THE RELATIONSHIP BETWEEN EMPLOYEE INVOLVEMENT, EMPLOYEE ENGAGEMENT AND INNOVATIVE WORK BEHAVIOR AND MEDIATING ROLE OF ORGANIZATIONAL CONTEXT OF EMPLOYEES IN THAI ORGANIZATIONS

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Abstract

In a tough competitive environment, many firms try to differentiate themselves by employing innovative policies. The main objective of this study is aimed at exploring the relationship between employee's involvement, engagement and innovative behavior of employees in Thai organizations. The 400 respondents in this study were senior employees and supervisors/managers in Marketing or R&D departments of firms that had obtained the Thailand Trust Mark (TTM) issued by the Ministry of Commerce Thailand. The survey employed a random sampling technique approach. The findings indicated that direct relationship of employee involvement and employee engagement have a statistically significant and positively effect on innovative work behavior but organizational context was found to have no statistical significance with innovative work behavior. Based on these findings it can be concluded that the policy of the organization should bond and fit with employee values, skills and capabilities such as job rotation, flexible job assignment, self-managed teams and compensation schemes such as profit sharing in order to create motivation, commitment and satisfaction of employees.

Keywords: Employee Involvement, Innovative work behavior, Organizational context, Employee Engagement

Introduction

All firms are facing many new challenges such as globalization, technology, competitors, natural disasters, political and other forces. Many environmental factors force

companies to adapt in order to survive the cycle of change. Thus, strategies, structures, and management approaches have to be modified in order to maintain a high level of competitiveness. New products and services have to be innovated to draw people attention ranging from creative approaches to generating demand from customers as much as possible (Shapiro, 2000). The new demands of competition require core competencies from employee-driven innovation for creating increased capacity (Stalk, Evans & Shulman, 1992). As a result, most firms endeavor to differentiate themselves from others through innovation policies. Hence, promoting innovation is playing a critical role to enhance competitiveness for business success (Tsai, 2001; Bowen et al., 2010; Zhang, Chen, & Sun, 2015). Not only innovation but creativity is also a fundamental element for the growth of all businesses nowadays (Martins & Terblanche, 2003; Anthony et al., 2008). Indeed, innovation behavior encompasses employee creativity to generate or implement new ideas to produce new products, services, processes and procedures (Anderson, De Dreu, & Nijstad, 2004; Miron, Erez, & Naveh, 2004). Therefore, creative potential for innovation as a core competency have become imperative in today's competitive marketplace. However, innovation is not a naturally occurring phenomenon. It requires proper criteria from policies, environment at the workplace, effective strategies and framework to the exploitation of new idea (trial and error). This study examines the factors underlying employee behavior that facilitates emerging views of creativity and innovation behavior.

Numerous researches have investigated innovation and its antecedent and consequences. Employee involvement is an important variable leading to various outcomes, such as, increased employee performance, less absenteeism, reduced turnover rate, and improvement in quality and production cycle time (Manz & Sims, 1987; Versteeg, 1990; and Harris, 1992). Unfortunately, few studies have examined cognitive behavior of individual-level employee activities leading to involvement in innovative behaviors. Moreover, empirical examination of employee involvement and employee engagement studies were conducted largely in the U.S. and Europe, but are lacking in other contexts or other cultures. Hence, the main objective of this study explores the relationship between employee's involvement, engagement and innovative behaviors of employees in Thai organizations.

In this study, organization context was investigated as the moderating variable. Organizational context is defined as workplace flexibility, culture and climate. Workplace flexibility refers to the ability to change policy in the workplace. This study was intended to

contribute to innovation research in terms of two aspects. First, we proposed an integrated model to explore the role of employee involvement and employee engagement as an antecedent of innovation work behavior of employees. Second, it intended to examine the moderating role of organizational context that influences the relationship between employee involvement, employee engagement and innovation work behavior.

Literature review

Social Exchange Theory

Social exchange theory has been used to understand organization behavior for many decades. Russell and Marie (2005) argued that social exchange theory is derived from reward transaction and relationships of others (reciprocal, exchange, negotiate rule) in exchange for mutual benefits in an economic and social exchange relationship. Social exchange theory involves relationship with another person in trusting, loyal and mutual commitments (Stafford, 2008). Dabos and Rousseau (2004) stated that social exchange theory provides an explanation to explain reciprocity within a social relationship between employees and the organization. This reciprocity not only refers to cooperative exchange between employee and the organization, but also employee to employee (Dabos, & Rousseau, 2004). These reciprocal cooperative exchange relationships create improved performance in the workplace under circumstances that employees are satisfied and demonstrate more involvement and engagement (Shaw, Dineen, Fang, & Vellella, 2009). Moreover, De Jong and Hartog (2007) found that when employees perceive support from their line manager, employees tend to reciprocate with innovative behaviors as an exchange reward relationship. Thus, the degree of social exchange from managers' behavior effects innovative behavior of employees and performance outcomes.

