

Employees' Creative Behavior: The Role of Organizational Climate in Malaysian SMEs

Solmaz Moghimi¹ & Indra Devi Subramaniam²

¹School of Management, RMIT University, Melbourne, Australia

²Faculty of Management, Multimedia University, Cyberjaya, Selangor, Malaysia

Correspondence: Solmaz Moghimi, School of Management, RMIT University, Melbourne, Australia. Tel: 61-423-017-271. E-mail: Solmaz.Moghimi@rmit.edu.au

Received: July 25, 2012

Accepted: September 7, 2012

Online Published: February 16, 2013

doi:10.5539/ijbm.v8n5p1

URL: <http://dx.doi.org/10.5539/ijbm.v8n5p1>

Abstract

The main purpose of this study is to determine the influence of organizational climate on employee's creativity and innovation which is a competitive advantage for success and survival of organizations nowadays. More specifically the study looked at the different dimensions that constitute organizational climate and examined the relationship between them and employees' creative behavior. This study also determined which among the dimensions of organizational climate could be the best predictor of employees' creative behavior. The research design was a quantitative approach, and a survey method was used to collect data. The structured questionnaire as a research instrument was distributed among Malaysian SMEs, performing in different economic sectors. A total of 100 employees constituted the sample; we collected 61 completed usable questionnaires. The data were analyzed with statistical package for social science (SPSS).

The results of this study illustrate that organizational climate has significant influence on employees' creative behavior. According to the results, among the different dimensions of organizational climate, providing resources were the best predictors of employee's creative behavior which followed by mission clarity and leaders' support.

Keywords: organizational climate, employee's behavior, creativity and innovation

1. Introduction

In response to today's globalized knowledge economy organizations need to grapple with a number of technological and demographical forces to survive and be successful in this challenging and dynamic working environment, so they need to introduce more innovations in their business practices, products, and services than before. But not all of them could actually conduct this process successfully. In accord to Ahmad (1998, pp.30), "Virtually all companies talk about innovation and the importance of "doing" innovation, many actually try to "do it", and only a few actually succeed in doing it", because being innovative in the current competitive economy is not easy, and the question is "how organizations can enhance innovativeness in their corporations?" Employees' creativity is one of the most important management principles which has attracted the attention of researchers in the area of business management as one of critical contributors of organizational success (George & Zhou, 2001; Tierney, Farmer, & Graen 1999; McLaughlin & Harris, 1997; Jong & Hartog, 2007; Hellman & Thiele, 2009; Tushman & Orielly, 1997; Martins & Terblunche, 2003). According to the scholars like Hellman and Thiele (2009), and Telsuk, Farr, & Klein (1997) Not only employees can generate new ideas, they can also find solutions for current problems and fulfill the gaps, so they are likely to lead developments in organizational level.

Using the organizational climate to provide suitable environment for creativity and innovation in order to empower organization is an idea that has been studied by several scholars since the middle of 1980's (Ismail, 2005). Tushman and O'reilly (1997) support the argument and mention that the ability of organizations to provide a bonding between creativity and innovation with their climate and management process is the key to their success.

Many organizations have taken certain steps to enhance innovation and creativity by paying attention to employees' opinions and involving them in decision making process or recruiting and staffing personnel with

creative characteristics. But a lot more effort is needed to achieve organizational creativity and innovation. The aim of this study is to investigate the influence of organizational climate dimensions on employees' creative behavior to help organizations find out how they can facilitate creativity and innovation practices in their corporations. The findings of this paper will contribute to the literature on organizational climate and individuals' creative behavior in general while identifying the specific components of organizational climate that play a significant role in creativity and innovation of SMEs in Malaysia.

Small and Medium Enterprises (SMEs) has an important role in economic growth in Malaysia. Based on SMEs annual report, SMEs represented the majority of business in Malaysia, 99.2 % of all establishments in Malaysia. SMEs share of Gross Domestic Product (GDP) of Malaysia was 32% in 2007 and then it got affected by global financial crisis. SMEs recovered again by the end of 2009 with a recorded of 31.2% share of Malaysian GDP (SME annual report, 2010). But, compared to that of 57% in the Germany, 60% in the China, and 55% in Japan, Malaysian SMEs still have the room to grow its share of GDP (SME performance report, 2006). It is believed that innovation practices and the organization capacity to be creative and innovative are among the most critical factors that boost the organizations' performance and competitive advantage. Therefore, this study is emphasizing on individuals' creativity and innovation predictors in Malaysian SMEs.

2. Literature Review

2.1 Employees' Creative Behavior

The nature of work has been changed significantly during past decades due to fast pace of technology, nowadays knowledge is considered as building blocks of work, and job responsibilities are less defined, so employees cannot continue to focus on their narrow job descriptions, they need to go beyond that by endeavoring to be creative and innovative during their daily routines.

