

Full Length Research Paper

Organizational climate as a predictor of innovative work behavior

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The present study intends to examine the predicting role of organizational climate (Competing Values Model) in Innovative Work Behavior (IWB). Additionally, the study examines the effect of organizational size on IWB. The study was carried out on a purposively selected sample of 320 managers from Fast Moving Consumer Goods (FMCG) organizations countrywide. The instruments used for the study included IWB, subscales of Organization Climate Measure (OCM) based on competing values model, including Opens System Model (OSM) and Rational Goal Model (RGM). Multiple regression analysis and ANOVA were carried out to test the hypotheses. The results revealed significant positive impact of OSM and RGM on IWB. Moreover, the results did not show significant role of organizational size in IWB.

Key words: Organizational Climate, Innovative work behavior, competing values model.

INTRODUCTION

Over the last two decades, globalization and rapid technological advancements have raised a situation where organizations encounter challenges like varying customer demands and increased competition. To keep pace with these changes and to maintain a competitive edge, organizations need to innovate that is to explore and implement new ideas. Organizations bring innovation in their product, service; introduce new technology, new managerial or administrative practices and bringing changes in other elements of the organization. To build an innovative workplace employees are heavily relied upon and must bring innovations in their processes, methods and operations (Ramamurthy et al., 2005). In the present scenario, innovation is not confined to specialists, scientists and other research and development professionals but organizations for long-term success to encourage and develop the innovative potential of all of their employees. Innovative Work Behavior (IWB) is described as the intentional creation, introduction and application of new ideas within a work role, group or organization, in order to benefit performance (Janssen,

2000). It helps to develop new and creative ideas and to encompass their implementation.

Increasing number of scholars and academicians have focused on determinants of individual innovation in the organizations and tried to answer the questions like, what drives employees to be creative? What stimulates them to engage in extra role behaviors? According to Getz and Robinson (2003), companies exploring causes of idea improvements find that 80% of ideas are initiated by their employees and only 20% are the result of planned innovation activities that is through strategy or structure etc.

The concept of individual innovativeness in empirical literature have been studied with respect to job characteristics like autonomy, control, satisfaction, organizational practices, like rules and procedures, reward system and external demands, threats or uncertainty faced by the organizations (Baer et al., 2003; West, 2002). Market environment, external uncertainty, organizational climate and leadership are also found to significantly influencing innovation (Axtell et al., 2000; Shin and Zhou, 2003).

In organizational context, organizational culture, resource factors and climate of the organization are the conditions that support creative performance of individuals (Sundgerm et al., 2005). The climate of the organization is assumed

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by the employees through organization's practices and procedures, which in turn formulate and shape their priorities. Solomon et al. (2004) found organizational climate to be an essential factor that affects the individual's innovative behavior. Organizational climate imitates shared beliefs of the members and psychological meanings they give to the environment in order to make sense out of it (Schneider and Reichers, 1983). It also portrays perception of the work situation, characteristics of the organization and the nature of employee's relationship with other people on job (Churchill et al., 1976). More precisely, climate is shared perceptions of organizational policies, practices and procedures.

The research literature reveals that organizational climate is determined by interaction of individuals with other people. Studies on organizational climate and innovation has focused on organization or team level as well as at individual level innovation (Axtell et al; 2006; De Jong and Den Hartog, 2005). The recent development in the field of organizational climate is the emergence of a Meta-theoretical model, the Competing Values Model (CVM) representing a framework of values that taps the core organization values and symbolize organizational climate. The model comprises of four quadrants; human relations, internal process, open systems and rational goal. Panayotopoulou and Papalexandris (2004) used competing values model to study the association between human resource management orientation and firm performance. The model was also used to examine the relationship between total quality management and organizational culture (Prajogo and McDermott, 2005). The studies also examined the model for organizational aspects like; effectiveness, performance, analysis, life cycle, culture and leadership (Quinn and Rohrbough, 1983; Berrio, 2003; Haakonsson et al., 2008).

Patterson et al. (2005) recommended testing the model as a predictor and explore the relationship between specific climate dimensions in or across quadrants and organizational outcomes. The current stream of literature lacks the empirical testing of this model with reference to IWB. Hence, the current study examines the two quadrants (open system model and rational goal model) of CVM as predictors of IWB. Additionally, the study examines the effect of organizational size with reference to IWB. It is also worth realizing that the current theoretical understanding of the consequences of organizational climate is largely based on the studies conducted in Western contexts lacking evidence in Asian perspective (Sellgren et al., 2008).