Innovation

Businesses have moved from price competition to innovation-driven competition (Anthony et al., 2008; Santamaria et al., 2012). Some well-known companies, such as 3M, Apple, Google and P&G have adopted the innovation approach as one of the major company policies or culture of the organization to produce differentiated and innovative products which make them leaders in their industries. At present, consensus has yet to be reached on the definition of innovation. Van de Ven, (1986) stated that innovation refers to production,

adoption and implementation of useful ideas, including the adaptation of products or processes from outside an organization. Damanpour (1992) refers to innovation as the adoption of a new idea such as new products, processes and procedures in an organization. Alonso & Bressan (2016) confirmed that innovation is the application of any new idea. Innovation is a crucial concept to thrive and compete with others in the changing business environment (Devloo et. al., 2014). Innovation brings about various advantages for organizations, for example, increasing efficiency, quality of relationships, and reducing production cost and errors (Bunduchi & Smart, 2010; Bunduchi, Weisshaar, & Smart, 2011). Blumentritt, Kickul and Gundry (2005) argued that a company which emphasizes innovation activity could benefit not only from creative ideas and opportunities but also organizational performance. Martins and Terblanche (2003) stated that in order to utilize the innovation approach, organization should stimulate creativity and innovation as the organizational cultural norms or process to influence people within a company to follow. Istance (2011) and Oke (2007) confirmed that intangible assets are becoming more important than tangible assets, i.e., human intellect is becoming more important than machine and physical facility. Ulhoi (2010) argued that the contemporary business organization relies on human capital factor, not only from top management but also the lower skilled employees to participate and becomes an important factor of production in the organization. In general, creativity and innovation concepts are mostly performed within marketing or R&D department (Moosa & Panurach, 2008). Thus, human components are the most important element in the innovation process, since innovation is introduced by the intellect of people (Van de Ven, 1986).

Innovative Work Behavior

Innovation behavior is broadly defined in terms of different perspectives after Scott and Bruce published in year 1994, 1998 under the concept of “innovation work behavior”. Kanter (1988) argued that innovation at the individual level is a process that is derived from recognizing the problem and attempting to solve that problem by creating or adopting ideas for better solutions. West and Farr (1990) defined innovation work behavior as the intentional introduction and application, within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit adoption, designed to significantly benefit the individual, the group, organization or wider society. Amabile (1996) defined innovation work behavior as the successful implementation of creative ideas within an organization. De Jong

and Hartog (2007) defined innovation work behavior as behaviors directed towards the initiation and application (within a work role, group or organization) of new and useful ideas, processes, products or procedures. De Jong and Hartog (2007) argued that innovation processes consist of initiation and implementation phase, but many previous studies on innovative work behavior focused only on the creative or the idea generation stage and few studied the implementation stage of creative ideas. Innovative behavior is a complex behavior incorporating the creation or adoption and implementation of new ideas (Hakimian, Farid, Ismail, & Nair, 2016). It includes behaviors or abilities that relate, directly and indirectly, with the development and introduction of innovations into a workplace (De Spiegelaere, Van Gyes, & Van Hootegem, 2015). Many studies define innovative behavior as multistage processes and procedures. Kanter (1988) identified four stages of an innovative process of individual work behavior as 1) idea generation and activation of the drivers of innovation; 2) coalition building and acquisition of the power necessary to move the idea into reality; 3) idea realization and innovation production for implementation; and 4) transfer or diffusion of the idea. Janssen (2004) described innovative behavior which comprises three behaviors such as finding an idea, improving an idea, and realizing an idea. Unlike creativity, innovative behavior focuses on the behavior rather than only the generation of new ideas. Miron, Erez, and Naveh (2004) found that creative people are not greatly innovative. An employee who has innovative work behavior can respond to new requirements of customer demand faster than other colleagues in the workplace. Thus, innovative behavior is stimulated from generating ideas by individuals attempting to search for the best solution for adoption at the beginning. Indeed, employee willingness and agreeableness and support by the organization are required for employees to produce innovative work behaviors.