Employees' creativity and innovation is the engine of change which provides the opportunity for organizations to create the future (Ahmad, 1998; Martins & Terblanche, 2003; Pitta, 2009; Gumusluoglu & Ilsev, 2006). Tierney (1999) defined creativity as the unique and useful solutions of employees in response to work-related problems based on organizations' goals and visions. In accord to George and Zhou (2001, pp. 513) "Creative behavior is the production of novel and useful ideas by employees which can be the starting points of innovation."

Innovation theorists explain the innovation process as a two stage process, at the first stage idea is generated (initiation), and the second stage is when the implementation of the idea is occurred (application) (Martins & Terblanche, 2003; Axtell, Holman, Unsworth, Wall, Waterson & Harrington, 2000; Kings & Anderson 2000; Scott & Bruce, 1994; Janssen, 2000). Similarly, the study of Slatten, Svenssen and Svaeri (2011) based on interactional approaches, with George & Zhou (2001) toward understanding creativity, theorized that frontline employees in service industries who are not enough creative in their interactions with customers produce ideas and solutions that are more ordinary and routine, but creative frontline employees will deliver more novel ideas. Also they suggested that creativity provides the opportunity for frontline service employees to be more innovative in their behaviour and interactions with customers, and the results of this research showed positive relationship between employees' creativity and innovative behaviour.

The distinction between creativity and innovation is blurred; many studies concentrate more on the creativity or idea generation stage of innovation (Oldham & Cummings, 1996; McAdam & McClelland, 2002), but innovation also contains the implementation phase. Mumford, 2003 suggests that future research should explore the "late cycle" or implementation of creative ideas as well. The current study like studies of (Amabile, Conti, Coon, Lazenby & Herron 1996; Basadur, 1997; Jong & Hartog, 2007) would focus on both idea generation (creativity) and implementation (innovation).

2.2 Organizational Climate

One of the most famous definitions of organizational climate is "a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behavior" by Litwin and Stringer (1968, p. 1).

The scholarly articles revealed two perspectives regarding organizational climate. A group of theorists like Glick (1988) and James (1982) describe organizational climate as the individuals' property which refers to the perception of individuals about organizational norms and characteristics, in the other word the organizational climate is based on the interactions of its members. Another group (Schneider & Reichner, 1983; Schneider, 1985; Friedlander & Margulies, 1969) is of the opinion that organizational climate is an objective property of the organization which stands as policies and practices of organization; actually it's an organizational attribute

rather than individual, and it is regardless of perceptions of members about the organization. In the framework of this article climate is regarded as individual perceptions of work environment. So from these sources employees can understand better the priorities accorded to certain goals and the organizational environment. They can define basis of organizational climate which can define the values, beliefs that are not visible but exist within the employee's behavior and action.

According to Ekvall (1996) organizational climate mediate the processes and operations of organization (e.g. creating, motivation, co-ordination, controlling, communication, decision making, and problem solving) between organizations' resources like human resources or financial resources and the organizational outcomes.

According to Pitta (2009) who worked on a culture of innovation at Portugal Telecom, individual creativity helps organizations to be effective, The companies which cannot bring neither creativity nor innovation in their daily tasks found that their failure is because of their weakness in establishing an appropriate culture and climate that values new ideas, this failure of overlooking the importance of culture decreased the profits of organization, and wasted procedures. "Successful organizations have the ability to provide a bonding between creativity and innovation with their climate and management processes" (Ismail, 2005; Tushman & Oreilly, 2003).

The role of employees in creativity and innovation of organization cannot be denied. Innovative people are those who are able to identify opportunities for new processes, procedures, services and products, they can find new uses for existing methods or materials and even equipment. Not only they can generate new ideas, they can also find solutions for current problems and fulfill the gaps, so they are likely to lead developments in organizational level.

A variety of research (Andrew, 1996; O'Reilly, 1989) arrives at some set of critical norms involved in promoting and implementing innovation and creativity: challenge and belief in action, freedom and risk taking, dynamism and future orientation, external orientation, trust and openness, cross functional interaction, freedom, leadership commitment and involvement, awards and rewards, training, unity in organization, and organizational structure.

The aim of this study is to investigate how organizational climate can encourage employees' creative behavior. This topic has attracted the attention of many scholars during past years, and they found different organizational climate dimensions positively related to employees' creative behavior. Martins and Terblanche (2003) found leaders' support, open communication, and providing facilities encourage employees to come up with new ideas.

Enson, Pirrie, and Band, (2006) conducted a research based on KEYS instrument by Amabile et al. (1996) in order to identify the influence of organizational creative climate in advertising industry, and the results demonstrated that work group supports, organizational encouragement, and lack of organizational impediments, freedom, and sufficient resources are positively correlated with creativity among organizational members. In addition the study of Jackson and Hinchliffe (1999) emphasizes on the importance of top management behaviors. Furthermore Yukl (2002) found that a leadership style which has some principles like consulting and shared decision making provide the opportunity for employees to participate and share their ideas.