LITERATURE REVIEW

Current organizations encounter an environment that is described by unprecedented challenges like technology, reduced product life cycles, globalization and initiating

modern day competition. Tremendous emphasis is also given to price, quality and customer satisfaction; pushing for a competitive strategy, having an increased focus on innovation (Leifer et al., 2001). In this way, organizations are pressurized to transform their current state into preferred future state. This transformation is facilitated through psychological processes, creativity and innovation. The concept of innovation, for the first time in management was coined by Schumpeter (1934), describing innovation process as creation of new brand, products, services and processes.

West and Farr (1990) defined innovation as "The intentional introduction and application within an organization of ideas, processes, products or procedures, new to the unit of adoption, designed to significantly benefit the organization or wider society". In view of Lepine and Van (1998) "Innovation starts with the recognition and generation of novel ideas that challenge past practices and standard operating procedures".

The innovation process is made up of two core segments, initiation and implementation. The initiation segment of the innovation process ends as soon as the idea is produced, where as the implementation phase ends when the idea is implemented (King and Anderson, 2002). Thomas (2006) further added that in the organizational settings, these ideas are usually produced by individuals or teams that are vital for success of organizations. These ideas are cherished by creative thinking, made up of four steps naming; preparation (gathering information, doing analysis, and search solutions); incubation (letting the mind work sub-consciously to carry on the process); illumination (inspiration, when an individual is relaxed and not essentially thinking about the problem, there is a possibility that it can come to individual's mind); and verification (it is about testing the ideas, solutions, obstacles and insights for applicability). Innovation when taken in a broad sense has some important components: generating new ideas and their implementation. According to Thomas (2006) there are three stages of innovation process; naming: Generation of ideas (production of new ideas and improvement of the recent ones); harvesting ideas (gathering, examining and evaluating the ideas); developing and implementing the ideas (study, testing, enhancement and development of the ideas and implementing them).

Literature on innovation also figures out other two key approaches of object-based and subject-based innovation (De Jong, 2006). The object-based approach is defining innovation, new product development, patterns of implementation and diffusion, transfer and classification of technologies, and innovative business development. Whereas, the subject-based approach, focuses on the subjects initiating and implementing innovation. The literature on innovation also viewed on some other perspectives (Johannessen et al., 2001). Individual oriented perspective; emphasizes on the role of individual factors like age, gender, level of education,

individual thinking process and creativity in determining innovation. Interactive oriented perspective; focuses on how action influences structure, and vice versa in the innovation process. Innovation system oriented perspective; is the study of the influence of national and regional innovation systems on innovation activities. Structural oriented perspective; focuses on organizational characteristics that enhance or limit the innovation process.

INNOVATIVE WORK BEHAVIOR

A comparatively new dimension of research emerged in the field of innovation in recent years is individual's future oriented and self initiated behaviors. These actions are aimed at changing or bringing improvement in one's current situation (Parker et al., 2006). Such behaviors include proactive work behavior and IWB (Janssen, 2000). The connotation of innovative behavior is to generate innovative output and benefit to the organization. Employee's behaviors aimed towards making new products, processes and services are included in such behavior (Scott and Bruce, 1994). IWB is more applied in nature as it is to result in innovative output. The two concepts of creativity and IWB are thought to be overlapped and used interchangeably by many researchers (De Jong, 2006). IWB is defined by De Jong (2006) as "Individuals' behaviors directed toward the initiation and intentional introduction of new and useful ideas, processes, products or procedure within a work role, group or organization (p.19)."

ORGANIZATIONAL CLIMATE

There are a number of factors which are found to affect innovation. These factors affect individual's innovativeness at different levels. At individual level; personality features, cognitive ability and job features; at the work group level; leadership and work group features and at organizational level; factors included are work organization and organization's environment or climate (De Jong, 2006). Organizational climate was found to be one of the key factors associated with the organization. For the organizations to gain strength and success it is important to build a climate that facilitates and supports creativity. The organization's climate is the frequent patterns of behavior, attitudes and feelings, which are displayed in the daily environment of the organization and the individuals of the organization experience and understand it (Isaksen and Lauer, 1999). Organizational climate has been presented as a multidimensional construct with four dimensions, comprising of autonomy and control, degree of structure, rewards and consideration, and warmth and support (Parker, et al. 2003).

