Organizational Climate as a moderator of the Relationship between Transformational Leadership and Creativity

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The interest is growing in the influence of transformational leadership on creativity at the organizational level. Transformational leaders increase the performance expectations and creativity levels of their followers. Recent studies showed that leaders' behaviors have important effects on creativity level of the employees. Creativity is consisted of three levels as individual, group and organizational creativity. Transformational leaders have effects on the creativity of the subordinates. Moreover, organizational climate can be important variable for the individual creativity in organizations. In this study, we assumed that the relationship between transformational leadership and followers' creativity moderated by organizational climate.

The main purpose of this study is to examine the moderating role of organizational climate on the effect of transformational leadership on creativity. The survey is conducted on 178 employees in Istanbul, Turkey. As a result, there are significant moderating effects of cohesion climate dimension on the relationship between transformational leadership and followers' creativity. In addition pressure factor of the organizational climate has a significant negative moderating effect on this relationship.

***Keywords**:* Transformational leadership, followers' creativity, organizational climate, cohesion, pressure

1. Introduction

In organizational research, creativity has often been used interchangeably with innovation. An attempt to distinguish these concepts, creativity has been defined as "the production of level perspectives, ideas or products", while innovation has been identified as "the implementation of these perspectives, ideas or products"; and as such innovation involves creativity (Oldham and Cummings, 1996). Creativity for individuals and organizations represents a dramatic aspect of organizational effectiveness, innovativeness and survival (Woodman, Sawyer and Griffin, 1993). Change phenomena, organization effectiveness and survival are more easily understood with the help of creativity for people and organizations.

In order to reason organization creativity, it is necessary to understand creative process, creative product, creative person, creative situation and how each of these is connected (Woodman, Sawyer and Griffin, 1993). Thus, managers should encourage creativity if they want their organizations to be creative, because they are to decide what consequences should be creative; also they are the ones to make room for creativity in an organization (Shalley and Gilson, 2004).

In this paper, we focused on individual creativity related to directly organizational innovativeness and survival; thereby the different important subject occurred. The managers in the organizations or leaders can be effect on employers' (or followers') creativity. Especially transformational leadership which includes creating vision and inspiration has an important affects on followers' creativity, because the leader motivates employees, shapes organizational culture and creates organizational climate required for organizational change (Weihrich, Cannice and Kootz, 2010). Moreover, transformational leaders help followers grow and develop into leaders by responding to individual follower’s needs by empowering them and by aligning objectives and goals of the individual followers, the leader, the group and the larger organizations (Bass and Riggio, 2006).

In addition, organizational climate is a significant variable (Hofmann, Morgeson, and Gerras, 2003) in the relationship between transformational leadership and creativity. This is the reason that we conducted to analyze whether this relationship moderated by organizational climate. The major focus of this study is to examine how organizational climate moderates transformational leadership and followers' creativity, which directly impacts organizational innovativeness. The hypothesized model appears in Figure 1. Support for the model appears in the literature review and analyses below.

2. Literature Review and Hypotheses

2.1. Creativity

The literature includes several definitions of creativity. Sternberg and Lubart (1999) define creativity as "the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)". A widely accepted definition states that "creativity is the production of new and useful ideas concerning products, services, processes and procedures" (Amabile et al., 2004; Amabile et al., 1996, Woodman, Sawyer and Griffin, 1993, Shalley, 1991). Some methods for sorting out industrial problems, producing industrial methods or bringing about new adjustments are involved in this description (Zhou and Shalley, 2003).

Creativity is discussed in three dimensions in the related literature. These dimensions are organizational creativity, group creativity and individual creativity (Woodman, Sawyer and Griffin, 1993. Creativity is handled in the individual dimension in this study.

Amabile (1988) defined individual creativity as, "the production of novel and useful ideas by an individual or small group of individuals working together". Findlay and Lumsden (1988) defined individual creativity as, "constellation of personality and intellectual traits shown by individuals". Briefly, it is a function of antecedent conditions, cognitive styles and abilities, personality, instinct motivational factors and knowledge (Woodman, Sawyer and Griffin, 1993).

2.2. Transformational Leadership

By its simplest definition, leadership is the skill of affecting a group of people for the achievement of a goal. The source of this effect can be both formal and informal since the top management assigns some managerial power to people. Organizations need powerful leaders and strong management to ensure organizational effectiveness (Robbins, 2005).

The earliest leadership researches date back to 1930s. In 1980s, two basic approaches were suggested about leadership: transformational leadership and transactional leadership. James McGregor Burns was the first to use this distinction. Bass (1985) developed the Multifactor Leadership Questionnaire (MLQ) based on this approach (Alimo-Metcalfe and Alban-Metcalfe, 2001). In this research, this scale developed by Bass and Avolio (1995) has been applied.