2.3 Research Questions Development

2.3.1 The Influence of Organizational Climate on Employees' Creative Behavior

To be successful in enhancing creativity and innovation, the importance of working environment which should be supportive for creativity and innovation has been emphasized (Ekvall, Arvonen & Waldenstrom-Lindblad, 1983; Ekvall & Tangeberg-Anderson, 1986; Zain & Rickards, 1996; Amabile & Conti, 1999). Organizational creative climate is considered as a significant contributor of working environment which enhances creativity and innovation (Hunter, Bedell & Mumford, 2007). The result of studies like Oldham and Cummings (1996) indicated that creative people are reactive to climate variables, and based on Basadur (1997), Schneider, Gunnarson and Niles-Jolly (1994) organizational climate is useful basis in motivating creativity and innovation.

According to previous scholarly literatures there is an agreement among them that organizational climate is an important predictor of employees' creativity and innovation (Oldham, 2003; Telsuk, et al.1997; Amabile et al.1996; Ekvall, 1996), what definitely needs more investigation and research is the exact dimensions of organizational climate.

According to literature research, various models regarding organizational creative climate have been developed by scholars (Oldham & Cummings, 1996; Abbey & Dickson, 1983; Tesluk et al., 1997; Isaksen & Kaufman, 1990). In 2006 Hunter, Bedel, & Mumford conducted a meta-analytical study of different models and developed a new comprehensive taxonomic framework of 14 dimensions for creative climate. They focused on most common instruments of creative climate as follows: KEYS (Amabile et al., 1996), Team Climate Inventory (West & Anderson 1996), the Siegel scale of support for innovation (Siegel & Kaemmerer, 1978), and the

Creative Climate Questionnaire (Isaksen, Lauer, Britz & Ekvall, 2000).

Current research based on literature review of extant creative climate taxonomies (Hunter et al., 2005; Amabile et al., 1996; Abbey & Dickson, 1983; Telsuk & Farr, 1997; Robben, 1998; Siegel & Kuemmerer, 1978; West, 1990; Ekvall, 1988; Isaksen & Kaufman, 1990; Caldwell & O'reilly, 2003) focus on seven dimensions of organizational climate as predictors of employees' creative behavior in SMEs Malaysia as follows ; Flexibility and risk taking (Ayers, Dahlstrom, & Skinner, 1997), reward orientation (Telsuk et al., 1997), resources (Amabile, Conti, Coon, Lazenby & Herron, 1996) leaders' support (Oldham & Cummings, 1996) mission clarity (Thamhain, 2003), freedom (Ekvall, 1996), positive interpersonal exchange (Ayers, Dahlstrom, & Skinner, 1997).

2.3.2 Research Questions

- To what extent does organizational climate influence employees' creative behavior in SMEs Malaysia?
- Which of the dimensions of organizational climate are the best predictors of employees' creative behavior in SMEs Malaysia?

3. Methodology

3.1 Research Design

This study is combination of quantitative analysis and literature research to investigate the effect of organizational climate dimensionson employees' creative behavior. The use of literature is important in developing the research theoretical framework, in this way we use the literature related to organizational climate and employees' idea generation and application.

This is a correlation study and uses the survey method to collect data. "Survey is the most widely used social science data-gathering technique" (Newman, 2011, pp.308). The structured questionnaire as a research instrument distributed among SMEs Malaysia from different industrial sectors. We collected data from two sources: employees and the supervisors. The questionnaire contains of a cover letter that briefly explains the purpose of this study, and there are two main parts, part A and B. Part A includes general information about the economic sector the SME is operating in, age of respondents, gender of respondents, how long the organization has been in operation, and so on. Part B measures the components of organizational climate and employee's creative behavior.

3.2 Population and Sampling

Probability sampling (simple random) used to have a representative sample (Neuman, 2011). We gather the list of SMEs manufacturing and services organizations, from different subsectors and the contacts information from www.smecorp.gov.my Employees from these organizations were the unit of analysis.

According to Departments of Statistics, the Census of establishments and enterprises in Malaysia in 2005 was as follows:

Table 1. Status of SMEs in Malaysia

	Establishments	SMEs
Manufacturing	39,219	37,866
Services	451,516	449,004
Agriculture	32,397	29,985
Overall Total	523,132	516,855

Source: Census of establishments and enterprises, 2005, department of statistics.

In terms of industries, as mentioned earlier we focused on different subsectors of SMEs manufacturing and services, there are various subsectors included in these two main categories of SMEs, the manufacturing contains; Textiles and Apparel, Food and Beverages, Metal products, Rubber and Plastic products, Wood and Furniture, Chemical, Electrical and Electronics, Transport Equipment. And the Services involve; Hotel, Education, Health, Professional, Transport and Communication, Computer services, Telecommunication, Real estate activities, Business/Management Consultancy, Financial Intermediaries, Wholesale, Retail, and

Restaurants.