Employee Involvement

Employees are the most important asset for organizations (Gabcanova, 2011). Employee involvement is defined as the degree that the organization's members participate in the decision-making process (Locke & Schweiger, 1979; Amah & Ahiauzu, 2013). Capelli and Rogovsky (1998) argued that employee involvement and participation could derive by intrinsically motivated behavior when involvement leads to job redesign of individual tasks. Denison (2007) inferred that the organization should build worker's capacity, ownership and responsibility in their works and workers should share knowledge and information with each

other. The sharing of knowledge and information is an essential component to lead new and innovative products or processes as employee involvement influences organizational performance and Total Quality Management (TQM) processes (Sun, Hui, Tam, & Frick, 2000). Empirical evidence from Tipu (2014) found that the encouragement of employee involvement enhanced service and product innovation. The success of an organization depends upon the employees' contribution and employee involvement. Knuppert (2007) stated that employee involvement not only helps in the creation of product or processes innovation but also create values for the organization. Employee-driven innovation with involvement could create added value for the organization, such as, improve company's total performance, job satisfaction, employee retention, etc. Rank et al. (2004) stated that employees are willing to initiate new ideas, problem solving or implementation when they feel safe and flexible in an innovation culture at the workplace. Therefore, we believe that employees who are involved or more participative could create more innovation behavior, which also supports the organization. Thus, the following hypothesis is posited:

H1. Employee involvement has a positive relationship with innovation work behavior.

Employee Engagement

Employee engagement is becoming a strategic driven requirement for business today in order to extend their organizational effectiveness, innovation and competitiveness in competitive (Madhura & Deepika, 2014). Many scholars have concluded that employee engagement leads to high productivity, lower turnover, increased customer satisfaction and increased workplace performance (Richman 2006; Shuck & Rocco 2011; Rana et al., 2014). The definition of employee engagement lacks consensus since employee engagement has been associated with other constructs, such as, job involvement, organization commitment or organizational citizenship (Saks 2006). Karn (1990) defined employee engagement as the harnessing of organization members' selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally and mentally during role performances. Schaufeli et al., (2002) also defined employee engagement as a positive and fulfilling feeling in work and employees who are engaged in work are alert, willing to invest effort, and persistence. Further, Schaufeli and Bakker (2004) defined employee engagement as a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication and absorption. Robinson and Hayday (2004) stated that employee engagement is a positive

attitude of employees to enhance job performance and organization effectiveness under awareness of the context of organization. Moreover, employees are dedicated to and absorbed in work (Bakker & Demerouti, 2008). Salanova and Schaufeli (2008) furthered point out that engagement is involved with an enduring affective motivational state which does not focus on any particular object. The definitions above share a common ground of employee engagement as cognitive-absorption, emotional-dedication, physical-vigor and mentally-fulfillment in work which lead to higher organization performance outcomes. Agarwal (2014) reported that work engagement is positively related to innovative behavior. Binnewies et. al, (2007) also found that open communication (initiation and generation of new ideas) of employees encourages creative engagement. De Spiegelaere, Van Gyes, and Van Hootegem (2015) supported that when employees are highly autonomous and not restricted by time pressure, they would be more engaged and exhibit more innovative behavior. Therefore, most companies realize that employees who are truly engaged as "passion in work" are not only important for their increase productivity but also affects their accountability and retention in the company (Madhura & Deepika, 2014). Thus, the study posits the following hypothesis:

H2. Employee engagement has a positive relationship with innovation work behavior

Organizational Context

Several studies have found that the organizational context which allows employee participation can increase productivity and job satisfaction (e.g., Cohen, Ledford & Spreitzed, 1996; Harris, 1992; Cordery, Mueller & Smith, 1991). Martins and Terblanche (2003) stated that organizations with an innovative work climate have innovative ways in terms of creating problem solving for the organization. Nevertheless, the important components to facilitate and motivate innovation conditions depend upon employee's abilities, efforts and situations in the workplace (Angle, 1989). Supportive conditions are required for employee willingness to innovate. This study attempts to focus on organizational context that support employee involvement and engagement in decision making, work setting and process which encourage and support employee for create innovation behavior at the workplace. Schneider (1990) defined organizational context as organizational members shared perceptions of formal and informal organization rewards, expectations, policies, and procedures. The concept of organizational context differs from the concept of organization culture and structural context where structural context refers to policies, processes and procedures as administrative mechanisms that foster behaviors of employees, but organization culture refers to the