COMPETING VALUES MODEL

Meta-theoretical model: The CVM by Quinn and Rohrbaugh (1983), constituting organizational climate, was primarily developed to judge the effectiveness of organizational outputs. The reasons behind this model creation were to summarize major approaches to organizational values and effectiveness into a single framework (Patterson et al., 2005). The model also exposes complexity of choices that managers are facing and the congruence of concerns across the organizations. The model with four value dimensions have been used in a diverse management situations. The model has been used for assessing organizational effectiveness (Thompson et al., 1981), organizational culture assessment instrument (Berrio, 2003) and in a theoretical model of organizational effectiveness and leadership by Buckner and Williams (1995). Other related researchers used competing values framework in a number of organizations to examine capacity for change (Sendelbach, 1993) and to assess corporate ethical codes (Paulin et al., 2000) in commercial banking. Patterson et al. (2005) used CVM to develop and validate a multidimensional measure of organizational climate naming organizational climate measure (OCM). The model based on constructs of organizational theory, comprising of values system of human relations, internal process, open system and rational goal values. Each value in the model is derived from a spatial mapping along the dimensions having an opposite value with contrasting emphasis and two parallel values. The competing value framework has four quadrants that explain four areas of outcomes related to managerial beliefs and perceptions.

Human relations model

Flexibility and internal focus values end results of teamwork and human resource development. Climate dimensions, included in this quadrant are employee welfare, autonomy, involvement, training, integration and supervisory support.

Internal process model

Control and internal focus values stability, exhibits formalization and internal control to efficiently use the resources (Patterson et. al., 2005). This quadrant emphasizes bureaucracy where there are workers with well defined roles and there are clear policies to follow (Buckner and Williams, 1995). Climate dimensions which are included in this quadrant are formalization and tradition.

Open system model

Flexibility and external focus values flexibility, adaptability and innovativeness with climate dimensions of flexibility

and innovation, outwards focus and reflexivity.

Rational goal model

Control and external focus values productivity, goal achievement. Important dimensions included in this quadrant are clarity of organizational goals, effort, efficiency, quality, pressure to produce and performance feedback.

Previous researches (Jung et al., 2003; Ekvall and Ryhammar, 1998) characterized internal process climate by low innovation, low creativity and high productivity. The rational goal climate was characterized as innovation development oriented climate. Similarly, the open system found conducive for innovation and creativity (Jung et al., 2003; Patterson et al., 2005). The group orientation and human relation dimension of the model is characterized by feelings of calm, comfort and relaxation. Organizational climate is associated with a number of outcomes (Glisson and James, 2002) like leader behaviors (Rentsch, 1990), organizational work performance (Ricketta, 2002), turnover intentions (Rentsch, 1990) and individual job performance (Brown and Leigh, 1996). Organizational climate and work attitudes like organizational commitment and job satisfaction are also found to be closely related (Glisson and James, 2002).

Empirical support is found that organizational climate has a pronounced impact on innovation (Ekvall and Ryhammar, 1999). A research conducted by Suliman (2001), stated that perception of employees of work climate plays a major role in their readiness to innovate. Solomon et al. (2004) argued that organizational climate fosters IWB. Further researches have been suggested to develop and test the theory about relationship between specific climate dimensions in or across model quadrants and a broad range of outcomes (Patterson et al., 2005). In the view of preceding literature survey it is hypothesized that:

H₁: If employees perceives open system model of organizational climate then they would exhibit higher IWB.

H₂: If employees' perception is high on rational goal model of organizational climate, they would rate higher on IWB.