The questionnaire was distributed among Malaysian SMEs situated in Kuala Lumpur; Information (8.2%), Industrial (9.8%), Social Science (3.3%), Public service (4.9%), Hospitality (9.8%), Financial (6.6%), Technology (6.6%), Manufacturing (8.2%), Construction (11.5%), Education (3.3%), Business (9.8%), Prosperity (4.9%), Retail and advertising (4.9%), and others (6.6%).

The questionnaire distribution took place by in person contact, Participation was voluntary and confidential in all cases and Respondents were allowed to complete the questionnaire during normal work hours. A total of 100 questionnaires were distributed to the SMEs. The questionnaire included a cover letter that explained the purpose of the study and assurance of confidentiality of the information obtained. 61 completed usable questionnaires were collected representing a response rate of 61%.

3.3 Measures

3.3.1 Organizational Climate

The items borrowed from the model of Hunter, Bedel and Mumford (2005, 2007) General taxonomy. We measured each dimension by a single item on a five-point scale ranging from 1 “strongly disagree” to 5, “strongly agree”, employees indicated how well each statement fitted their organization climate. (Appendix 1)

3.3.2 Employees’ Creative Behavior

We assessed employees’ creative behavior with borrowing and modifying items from 13 items scale of George and Zhou (2001). The measurement instrument employed by this study is a subjective procedure, supervisors ratings used to measure employees’ creativity along with studies such as, Oldham and Cummings (1996), and Scot and Bruce (1994). It should be noted that some studies used objective measures in addition to subjective measures in order to check convergence across two types of measures. For example, studies of Tierney et al (1999), and Scot and Bruce (1994) found that the results across both measures were significantly correlated; hence, they looked at supervisors rating to test the research hypotheses. We measured items on a five-point scale ranging from 1 “strongly disagree” to 5 “strongly agree”. (Appendix2)

3.4 Pilot Study to Test the Validity and Reliability of Questionnaire

The main objective of conducting a pilot survey is to ensure the consistency and accuracy of each item in a questionnaire (Oppenheim, 1988). Trough pilot study, the appropriateness of the instrument such as the use of correct word and sentence can be determined. Data were collected randomly from 15 employees working in different organizations from the list of SMEs, who did not participate in the research study.

Table 2. Reliability statistics of the research constructs in the questionnaires

Variables	Cronbach Alpha
Flexibility and risk taking	0.7
Reward Orientation	0.730
Resources	0.764
Leaders’ support	0.753
Mission clarity	0.760
Freedom	0.71
Positive interpersonal exchange	0.720
Organizational Climate	0.758
Creative Behavior	0.758

In view of the fact that the Cronbach alpha coefficients in this study were within the acceptable range (0.7 and more), the constructs are therefore deemed to have adequate reliability and ready for actual survey.

3.5 Data Analysis

Data analysis was performed using the statistical packages of the social science (SPSS). Descriptive statistics and frequency analysis were used to describe the profile of respondents, the economic sector, number of employees in organization, how many years the organization has been established, the department that the respondents is working for, and how many years the respondents have been working for the organization.

At the next step correlation analysis were used to determine the relationship between the independent variables, determinants of organizational climate and employee's creative behavior.

Finally, linear regression and stepwise multiple regression analysis was used to investigate which among the independent variables (determinants of organizational climate) significantly correlated with dependent variable (creative behavior) in order to find out the most important predictors of organizational climate components. The level of significance was set at $P = 0.05$.

4. Results

4.1 General Information of Respondents

This section represents the general information of respondent which obtained at the section A of the questionnaire. The average age of employees was 35 years. The respondents were 25 females (40.9%), and 36 Men (59.1%). Table 3 represents number of years the SME has been in operation, and how long the employee was working for the SME.

Table 3. General information of respondents

	Min	Max	Mean
Number of years the SME has been established	2.00	70.00	18.3113
Number of years the employee working for the SME	1.00	23.00	3.8417

4.2 Data Analysis

The result of Pearson product moment correlation shows that there exists a significant positive relationship between OC (organizational climate), and CB (Creative Behavior) [$r = 0.614$, $p < 0.05$]. Therefore the answer to the question "Is there relationship between organizational climate and creative behavior?" is "Yes".

Table 4. Correlation between organizational climate and creative behavior

Variable	Pearson r	P
Correlation between organizational climate And creative behavior	0.614	0.000

In this step linear regression analyses enter method was used to determine which components of organizational climate are the best predictors of employees' creative behavior. According to the results, 61% of variations in employees' creative behavior are explained by organizational climate. So the components of organizational climate can be applied to explain creative behavior.

