating an appealing / evocative vision), intellectual stimulation (promoting creativity and innovation), idealized influence (charismatic role modeling), and individualized consideration (coaching and mentoring)" (quoted in Jung, Chow & Wu, 2003:528).

In prior research, leadership particularly transformational leadership (e.g., Gong, Huang & Farh, 2009; Oke, Munshi & Walumbwa, 2009; Pieterse, van Knippenberg, Schippers & Stam, 2010) has been identified as an important currency in innovative behavior. Extant research (e.g., Reuvers, van Engen, Vinkenburg & Wilson-Evered, 2008; Khan, Aslam & Riaz, 2012; Pieterse et al., 2010) revealed a positive and significant relationship between transformational leadership and innovative work behavior. However, the findings of prior research established a boundary condition (i.e., psychological empowerment of the followers) to the effectiveness of transformational leadership in engendering innovative behavior. Such findings imply that "only with the higher psychological empowerment, transformational leadership can be seen as more beneficial to innovative behavior than transactional leadership and hence the psychological empowerment seems to be a precondition for innovative behavior" (Pieterse et al., 2010: 618). In the study of Rank, Nelson Allen & Xu (2009:479), "transformational leadership was found positively and significantly related to both task performance and innovation". Further, they revealed that "(i) both correlation and the multiple regression analyses identified organization based self-esteem (OBSE) as a positive predictor of innovation; and (ii) self-esteem moderated relationships between leadership and innovation" (Ibid: 481). The findings of the study carried out by Michaelis, Stegmaier & Sonntag (2010: 408)) demonstrate that "transformational leadership was strongly related to followers' innovation imple-

mentation behavior and that the nature of this relationship was moderated by followers' levels of perceived climate for initiative and mediated by commitment to change".

Another significant dimension of leadership related to innovative behavior at work is quality of leader-member exchange (LMX) which focuses upon the quality of relationships between leaders and followers, level of satisfaction with the relationship among co-workers, level of employee performance, extent of employee job involvement, level of role efficacy and role conflict, and employee turnover intentions. High quality LMX relationships that include providing challenging tasks to employees, providing organizational support to employees in high risk-taking circumstances, providing resources that are necessary to perform on the job, and social recognition for high performance, foster innovative behavior at work. In earlier research (e.g., Scott & Bruce, 1994; Basu & Green, 1997; Janssen & Van Yperen, 2004; Sanders, Moorkamp, Torka, Groeneveld, & Groeneveld, 2010; Li, Feng, Liu & Cheng, 2014), employees' innovative behavior was found to be positively associated with LMX. Janssen's (2005:573) study "showed that supervisor supportiveness moderated the relationship between employees' perceived influence in the workplace and their levels of innovative behavior". The findings of such a study suggest that "when supervisors are perceived as being supportive of employee innovation, employees feel encouraged to use their influence to carry out innovative activities at work, whereas supervisors perceived as not being supportive inhibit them from doing so" (Ibid: 573).

In brief, (i) there exists a significant positive association between transformational leadership and employee innovative behavior at work; however, such a relationship is moderated by employees' psychological empowerment, leader-member exchange, supervisor supportiveness, organization based self-esteem (OBSE) and perceived innovation friendly climate; and (ii) employee innovative behavior at work is positively associated with the quality of the leader-member exchange.

Knowledge Sharing in Social Network

Social network relationships within an organization influence knowledge sharing and thus affect employees' individual behaviors including innovative behavior. Yu, Yu, and Yu (2013: 152)) show that "knowledge sharing and inter-active behavior among employees enhance individual innovative behavior and the ability to innovate". Similarly, Hu (2009:977) found that "knowledge sharing was associated with increased innovative service behavior for individuals with a favorable guanxi" (interpersonal relationship within a networked group). Extant research (e.g., Decarolis & Deeds, 1999;

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Kogut & Zander, 1996) suggests that the organization's stock of knowledge (tacit or explicit) has positive relationship with one's capacity to innovate. More successful outcomes of employee innovative behavior appear when tacit knowledge or explicit knowledge or some combination of both is associated with the desired innovation. Waenink (2012) found that domain-specific knowledge as well as organizational knowledge positively contributes to idea exploration, idea generation and idea implementation.