INNOVATION AND ORGANIZATIONAL SIZE

Since long researchers have been debating on whether large or small organizations successfully implement innovation. Some researches endorsed that large organization size is facilitative of innovation (Ettlie et al., 1984). Diversified resources and capabilities are possessed by large organizations which are enabling to implement a higher number of innovations. Larger organizations are also in a better position to take greater risk and tolerate losses, when innovations are not successful. Contrarily,

some researchers argued that large size of the organization does not guarantee greater innovations, rather, smaller sized firms are found to be more innovative than large firms (Acs and Audretsch, 1991). Previous studies concerning the relationship between organizational size and innovation found mixed results and unable to reach a conclusive decision (Damanpur, 1992; Auderstech and Acs, 1991; Hitt et al., 1990). Some studies found positive relationship (Camison-Zornoza et al., 2004; Sullivan and Kang, 1999), whereas, others established negative relationship (Wade, 1996). Some studies claimed the relationship to be non significant (Aiken et al., 1980). Consistent to aforementioned literature it is anticipated that:

H₃: Employees of large size organizations would be higher on IWB as compared to smaller size organization employees.

MATERIALS AND METHODS

The main objective of the study is to determine the impact of organizational climate and on IWB. The study is also aimed to examine the impact of organizational size on IWB.

Sample

A sample of 320 managers including (72%) males and (28%) females working in different functional areas; marketing, sales, finance, personnel, general management and production, working all over Pakistan was selected by using purposive sampling from Fast Moving Consumer Goods (FMCG) organizations.

Measures

The instruments for IWB and organizational climate were adopted in the study after validation through pre-testing in pilot study. A structured questionnaire containing 75 closed ended questions was utilized to collect the data. Locally developed and verified instrument of IWB adopted from Zaman (2006) was used to tap the variable. The scale consisted of 22 items rated on five point Likert's type ratings (1= strongly disagree to 5= strongly agree). The Cronbach's alpha coefficient of the scale was 0.94. The concept of organizational climate was measured by OCM developed by Patterson et al. (2005). The dimensions of organizational climate that is open system model and rational goal model consisting of 13 and 20 items respectively were rated on five point Likert's type ratings (1= strongly disagree to 5= strongly agree). The Cronbach's alpha coefficients of the two subscales of open system model and rational goal model in the present study were 0.86 and 0.87 respectively.

Procedure

The respondents of the concerned organizations were approached personally in their offices. They were briefed about the study purpose and ensured about data confidentiality. The questionnaire was administered personally, explaining method to fill the questionnaire. A total of 500 questionnaires were administered. Out of total distributed 407 questionnaires were returned back, with a

response rate of about 80%. Out of these returned questionnaires, 320 completed in all respects were selected for the study.

RESULTS

Descriptive statistics including means, standard deviation and alpha reliability coefficients of all scales and subscales were calculated. Table 1 shows the mean, standard deviations and minimum and maximum ranges of all the variables in the study. The mean ranges from maximum value of 79.17 (in IWB) to a minimum value of 44.82 (open system model). The correlation matrix in Table 2 reveals that organizational climate has highly significant positive relation with its subscales open system model ($r = 0.82$, $p < 0.01$) and rational goal model ($r = 0.90$, $p < 0.01$). The matrix also shows that IWB has significant positive correlation with open system model ($r = 0.63$, $p < 0.01$) and rational goal model ($r = 0.67$, $p < 0.01$). The results of multiple regression analysis in Table 3 show that both open system model and rational goal model have a significant positive impact on IWB. The value of $R^2 = 0.50$ shows that 50% variance is explained by independent variable (organizational climate) in dependent variable (IWB) with ($F = 159.27$, $p < 0.001$). Beta values of 0.32 ($p < 0.001$) and .45 ($p < 0.001$) for open system model and rational goal model respectively show that rational goal model contributes more than open system model in the variance of IWB. Table 4 shows results of ANOVA, summarizing that respondents working in organizations with different sizes do not significantly differ in their scores on IWB $F(4, 315) = 0.92$, $p = 0.45$.

DISCUSSION

The main objective of the study was to determine the impact of organizational climate in IWB. In order to substantiate the objective two hypotheses were formulated and tested through multiple regression analysis. The first preposition hypothesized that if employees perceive open system model of organizational climate then they would exhibit higher IWB; the second hypothesis stated that if employees perceive rational goal model of organizational climate then they would exhibit higher IWB. Both of the hypotheses are supported, as organizational climate; open system model ($\beta = 0.32$, $p < 0.001$) and rational goal model ($\beta = 0.45$, $p < 0.001$) showed significant impact on IWB. Table 3 reveals that 50% of variance is explained by organizational climate in IWB. It appears that emphasis on flexibility and external focus (that is open system model); as suggested by Patterson et al. (2005), as well as control and external focus (that is, rational goal model) can lead employees to exhibit higher on IWB.