Transformational leadership contains four components: charisma or idealized influence (attributed or behavioral), inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985, 1998; Bass and Avolio, 1993; Bass and Steidlmeier, 1999). Such leaders work so hard to ensure effectiveness and productivity (Weihrich, Cannice and Kootz, 2010).

According to Bass (1999), *idealized influence* and *inspirational leadership* are displayed when the leader envisions a desirable future, articulates how it can be reached, sets an example to be followed, sets high standards of performance, and shows determination and confidence. Followers want to identify with such leadership (Bass, 1999). *Intellectual stimulation* is displayed that the leader helps followers to become more innovative and creative. *Individualized consideration* is displayed when leaders pay attention to the developmental needs of followers and support and coach the development of their followers. The leaders delegate assignments as opportunities for growth (Burns, 1978; Bass, 1985-1995-1999; Bass and Avolio, 1995; Bass and Steidlmeier, 1999; Bass and Riggio, 2006).

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2.3. Organizational Climate

Psychologists created the term "organizational climate". Lewin, Lippitt and White (1939) have analyzed social climates, and employee climate has attracted great attention in the organization literature, and it has been useful in concluding some variables of individual and organizational consequences.

The literature includes several definitions of climate. Schneider (1990) defined climate as "perceptions of the events, practices, and procedures, as well as the kind of behaviors, which get rewarded, supported, and expected in a particular organizational setting". Isaksen et.al (2000-2001) defined climate as, "the recurring of patterns of behavior, attitudes, and feelings that characterize life in the organization". From the individual point of view, the concept is called psychological climate. In this case, climate is about individual understanding of behavior. When they are combined, it is called organizational climate. They are common perceptions which define life in the organization. In other words, organizational climate is thoughts, feelings and perceptions of individuals in the organization (Schneider, 1990).

Organizational climate and organizational culture are associated with each other in the literature and sometimes they are even used interchangeably (Walles, Hunts and Richards, 1999). Climate is conceived as an organizational reality in an objectivistic sense. The framework means that organizational climate is not identical to organizational culture. Culture refers to deeper and more enduring values, norms and beliefs within the organization; however, climate is distinct from culture in that it is more directly observable within the organization (Ekvall, 1996).

Organizational climate is a concept dealt in various dimensions. In their studies examining the relationship between organizational climate and perception of support of innovation, Monts, Moreno and Fernandez (2003) defined sub-dimensions of organizational climate as support, cohesion, pressure, intrinsic recognition and impartiality. *Support* addresses the existence of managers supporting employees working in an organization. *Cohesion* emphasizes the harmony and cooperation in the organization. *Pressure* expresses the pressure created by heavy workload of workers. *Intrinsic recognition* emphasizes rewarding and appreciation in the organization. *Impartiality* expresses the objectiveness perceived by workers in the organization (Monts, Moreno and Fernandez, 2003). In this study, organizational climate is handled in line with these dimensions.

2.5. Development of Hypotheses

Transformational leadership and creativity are closely related to each other. It is highly important that transformational leaders should be qualified enough to inspire others following them to be more creative (Bass and Riggio, 2006).

In addition to, transformational leaders increase followers' intrinsic motivation, which stimulates creativity and the intellectually stimulating transformational leader encourages followers to think "outside of the box" (Bass and Avolio, 1995; Bass and Riggio, 2006).

It is possible to find several researches about the relationship between transformational leadership and creativity in the related literature. It has been shown in some researches leaders tend to promote followers' creativity and innovation instead of being the sole authority for innovation (Mumford, Connelly and Gaddis, 2003; Mumford et al., 2002).

According to Jung (2001), transformational leaders encourage creativity more than transactional leaders, and it is supported by members of groups. Shin and Zhou (2003) examined the relationships among transformational leadership, conservation and creativity. They found that transformational leadership was positively related to follower creativity. Similarly, Gong, Huang and Farh (2009) found that employee learning orientation and transformational leadership were positively related to employee creativity. Specifically, Jung, Chow, and Wu (2003) argued that transformational leadership encourages employees to think creatively (Sosik, Avolio and Kahai, 1997; Sarros, Cooper and Santora, 2008).

Gumusluoglu and Ilsev (2009) examined the impact of transformational leadership both on followers' creativity at the individual level and on innovation at the organizational level. Research results showed that there was a positive relationship between transformational leadership and employees' creativity.