"Earlier research (e.g., Davenport & Prusak, 2000; Floyd & Woolbridge, 1999) indicates that social networks facilitate to know who and who in the network possess what sort of knowledge that in return makes that knowledge more visible for the members of the organization; more knowledge particularly tacit knowledge is created and shared in the social networks" (Jain, 2014: 52). Waenink (2012) found that internal networking skills have positive influence on idea championing. The analysis of Bjork & Magnusson (2009:662) indicates that "there is a clear interrelationship between the network connectivity and the quality of the innovation ideas created; regarding ideas provided by single individuals, more connections within the network resulted in a higher proportion of high-quality ideas". The study carried out by Xerri & Brunetto (2011:959) also confirmed that "the perceived usefulness of workplace social networks affects the innovative behavior of the employees". "The findings of a recent study carried out by Zheng (2010) suggest that the structural components of social capital including ego, network size, structural size, tie strength, and centrality have a significant impact on innovation; their impact, however, tends to be moderated by contextual and intellectual factors, such as the nature and type of innovation, internal versus external ties and existing intellectual capital" (Jain, 2014: 53).

To sum up (i) knowledge sharing and inter-active behavior among employees enhance individual innovative behavior; (ii) domain-specific knowledge as well as organizational knowledge positively contributes to innovative behavior at work; and (iii) social networking skills have positive influence on employee innovative behavior as they encourage knowledge sharing among employees.

Job Context

Job characteristics play a significant role in the matter of influencing employee innovative behavior. "Job characteristics are associated directly with innovation" (Holman et al., 2011: 2). In prior research, the two variables, viz., job complexity and job autonomy were mainly studied. In the study of Ohly, Sonnentag & Pluntke (2006: 271), "job complexity emerged as a positive predictor of innovation". Job complexity refers to challenging circumstances and job requirements associated with a particular job. According to Amabile (1996: 115), "when tasks are complex and intellectually demanding,

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employees are likely to experience interest, involvement, curiosity, satisfaction or positive challenge". This, in turn, demonstrates creative and innovative behavior. Job complexity fosters utilization and expansion of knowledge and skills (Holman & Wall, 2002), relevant for both the development of novel and applicable ideas and for their effective implementation in practice. Prior studies (e.g., Axtell et al, 2000; Baer & Oldham, 2006) indicate moderate to low positive correlation between job complexity and innovative behaviors. However, in the study of Urbach, Fay and Goral (2010), job complexity was found related to innovation implementation but not to ideation. They further observe that complexity leads employees to take a more active approach to their work by taking initiative and personal initiative, in turn, is associated with innovation activities (Ohly, Sonnentag & Pluntke, 2006).

Another important predictor of innovative behavior is job autonomy. Autonomy means the extent to which subordinates are given authority to carry out their jobs without close supervision. Employees are more likely to demonstrate their innovative behavior when they have adequate autonomy and control over their tasks and related decisions. It creates an atmosphere that fosters independent thinking, sharing of relevant information, and the authority to find out novel methods of dealing with the problems in hand. Prior studies (e.g., Krause, 2004; Ramamoorthy, Flood, Slattery & Sardesai, 2005; Slatten & Mehmetoglu, 2011) showed positive association between job autonomy and employee innovative behavior. Krause (2004), in his hierarchical regression analyses, shows that "granting freedom and autonomy has the most positive effect on the innovative behaviors, and the most negative effect on innovation-blocking behaviors (intra-psychic coping and flight)" (Ibid:79). "In terms of designing jobs, providing autonomy for employees about the manner in which they do their work appears to have the strongest influence on innovative work behavior" (Ramamoorthy et al., 2005: 148). Thus, it may be concluded that both job complexity and job autonomy predicts innovative work behaviors.

Granting freedom and autonomy has the most positive effect on the innovative behaviors.

Supportive Organizational Climate

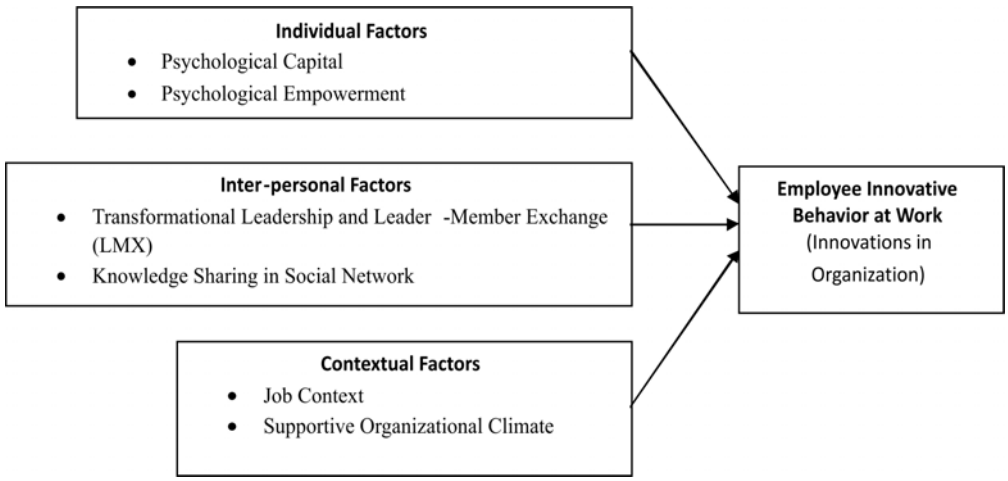
Innovation friendly climate pushes employees to engage in innovative behavior. "Climate represents signals individuals receive concerning organizational expectations for behavior and potential outcomes of behavior" (Scott & Bruce, 1994: 582). Quoting these authors Yuan & Woodman (2010: 327) states that an organization climate for innovation delivers "expectancies" and "instrumentalities". "Organization members understand that being innovative is a desirable image and engaging in innovative behavior will make them look good;….. from an efficiency-oriented perspective, a favorable organization climate for innovation communicates the need for change and demonstrates the belief that innovation will make the organization more efficient and