Table 5. Model summary (enter method analysis)

Model	R	R Square	Adjusted R square	Std. Error of the estimate
1	.781*	.610	.558	2.05742

In addition, table 5 and 6 indicate that Organizational Climate (OC) can be utilized to predict creative behavior

(CB) ($F(7, 53) = 11.84, p < 0.05$).

Table 6. ANOVA (enter method analysis)

Model	Sum of squares	df	Mean square	F	Sig
Regression	350.866	7	50.124	11.841	.000*
Residual	224.347	53	4.233		
Total	575.213	60			

*Predictors: flexibility and risk taking, reward orientation, resources, leaders' support, mission clarity, freedom, positive interpersonal exchange.

**Dependent variables: CB.

Table 7. Coefficients* (enter method analysis)

Model	Unstandardized coefficients B	Unstandardized coefficients Std.Error	Standardized Coefficients Beta	t	sig
Constant	1.314	1.880		0.699	0.488
Flexibility and risk taking	-0.023	0.178	-0.015	-0.129	0.898
Reward Orientation	0.022	0.123	0.023	0.181	0.857
Resources	0.263	0.215	0.198	1.225	0.226
Leaders' support	0.874	0.408	0.287	2.142	0.037
Mission Clarity	1.805	0.436	0.494	4.138	0.000
Freedom	0.026	0.507	0.007	0.052	0.959
Positive interpersonal exchange	0.122	0.409	0.038	0.299	0.766

*Dependent variable: CB (Creative Behavior).

The table 7 presents the results of the stepwise multiple regression analysis that was carried out to determine which among the components of organizational climate correlated significantly with creative behavior. According to the results, Resources explain 45.9% of the employee's creative behavior. After providing resources, the inclusion of Mission clarity makes additional 10.4% of the employee's creative behavior. The inclusion of leaders support explains another 4.5% of the employee's creative behavior. So resources, mission clarity and leaders support together explain 60.8% of the creative behavior, compare with 61% by all predictors. According to the table 8, ANOVA for the stepwise regression, shows that the P-value of predictors is 0.000 which is < 0.05 , so there is significant correlation between this predictors and creative behavior.

Table 8. Model summary (stepwise regression analysis)

Model	R	R Square	Adjusted R Square	Std. Error The Estimate
1	0.677a	0.459	0.450	2.29660
2	0.751b	0.563	0.548	2.08106
3	0.780c	0.608	0.588	1.98854
4	0.769d	0.591	0.577	2.01476

a. Predictors: Resources.

b. Resources, and Mission clarity.

c. Predictors: Resources, Mission clarity, and Leaders' support.

d. Predictors: Mission clarity, Leaders' support.

Table 9. ANOVA (stepwise regression analysis)

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	264.025	1	264.025	50.058	0.000a
Residual	311.188	59	5.274		
Total	575.213	60			
Regression	324.026	2	162.013	37.409	0.000b
Residual	251.188	58	4.331		
Total	575.213	60			
Regression	349.818	3	116.606	29.488	0.000c
Residual	225.395	57	3.954		
Total	575.213	60			
Regression	339.776	2	169.888	41.852	0.000d
Residual	235.437	58	4.059		
Total	575.213	60			

a. Predictors: Resources.

b. Predictors: Resources, and Mission clarity.

c. Predictors: Resources, Mission clarity, and Leaders' support.

d. Predictors: Mission clarity, Leaders Support, Dependent Variable: Creative Behavior (CB).

5. Discussion and Conclusion

Innovation only occurs successfully where there is strong culture or climate supporting followers' creativity and innovation (west & Sacramento, 2012). This study aimed to contribute to the literature on individual innovation by providing the inventory of organizational climate determinants that may influence employees' creative and innovative efforts.

Generally, this study makes a contribution to the call for more research related to the topic of relationship between organizational contextual factors and employees' creativity and innovation.

This study has focused on:

- 1) Organizational climate (organizational-level construct)
- 2) Employees' creative behavior (Individual-level)
- 3) The relationship between organizational climate dimensions and employees' creative behavior

The results of the study indicate that there is positive relationship between organizational climate and employees' creative behavior [$r = 0.614$, $p < 0.05$]. It seems that employees' creative behavior related closely to organizational climate, which is in line with previous studies on the organizational climate and creativity and

innovation (exp. Amabile (1983); Woodman, Sawyer & Griffin (1993); Ekvall, 1996; Ekvall & Ryhammer, 1999; Ekvall, et al. 2001; Acikgoz & Günsel, 2011). According to the Amabile componential model (1983) and Woodman, Sawyer & Griffin (1993) interactionist model, organizational climate as an organizational contextual factor is a significant predictor of organizational members creativity and innovation.