Patterson et al. (2005) found competing values model specifically rejecting a typological approach regarding the

Table 1. Descriptive statistics of all variables (N=320).

Variables	Min	Max	Mean	S.D
Innovative work behavior	42	108	79.17	12.58
Open system model	24	64	44.82	8.86
Rational goal model	37	69	66.49	12.09

Table 2. Correlation matrix of all variables (N=320).

Scales	I	II	III	IV
I Innovative work behavior	0.90			
II Open system model	0.63*	0.86		
III Rationale goal model	0.67*	0.43*	0.87	
IV Organizational climate	0.64*	0.82*	0.90*	0.92

* $p < 0.01$, (boldface shows alpha reliability values of variables).

values and quadrants. It was argued that organizations should not be forced to one or the other quadrant whereas, organizations could be better understood on the basis of the relevant importance they give to the values in different quadrants. If organizations are confined to one quadrant it would not completely represent employees' full span of activity. The current study validates the applicability of two quadrants of competing values model; open system model and rational goal model in the local context. The organizations under study were subject to competing values, revealing many of the same conflicting values mentioned in the two quadrants of the model. The open system model focuses on flexibility, adaptability, innovativeness (Buckner and Williams, 1995), growth and recourse acquisition (Patterson et al., 2005). Intense global competition and perishable nature of the commodities pressurizes the organizations to be flexible to the external environment, to bring innovativeness in their processes, to adapt to market trends and to seek constant growth. The perception of open system model of organizational climate would encourage the employees of such organizations to facilitate IWB.

Rational goal model on the other hand stresses productivity, goal achievement and efficient production (Buckner and Williams, 1985). The rational goal model perceptions for the organizations, surviving in a deprived economy can initiate IWB. This will ultimately lead to cost effective production and achieving short as well as long-term goals for their survival. Past literature also supports the hypothesized relationship. Montes, Moreno and Fernandez (2004) and Solomon et al. (2004) found that supportive organizational climate generally enhances the perceptions of support for innovation and IWB. Third hypothesis anticipating that employees of large size organizations would be higher on IWB as compared to smaller size organization was tested by ANOVA. The hypothesized difference cannot be substantiated and the

Table 3. Regression analysis for organizational climate with innovative work behavior (N=320).

	B	SE		t	Tolerance
Constant	25.57	2.93	----	9.4*	
Open system model	0.46	0.07	0.32	6.0*	0.546
Rational goal model	0.47	0.06	0.45	8.38*	0.546
$R^2 = 0.50, R^2 = 0.50, F = 159.27, df = 2.317, p < 0.001$					

p < 0.001.

Table 4. One- way ANOVA of organizational size and innovative work behavior (N = 320).

Role Stressors		SS	df	MS	F	p
Innovative work behavior	Between groups	585.29	4	146.32	0.92	0.45
	Within groups	49899.85	315	158.41		

results indicate that the size of the organization do not play a significant role in IWB.

The research focusing on the effect of organizational size on innovation has conflicting reports. The results of the current study are consistent to Aiken et al. (1980) that claimed the relationship between organizational size and innovation to be non significant. The reason for this non significant role of organizational size may be that larger organizations have a more formalized structure and a bureaucratic environment restricting the innovation. Larger organizations face complexities of centralized decision makings, compliance of rules and regulations and a through proper channel that is, follow the hierarchy and culture which hinders employees IWB. In contrast, the smaller organizations because of its simple hierarchal structure are in a better position to implement the innovative ideas of the employees.

LIMITATIONS AND FUTURE RESEARCH

The present study only examined the affect of two quadrants of competing values model that is, open system model and rational goal model on IWB. It is suggested that the other two quadrants; human relations model and internal process model of competing values model may also be empirically tested. Another limitation for the present study was its cross-sectional study design. The examination of the process of employee's perceptions about their climate and its impact on innovative behavior requires relatively longer period. A longitudinal design would capture the dynamic nature of the perception process and its outcomes in a more comprehensive manner. Furthermore, future studies may also have comparisons with culturally diverse organizations and cross cultural replication of the current study. Similarly validation of the current findings may establish in other sectors like education, banking and telecom sector.

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