successful" (Ibid: 327). Organization support for innovation can manifest a pro-innovation climate and it provides psychological safety to the employees. In prior research (e.g., James et al., 2008; Martins & Terblanche, 2003), perceived organizational climate were considered as supportive for innovation and also found positively associated to employee innovative behaviour. In several studies (e.g., Basu & Green, 1997; Janssen, 2005), positive association between supervisor support and employee innovative behavior were revealed. In order to support for innovation, top & senior managers are expected to own up responsibility for ensuring timely flow of relevant information in all directions. "Information is crucial to creativity and new learning, which in turn, are the building blocks of innovation; it falls to executives to ensure that internal and external information resources are readily available to high-stakes innovation initiatives" (Le Storti 2006:2). Pundt, Martins & Nerdinger (2010:186) revealed that "reciprocal exchange (in terms of voice behavior and communicating ideas) between an organization and its employees as described in organization support theory is relevant for explaining employees' innovative behavior and thus can help organizations to tap the employees' innovative potency". In brief, (i) organizational climate perceived as supportive and empowering are positively related to innovative behavior; and (ii) reciprocal exchange (in terms of voice behavior and communicating ideas) between an organization and its employees is a predictor of employees' innovative behavior.

An Integrated Conceptual Framework

Based on the extensive review of research and the resultant propositions as presented here, an integrated conceptual framework of employee innovative behavior is proposed (fig. 1). In such a framework, the various factors that influence employee innovative behavior as emerged in prior research have been

Fig. 1 Employee Innovative Behavior: A Conceptual Framework



categorized into individual factors, inter-personal factors, and contextual factors. Broadly, individual factors that have impact on employee innovative behavior include psychological capital and psychological empowerment whereas transformational leadership and leader-member exchange (LMX), and knowledge sharing in social network are put under the category of inter-personal factors. Job context and supportive organizational climate are the contextual factors that have impact on employee innovative behavior.

Managerial Implications

"Innovation is a social phenomenon that not only requires many people to generate and implement ideas, but also requires that those individuals interact, work together and build on one another's perspective, thinking and creativity" (Smith & Hall, 2012: 36). The proposed framework of employee innovative behavior enables managers to understand that a number of interrelated factors need to be considered for managing innovations in their organizations as single factor in isolation has limited impact. Inter-dependence exists upon and between antecedents and support factors which merge and mingle, emerge and separate, combine and recombine with the process and innovation fit building towards preferred outcomes (Taylor & McAdam, 2004:33). However, there is need for further analysis to innovation fit, where 'fit' covers issues such as compatibility, risk and complexity associated with the innovation being introduced into the organization (Daft, 1982).

A social network is a critical factor in the matter of developing absorptive capacity of an organization.

Top and senior managers' commitment for innovation is a must and their commitment must be demonstrated by their communication and action. Rahmani and Mousavi's review (2011: 289) found that "high degree of absorptive capacity in terms of knowledge acquisition, assimilation, transformation, and exploitation positively enhance the level of innovative outcomes; and therefore, absorptive capacity is widely used as a critical factor in organization's innovation process". A social network is a critical factor in the matter of developing absorptive capacity of an organization as tacit knowledge can be acquired through social networks and also through sharing pragmatic experiences of cross-section people in the networks. It is essential for management to generate or collect and apply knowledge and other valuable resources embedded in the social system and networks and those produced through a variety of social processes. As appropriately stated by Jain (2014: 48) "An innovative culture reflects a learning orientation (e.g., Amabile. 1996; and Glynn, 1996) that facilitate inventiveness (Cohen & Levinthal, 1990); management, therefore, must appreciate, encourage, direct, and enhance the willingness of employees to place their energy and diversity of ideas in the service of a set of collective understandings and beliefs to help, orient or guide an overall innovation community" (Siguaw, Simpson & Enz, 2006). Management needs to