underlying belief systems and values of individuals in the organization (Bower & Doz, 1979; Denison, 1990). Thus, organizational context reflects both structure and culture of the organization. Am (2015) stated that innovation is a process that incorporates the processes, structures and cultures of organizational work. Researches showed that organizational context has a strong influence on employee innovation behavior. Xie, Wu, and Zeng's (2016) empirical evidence found a positive relationship between knowledge sharing, organizational innovation atmosphere, team decision-making, organizational change and innovation performance of organizations. Hartmann (2006) argued that innovative organization are more likely to have a good organizational climate. Khazanchi *et al.* (2007) also confirmed that organizational innovation culture has a significant impact on processes within organization. According to Fogel, (2017) the persuasive strategy of managers to employees is positively associated with attitude and creative behavior. The creative idea- searching activities often require permission from their manager to implement the process (Lukes & Stephan, 2017). Empirical evidence from Lukes and Stephan (2015) found that managerial support is an extremely important factor in order to facilitate employee innovation behavior which creates a positive mediate effect. However, the evidence shown in many researchers measure organizational context as an intervening variable in order to determine between company resources and job outcome (Amabile, 1996; Ekval, 1996; Moreno, Morales & Montez, 2006). Scott and Bruce (1994) argued that the organization climate encourages innovative behavior, by providing the necessary resources. Axtell et al. (2000) showed that the organizational context encourages employees to express innovative work behavior when they perceive support for their ideas during the implementation stage. Therefore, organization support and facilitation of processes, structures and cultures of organizations are required for the development of innovative work behavior (Coakes & Smith, 2007). Based on the above analyses, the study proposes the following hypothesis:

H3. Organizational context has a positive relationship with innovation work behavior.

H4. Organizational context will mediate the effects of employee involvement and employee engagement.

Method

Participants and data collection

Data were collected from Thai enterprises which had received Thailand Trust Mark: TTM. Thailand Trust Mark (TTM) is a symbol of excellence and trusted quality of Thai products and services given by Ministry of Commerce of Thailand. There are 364,492 companies in Thailand, but 696 companies have received the TTM since 2012. The main respondents in this study were senior employees and supervisors/managers in Marketing or R&D departments of these firms. The survey employed a random sampling technique approach. The survey questionnaire was collected via hand-over, e-mail, or fax. A total of 598 questionnaires were distributed and 450 were returned. However, only 400 sets were usable for analysis based on a confidence level at 95%, accepting a 5% margin of error.

Measurement scales

According to the research objectives, four constructs were used in the study including innovative work behavior as an exogenous variable and employee involvement, employee engagement as endogenous variables. Organizational context was examined as mediating variable. This study adopted valid constructs from existing scales and widely used questionnaires. All four measurement constructs were measured with a self-report approach using the five-point Likert scale (1 = never to 5 = almost always.) as following;

To measure innovative work behavior, the scale developed by Scott and Bruce (1994) was adopted. They developed six items from Kanter (1988). Scott and Bruce (1994) measured behavior on 3 major tasks: idea generation, coalition building and idea realization. The Cronbach's Alpha was 0.89.

To measure organizational context was also adopted from Scott and Bruce (1994). There are 16 items measuring tolerance for diversity, support for creativity and reward for innovation. The Cronbach's Alpha for organization support for innovation was 0.92.

To measure employee involvement, the scale developed by Kanungo's (1982) was used. There are 10 items to measure an individual's psychological identification. The original scale used a 6-point Likert-scale but this study used 5-point Likert scale. The Cronbach's Alpha was 0.86.

To measure the level of employee engagement, a scale developed by Schaufeli et al. (2006) was used. The 9 items were adopted as Utrecht Work Engagement Scale (UWES-9).

There are three sub-dimensions of the characteristics of the work engagement, namely vigor (three items), dedication (three items), and absorption (three items). The Cronbach's Alpha was 0.92.

Results

The sample was composed of male 43% and female 57%, age older than 36 years 29.1% age younger than 36 years 71.1%, undergraduate 71.6%. The duration in the company for less than 5 years was 53% and less than 5 years 47%. The number of employees in company was less than 50 employees 3.3% and more than 50 employees 96.7%, type of business, manufacture 59%, retail and wholesale 16.3%, services 21.8% and others 3%.