This study contributes to the empirical confirmation of previously tested theory of the influence of organizational creative climate on individuals' creativity and innovation. According to the data analysis of this study three organizational climate components significantly predict employees' creative behavior; (i) resources which is the Perception that, organization has and is willing to provide facilities to encourage creativity and innovation in organization explain 45.9% of the employee's creative behavior in Malaysian SMEs (p-value < 0.05). (ii) Mission clarity which refers to awareness of goals and expectations regarding creative performance, has contributed another 10.4% to employee's creative behavior (p-value < 0.05). Surprisingly the results of this study support studies of (Jong & Hartog, 2007; Carneiro, 2008; Lee, 2007; Basadur, 2004) about the importance of leadership on followers creativity and innovation, (iii) leaders support has contributed another 4.5% (p-value < 0.05). Providing resources, mission clarity and leaders' support together explain 60.8% of the employees' creative behavior, compare with 61% by all predictors.

Also the result of this study is consistent with the contextual theory that organizational creative climate provides an adequate working environment in such a way that enhance employees' perception toward being creative and innovative in the organization (Ekvall & Ryhammar, 1999; Oldham & Cummings, 1996).

This study is not without limitation like the other empirical studies. First the results of this study emerge from a specific national context, Malaysia; results may be different for employees working in various cultural, political, economical, and environmental conditions. Secondly we gathered the data from SMEs operating in different industrial sectors; results may be different from one particular sector to another. Third, the sample size was relatively small (n=61), actually around 100 structured questionnaires were distributed, but some of organizations did not participate in the survey because of reasons like time constrain and work load pressure. The study can be strengthened by increasing the sample size as the results and finding may vary substantially when the sample size is increased, so the sample size may limit the generalizability of the results. Next, more factors or variables can also be included in the study as creative behavior can be encouraged by many different aspects of working environment. According to multiple regression analysis, approximately 61 % of individual creativity can be explained by independent variables identified by this study. This indicates that there are other predictor variables of employees' creative behavior in the organization which have not been included in this study. Further studies needed be carried out with a larger sample size, and inclusion of additional work related variables as independent variables.

Acknowledgements

I am deeply indebted to my supervisor, Dr. Indra.Devi Subramaniam for her constant's help, guidance and support. This study would not have been possible without her useful suggestions, which not only made the process of completing this research interesting, also was contributed to my learning.

References

- Abbey, A., & Dickson, J. W. (1983). R&D work climate and innovation in semiconductors. *The Academy of Management Journal*, 26(2), 362-368. <http://dx.doi.org/10.2307/255984>
- Açıkgoza, A., & Günsel, A. (2011). The effects of organizational climate on team innovativeness. *Procedia Social and Behavioral Sciences*, 24, 920-927. <http://dx.doi.org/10.1016/j.sbspro.2011.09.102>
- Ahmed, P. K. (1998). Culture and climate for innovation. *European Journal of Innovation Management*, 1(1), 30-34. <http://dx.doi.org/10.1108/14601069810199131>
- Amabile, T. M. (1983). The social-psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45, 357-376. <http://dx.doi.org/10.1037/0022-3514.45.2.357>
- Amabile, T. M., & Conti, R. (1999). Changes in the work environment for creativity during downsizing. *Academy of Management Journal*, 42(6), 630-41. <http://dx.doi.org/10.2307/256984>
- Amabile, T. M., & Gryskiewicz, N. D. (1989). The creative environment scales: Work environment inventory. *Creativity Research Journal*, 2, 231-253. <http://dx.doi.org/10.1080/10400418909534321>
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154-1184. <http://dx.doi.org/10.2307/256995>
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington. (2000). shop floor