focus on exploratory learning also which includes active search and re-search for a variety of cross-section perspectives. Exposure to different perspectives and work experiences pushes employees to re-examine their own mental sets and to make inevitable adjustments, thereby avoiding the tendency to become fixed into limited viewpoints (e.g., Tushman & Anderson, 1986). This is more relevant to practice as the study of Shipton et al. (2006:19) suggests "the mechanisms designed to promote exploratory learning and those intended to exploit existing knowledge (training, induction, appraisal, contingent pay and team working) are related significantly to innovation". Previous research suggests that social networking skills have positive influence on employee innovative behavior as they encourage knowledge sharing among employees. Supportive organizational climate strengthens the sociability of network members and social network ties at work place and therefore management needs to nurture and maintain the desirable climate on ongoing basis.

In a number of previous research studies, psychological empowerment was found to moderate the relationship with innovative behavior and transformational leadership. It means that employees may be inspired through making them feel empowered and transformational leadership can be instrumental in this matter. Therefore, management should pay its attention to stimulate psychological empowerment among employees while promoting transformational leadership in the process of engendering innovative behavior. Managers must strengthen human resource management processes in the workplace which enhances psychological empowerment. Prior research indicates that self-efficacy and self-leadership skills foster innovative behavior at work and therefore, management needs to evolve appropriate strategies to develop self-leadership skills of the employees as well as to enhance the level of their self-efficacy. The extent of organizational and management support provided to empower employees certainly make them more confident to engage in innovative behavior. Active presence of idea champions may further strengthen such a process. Sufficient resources provided in time to the employees further facilitate ideas to emerge (e.g., Hyland & Beckett, 2005) and innovative behaviors. In earlier researches (e.g., Ramamoorthy et al., 2005), empowering employees in terms of providing them greater job autonomy appears to have the positive impact on their innovative behavior. Such a finding suggests that management willing to develop the innovative potential of employees should emphasize on granting greater job autonomy to the employees. Management is also expected to ongoing examination of the issue concerning increasing the job resources and decreasing the job hindrances. Overall, developing human capital may produce high impact on innovative performance. Human capital refers to variety of competencies that employees strengthen in the context of their job performance and organizations require hiring, training, and retaining of talented employees having human capital.

In a survey of innovation practices of more than 550 large companies, Loewe & Dominiquini (2006:25) identi-

fied a number of obstacles to innovation such as focus on short-term goals, shortage of required resources, leadership's unrealistic expectations of pay-off, unstructured incentives to reward innovation, adoption of less systematic innovation process, and beliefs regarding inherent risk in innovation. In other prior studies also (e.g., IBM Global Business Services, 2006; Peterson, 2010), lack of resources or inadequate funding, risk avoidance, insufficient internal cooperation, and lack of goal clarity were found as major barriers to successful implementation of innovation in organizations. Such findings provide the foundation for formulating the specific strategies to remove the particular sets of such obstacles.

Conclusion

Earlier research did not examine whether the three sets of factors make independent contribution to innovative behavior or if they interact with one another to affect innovative behavior of the employees. However, it may be suggested that the three sets of factors have independent as well as combined or mediated effect on employee innovative behavior. The integrated framework presented here portrays the linkages among cross-level factors related to employee innovative behavior. This study opens up potential fresh chapters for research. Overall, this study identified seven key variables (fig. 1) that impact the innovative behavior at work. We trust that the seven factors commonly influence the various dimensions / stages (e.g., idea generation, idea implementation) of innovative behavior. An integrated conceptual framework of employee innovative behavior presented here contributes in a number of ways. First, the proposed integrated framework suggests that an array of factors influence innovative behavior of the employees. This article provides a holistic picture of the key factors that influence employee innovative behavior. Second, the whole cluster of propositions has been arrayed in one place and thus provides a comprehensive base for formulating appropriate strategies to foster innovative behavior among employees. Such an understanding may facilitate evolving better plans and taking more appropriate actions in the matter of developing innovative climate in organizations on one side and on the other, it may facilitate organizations in unleashing their employees' innate creative and innovative potential. Integrated view of multiple factors that influence innovative behavior at work as presented in this article makes a positive contribution for both theory and practice and it contributes significant value addition to the body of knowledge.

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