Validity of the Scales

Construct validity was employed to measures how well the questionnaire measures what it is supposed to measure. Construct validity can be measured by convergent validity and discriminant validity. The convergent validity can be assessed by internal consistency (reliability test) and discriminant validity can be assessed using either exploratory factor analysis or confirmatory factor analysis. In this study, reliability test, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) were adopted to measure construct validity. Exploratory factor analysis (EFA) was used to reduce factors and cluster factors which are highly correlated to represent a theoretically meaningful dimension construct (Ho, 2006). In contrast, confirmatory factor analysis was used to establish a valid measurement model prior to testing the structural equation model (SEM). EFA was conducted for each construct using principal component analysis with VARIMAX orthogonal rotation method and coefficient value greater than 0.4 which exceeds the minimal level of practical significance of the structure was set (Hair et al., 2006).

The total variance which explained four factors is approximately 59.72%. There were no cross loadings after eliminating problematical items. The reliability test was performed for internal consistency after conducting factor analysis and used accepted level value α = 0.7 (Nunnally,1978; Hair et al., 2006). The reliability was assessed to define the internal consistency of each factor. Table 1 contains a summary of means, standard deviations, correlation and Cronbach alpha.

Table 1 Mean, Standard Deviations, Correlations Matrix, and Cronbach Alpha (N = 400)

No.	Construct	Mean	SD				
1.	INV	3.90	.58	(.864)			
2.	IWB	3.74	.57	.420**	(.839)		
3.	ENGAGE	4.00	.46	.687**	.483**	(.789)	
4.	CONTEX	3.74	.54	.728**	.476**	.692**	(.881)

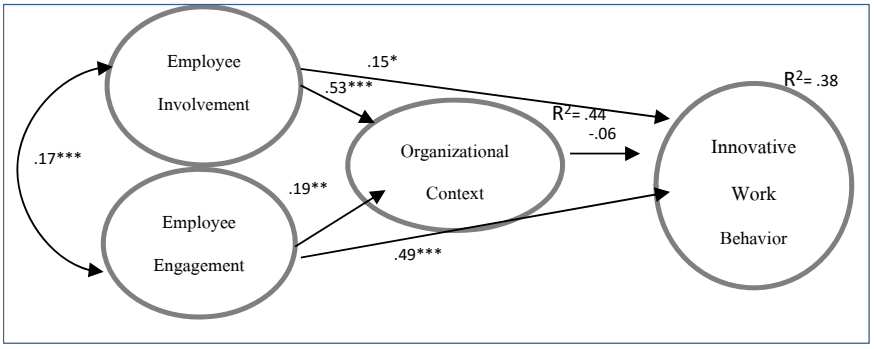
*p < .05, **p < .01. Correlation is significant at the 0.01 level (2-tailed), Coefficient Alphas are in the parentheses

Table 2 Confirmatory Factor Analysis

Models	x^2	df	CMIN/DF	RMSEA	CFI	TLI	PNFI
Measurement	729.59	246	2.966	.070	.89	.872	.747

Confirmatory factor analysis (CFA) found that the model fit the data well as shown in Table 2. There were 24 measurement variables with 54 sample moments. The group was established with a 300 samples size. The hypothesized model shows the results of the Chi-square test (χ^2) = 729.59, χ^2/df = 2.966, lower than 3 indicates a good fit (Hair et al., 2006). The baseline comparison fit indices of NFI = .838, RFI = .818, IFI = .89, TLI = .872, and CFI = .89. Root-mean-square error of approximation (RMSEA) = .070. The Parsimonious Normed fit index (PNFI) = .747, which is above the cutoff point of .60. In addition, as seen above, all items loaded significantly on their respective constructs and enhanced support for convergent validity.

Figure 1. Illustrates the structure path estimates of the hypothesized model.



*Structural path estimates are the standardized parameter estimates.

***p < .001, **p < .01, *p < .05 one-tailed test.

Analysis and findings

In order to test the relationship and mediation for hypotheses, structural equation modeling (SEM) analysis was performed by two separate tests. The first test was adopted to test hypothesis H1 to H3 for direct relationship. The second test was aimed to test mediation hypothesis on H4 by performed the bootstrapping procedure.

As shown in Table 3, the findings indicate that employee involvement has a significant positive effect on innovative work behavior (β = .15, C.R.= 2.07, $p < 0.05$) hence, H1 is supported. Moreover, the effect on employee engagement has a significant positive effect on innovative work behavior (β = .49, C.R.= 5.95, $p < 0.001$), consequently, H2 is supported. However, the finding indicate that organizational context has no significant positive effect on innovative work behavior (β = -.06, C.R.= -.944, $p > 0.05$) hence, H3 is not supported.