- innovation: facilitating the suggestion and implementation of ideas. *Journal of Occupational & Organizational Psychology*, 73, 265-85. <http://dx.doi.org/10.1348/096317900167029>
- Ayers, D., Robert, D., & Steven, J. S. (1997). An Exploratory Investigation of Organizational Antecedents to New Product Success. *Journal of Marketing Research*, 34, 107-116. <http://dx.doi.org/10.2307/3152068>
- Basadur, M. (1997). Organizational development interventions for enhancing creativity in the workplace. *Journal of Creative Behavior*, 31, 59-72. <http://dx.doi.org/10.1002/j.2162-6057.1997.tb00781.x>
- Caldwell, D. F., & O'Reilly III, C. A. (2003). The determinants of team-based innovation in organizations: The role of social influence. *Small Group Research*, 34, 497-517. <http://dx.doi.org/10.1177/1046496403254395>
- Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work & Organizational Psychology*, 5, 105-124. <http://dx.doi.org/10.1080/13594329608414845>
- Ekvall, G., & Ryhammer, L. (1999). The creative climate: its determinants and effects at a Swedish university. *Creativity Research Journal*, 12, 303-310. http://dx.doi.org/10.1207/s15326934crj1204_8
- Ekvall, G., & Tangeberg-Anderson, Y. (1986). working climate and creativity: a study of an innovative newspaper. *Journal of Creative Behaviour*, 215-25.
- Ekvall, G., Arvonen, J., & Waldenstrom-Lindblad, I. (1983). *Creative organizational climate: construction and validation of a measuring instrument*. Swedish council for management and work life issues, Stockholm.
- Ensor, J., Pirrie, A., & Band, C. (2006). Creativity work environment: do UK advertising agencies have one. *European Journal of Innovation Management*, 9(3), 258-268. <http://dx.doi.org/10.1108/14601060610678130>
- Friedlander, F., & Margulies, N. (1969). Multiple impacts of organizational climate and individual value systems upon job satisfaction. *Personnel Psychology*, 22, 171-183. <http://dx.doi.org/10.1111/j.1744-6570.1969.tb02300.x>
- George, J. M., & Zhou, J. (2001). when openness to experience and conscientiousness are related to creative behaviour: an interactional approach. *Journal of Applied Psychology*, 86, 513-24. <http://dx.doi.org/10.1037/0021-9010.86.3.513>
- Glick, W. (1985). Conceptualizing and Measuring Organizational and Psychological Climate: Pitfalls in Multilevel Research. *Academy of Management Review*, 10(3), 601-16.
- Gumusluoglu, L., & Ilsev, A. (2007). *Transformational leadership, creativity, and organizational innovation*. Bilkent University, Faculty of Business Administration.
- Hellman, T., & Thiele, V. (2009). *Incentives and Innovation*. University of British Columbia, Sauder School of Business.
- Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2006). Dimension of creative climate: A general taxonomy. *Korean Journal of Thinking and Problem Solving*, 15, 97-116.
- Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review'. *Creativity Research Journal*, 19, 69-90. <http://dx.doi.org/10.1080/10400410709336883>
- Isaksen, S. G., Lauer, K. J., Ekval, G., & Britz, A. (2000). Perceptions of the best and worst climates for creativity Preliminary validation evidence for the situational outlook questionnaire. *Creativity Research Journal*, 13, 171-184. http://dx.doi.org/10.1207/S15326934CRJ1302_5
- Ismail, M. (2003). Creative climate and learning organization factors: their contribution towards innovation. *Leadership & Organization Development Journal*, 26(8), 639-654. <http://dx.doi.org/10.1108/01437730510633719>
- Jackson, S., & Hinchliffe, S. (1999). Improving organizational culture through innovative development programs. *International Journal of Health Care Quality Assurance*, 12(4), 143-148. <http://dx.doi.org/10.1108/09526869910370915>
- James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 67, 219-229. <http://dx.doi.org/10.1037/0021-9010.67.2.219>
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work.
- Jong, J. P. J., & Hartog, D. N. D. (2007). How leaders influence employee's innovative behavior. *European Journal of European Management*, 10(1), 41-64.

- King, N., & Anderson, N. (2002). *Managing Innovation and Change: A Critical Guide for Organizations*. Thomson, London.
- Litwin, G. H., & Stringer, R. A. (1968). *Motivation and organizational climate*. Boston: Harvard Business School.
- Martins, E. C., & Terblanche, F. (2003). Building Organizational Culture that Stimulates Creativity and Innovation. *European Journal of Innovation Management*, 6(1), 64-67. <http://dx.doi.org/10.1108/14601060310456337>
- McAdam, R., & McClelland, J. (2002). Individual and team-based idea generation within innovation management: organizational and research agendas. *European Journal of Innovation Management*, 5(2), 86-97. <http://dx.doi.org/10.1108/14601060210428186>
- McLoughlin, I., & Harris, M. (1997). *Innovation, Organizational Change and Technology*. Thomson, London.
- Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review*, 10, 1-29. [http://dx.doi.org/10.1016/S1053-4822\(99\)00043-1](http://dx.doi.org/10.1016/S1053-4822(99)00043-1)
- Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity Research. *Creativity Research Journal*, 15(2/3), 107-20.
- Neuman, W. L. (2011). *Social research methods: qualitative and quantitative approaches* (7th ed.). Pearson, University of Wisconsin at Whitewater.
- Oldham, G. R. (2003). Stimulating and supporting creativity in organizations. In Jackson, S. E., Hitt, M. A., & DeNisi, A. S. (Eds.), *Managing knowledge for sustained competitive advantage* (pp. 243-273). San Francisco, CA: Jossey-Bass.
- Oldham, G. R., & Cummings, A. (1996). employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39, 607-634. <http://dx.doi.org/10.2307/256657>
- Oppenheim, A. N. (1998). *Questionnaire design, interviewing and attitude measurement*. Pinter Pub Ltd.
- Pitta, D. A. (2009). Creating a culture of innovation at Portugal telecom. *Journal of product & Brand Management*, 18(6), 448-451. <http://dx.doi.org/10.1108/10610420910989767>
- Robbins, S. P. (1996). *Organizational Behavior: Concepts, Controversies, Applications* (7th ed.). Prentice-Hall, Englewood Cliffs, NJ.
- Schneider, B. (1985). Organizational behavior. *Annual Review of Psychology*, 36, 573-611. <http://dx.doi.org/10.1146/annurev.ps.36.020185.003041>
- Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, 36, 19-39. <http://dx.doi.org/10.1111/j.1744-6570.1983.tb00500.x>
- Schneider, B., Gunnarson, S. K., & Niles-Jolly, K. (1994). Creating the climate and culture of success. *Organizational Dynamics*, 17-29. [http://dx.doi.org/10.1016/0090-2616\(94\)90085-X](http://dx.doi.org/10.1016/0090-2616(94)90085-X)
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: a path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607. <http://dx.doi.org/10.2307/256701>
- Siegel, S. M., & Kaemmerer, W. F. (1978). Measuring the perceived support for innovation in organizations. *Journal of Applied Psychology*, 63, 553-562. <http://dx.doi.org/10.1037/0021-9010.63.5.553>
- Slåtten, T., Svensson, G., & Sværi, S. (2011). Empowering leadership and the influence of a humorous work climate on service employees' creativity and innovative behaviour in frontline service jobs. *International Journal of Quality and Service Sciences*, 3, 267-284. <http://dx.doi.org/10.1108/17566691111182834>
- SME Annual Report. (2008). National SME Development Council.
- SME Corp Malaysia. (2010). Definition of SMEs. Retrieved from on 2 July 2010. <http://www.smecorp.gov.my/Node/33>
- SME Performance Report. (2005). Small and Medium Industries Development Corporation.
- Telsuk, P. E., Faar, J. L., & Klein, S. R. (1997). Influence of organizational culture and climate on individual creativity. *The Journal of Creative Behavior*, 31(1), 21-24.
- Thamhain, H. J. (2003). Managing innovative R&D teams. *R&D Management*, 33, 297-311. <http://dx.doi.org/10.1111/1467-9310.00299>

- Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52, 591-620. <http://dx.doi.org/10.1111/j.1744-6570.1999.tb00173.x>
- Tushman, M. L., & O' Reilly, C. (1997). *Winning through Innovation: A Practical Guide to Leading Organizational Change and Renewal*. Harvard Business School Press, Boston, MA.
- West, M. A., & Anderson, N. R. (1996). Innovation in top management teams. *Journal of Applied Psychology*, 81, 680-693. <http://dx.doi.org/10.1037/0021-9010.81.6.680>
- West, M. A., & Farr, J. L. (1990). *Innovation at work*(pp. 3-13). Wiley, Chichester.
- West, M. A., & Sacramento, C. A. (2012). *Creativity and innovation: the role of team and organizational climate*. Aston University, Birmingham, UK.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review*, 18, 293.
- Yukl, G. (2002). *Leadership in organizations*. New York: Prentice Hall.
- Zain, M., & Rickards, T. (1996). Assessing and comparing the innovativeness and creative climate of firms. *Scandinavian Journal Management*, 12(2), 109-21. [http://dx.doi.org/10.1016/0956-5221\(96\)00003-6](http://dx.doi.org/10.1016/0956-5221(96)00003-6)

Appendix 1. Organizational creative climate dimensions and definitions

No	Label	Definition
1	Flexibility and Risk taking	Organization is willing to take risks and deal with uncertainty and ambiguity associated with creative endeavors.
2	Reward orientation	Creative performance is tied to rewards in the organization.
3	Resource	Organization has and is willing to use resources to facilitate, encourage and eventually implement creative ideas.
4	Leaders support	Leaders are supportive of new and innovative ideas. Leaders also operate in a non-controlling manner.
5	Mission clarity	Employees are aware of goals and expectations regarding creative performance.
6	Freedom	Employees have autonomy and freedom in performing their jobs.
7	Positive interpersonal exchange	Employees perceive a sense of "togetherness" and cohesion in the organization.

Source: General Taxonomy Hunter, Bedel, and Mumford (2005, 2007) "Dimensions of creative climate: A general taxonomy", "Climate for creativity: A quantitative review".

Appendix 2. Creative behavior

No	Statement
1	Suggests new ways to achieve goals and objectives
2	Comes up with new and practical ideas to improve performance
3	Searches out new technologies, processes, techniques, and/or product ideas (adopted from Scot & Bruce, 1996)
4	Suggests new ways to increase quality
5	Is a good source of creative ideas
6	Not afraid to take risks
7	Promotes and champions ideas to others (adopted from Scot & Bruce, 1996)
8	Exhibits creativity on the job when given the opportunity to
9	Develops adequate plans and schedules for the implementation of new ideas (adopted from Scot & Bruce, 1996)
10	Often has new and innovative ideas
11	Comes up with creative solutions to problems
12	Often has a fresh approach to problems
13	Suggests new ways of performing work tasks

Source: George and Zhou (2001), "When openness to experience and conscientiousness are related to creative behavior: An interactional approach".