For the mediation hypothesis (H4), the structural model shows there are two mediating roles of organizational contexts: i) Employee Involvement to Innovation Work Behavior and ii) Employee Engagement to Innovation Work Behavior. We found insignificant and negative results from indirect effects of the two outcomes variable through organizational context using bootstrapping estimates re-sampling process and 95% confidence of two-tailed significance. Since the direct effect is higher than the indirect effect, the mediation effect is not indicated, hence, H4 is not supported as shown in Table 3.

Table 3 Summary of Estimates

Direct effect

Exogenous Variable	**Endogenous Variable**	**Beta Estimate (β)**	**S.E.**	**C.R.**	**P-Value**	**Result**
Employee Involvement	IWB	.151	.073	2.07	.038	Supported H1
Employee Engagement	IWB	.493	.083	5.95	.000	Supported H2
Organizational Context	IWB	-.063	.067	-.944	.345	Not Supported H3

Indirect effect through Organizational Context

Exogenous Variable	Endogenous Variable	Indirect Effect	Standard Error	Lower Bound	Upper Bound	P-Value	Result
Employee Involvement	IWB	-.036	.06	-.13	.07	.548	Not Supported H4
Employee Engagement	IWB	-.014	.28	-.072	.02	.484	

Discussion and Conclusion

This study aimed to examine the effects of employee involvement, employee engagement and organizational context through innovative work behavior among employees in specified Thai organizations. This study is also aimed to enhance understanding of innovative work behavior based on the social exchange theory. Our finding indicated that direct relationship of employee involvement and employee engagement have a statistically significant and positively effect on innovative work behavior but organizational context was found to have no statistical significance with innovative work behavior. The results provide partial support for the hypothesis. This outcome was consistent with previous findings (Agarwal, 2014; De Spiegelaere et al.; Tipu, 2014; Knuppert, 2007). The empirical results show innovative work behavior contributes more to the intrinsic rather than extrinsic factors since the results indicate that organizational context is not statistically significant. Also, indirect effect of organizational context was found to have no mediating relationship in terms of both employee involvement and employee engagement to innovation work behavior. This surprising result was similar with Yıldız et al. (2017).

Our findings implied many theoretical implications. First, these empirical results make a significant contribution to enhance the understanding of employees' innovative behavior. Second, these empirical results also provide an insight into how organizations can motivate innovative behavior through involvement and engagement schemes. Finally, the mediating hypothesis revealed insignificant and negative relationship with organizational context, despite the fact that the mediating hypothesis was developed based on previous studies (Scott and Bruce, 1994; Amabile, 1996; Ekval, 1996; Moreno, Morales & Montez, 2006). Yıldız et al. (2017) argued that supportive climate of the workplace could prevent innovative intentions. Klein and Sorra (1996) argued that employees' perceptions of organizational climate to adopt

innovation may vary between individuals, between groups, or organization. The conflict with co-workers and dissatisfaction with co-workers could diminish innovative work behavior at the workplace (Jannsen, 2003).

Practical Implications

Based on the findings, managers or practitioners should encourage employee participation to get more involvement and engagement. Our empirical evidence suggests that innovative work behavior is derived from intrinsic motivation, thus organizations ought to focus on a supportive climate. Organization policies should promote and facilitate employee synergy- schemes to create innovative work behavior. The policy of the organization should bond and fit with employee values, skills and capabilities such as job rotation, flexible job assignment, self-managed teams and compensation schemes such as profit sharing in order to create motivation, commitment and satisfaction of employees. Inevitably, it is a challenge for organizations to create the conditions for innovation. Under uncertainty of the environment, engaging employees and involving employees could become a strategic imperative for organizations with passionately committed employees who willingly commit themselves to increase productivity and organization effectiveness from innovative work behavior that could become a key source of sustaining the competitive advantage of the organization.

Limitations

This study has several limitations. First, innovative behavior is a complex and multilevel relationship construct which requires a longitudinal analysis. This study only measures cognitive behavior of individual-level employee activities regarding involvement in innovative behavior under organizational contexts. We are interested in relationships between employee attitudes and perception of employees rather than real contribution of job titles across the organization. This study does not consider multi-dimensions of other critical factors such as of personality characteristics, individual goals and objectives, relationships with co-workers and line managers which contribute and support the innovative work behavior process. Further research should examine other dimensions such as varying leadership styles, organization culture or commitment which affect cognitive and innovative performance in order to understand the social and contextual antecedents of innovative behavior of employees.

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