As a result of scanning the literature, the first hypothesis of the research is composed as given below:

H1: Transformational leadership effects on creativity

In order to understand the connection between climate in organizational research and theory, some patterns are suggested (Burke and Litwin, 1992; Ekvall, 1996; Litwin and Stringer, 1968). According to Ekvall (1996), "in the context of organizational processes climate plays the part of an intervening variable which affects results of the operations of the organization. The climate has this moderating power because it influences organizational processes such as problem solving, decision making, communicating, coordinating, controlling; and it influences psychological processes such as learning, creating, motivation and commitment".

Various researches studying the relationship among transformational leadership, creativity or innovation and organizational climate can be found in the literature (Ekvall and Ryhammar, 2010; Eisenbeiss, Knippenberg and Boerer, 2008; Gumusluoglu and Ilsev, 2009). In some of these researches, organizational climate is handled as a moderator variable (Wang and Rode, 2010; Zhou and Xiao, 2011; Gumusluoglu and Ilsev, 2006).

Eisenbeiss, Knippenberg and Boerer (2008) examined relationships among transformational leadership, team innovation, and support for innovation and climate for excellence. Results showed that transformational leadership works through support for innovation, which in turn interacts with climate for excellence such that support for innovation enhances team innovation only when climate for excellence is high.

Ekvall and Ryhammar (1998) examined the relationships among leadership style, organizational climate and organizational outcomes (creativity, productivity). The results showed that leadership style affects organizational results only by influencing the social climate.

Jung, Chow and Wu (2003) suggested how transformational leadership might affect creativity. They found that transformational leaders encourage follower creativity and innovation by providing a climate that support followers' innovative efforts.

Wang and Rode (2010) examined relationships among transformational leadership, employee identification with leader, innovative climate, and employee creativity. According to the results; transformational leadership was not significantly related with employee creativity, nor were the two way interactions of transformational leadership identification with leader and transformation leadership and innovative climate. However, the three-way interaction of transformational leadership, employee identification with leader, and innovative climate were associated with employee creativity.

In this context, concerning transformational leadership's impact on creativity, organizational climate can be handled as a differentiating variable influencing this relationship. As a result of scanning the literature, the second hypothesis of the research is composed as given below:

H2: The effect of transformational leadership on creativity is moderated by organizational climate.

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3. Methodology

3.1. Research Goal

The purpose of this study is to identify the impact of transformational leadership on creativity and to display the moderating effect of organizational climate on the relationship between transformational leadership and followers' creativity. In order to analyze the hypotheses, a survey using questionnaires was conducted.

3.2. Sample

The survey was conducted on middle-level employees in Istanbul, Turkey. Data related to the variables were obtained directly from the employees of the firms through the questionnaires, which mean primary source data were used in the research. We send 250 questionnaires in all which get 178 valid questionnaires, so the response rate of the research was 71.2%. Data obtained from questionnaires was analyzed through the SPSS statistical packet software (v.18) and proposed relations were tested through analyses.

The demographic questions related to the participants' sex, age, and educational level. Of the study participants, 43.8 % were male and 56.2 % were female. The participants had a mean of 32 years old, the median was 35, and the mode was 30 %. Of the participants 46.1% had a bachelor's degree, 53.9 % had a master's and doctoral degree. They also had a mean of 4.35 years of experience in their own firm. The median was 4 and the mode was 5.

3.3. Measures

In this study we used three different surveys mentioned below to measure our three variables determined as organizational climate, transformational leadership and creativity. All the items in the questionnaire were accompanied by a 5-point rating scales (from 1: Strongly Disagree to 5: Strongly Agree).

The Transformational Leadership scale was developed by Bass and Avolio (1995), The Organizational Climate scale was developed by Koys and De-Cottis (1991) and refined by Montes, Moreno and Fernandez (2004), and The Creativity Questionnaire was developed by Shin and Zhou (2003). The numbers of items of the scale are shown in Table 2.

Organizational climate scale consists of 15 items and also has five dimensions explained above. There are 4 items for support, 4 items for cohesion, 3 items for pressure, 2 items for intrinsic recognition, 2 items for impartiality.

4. Analysis and Results

First of all, the factor and reliability analysis of data collection tools have been made in the research. All factors have passed the KMO Measure of Sampling Adequacy and Barlett Test of Sphericity which means that our data set is appropriate for factor analyses. Principal component and varimax method are used in analysis.

Validity of Creativity and Transformational Leadership Scales were analyzed by their developers and used and tested in various studies by other researchers as well. Therefore these instruments are adequate and stable. Transformational Leadership and Creativity scales were not factor analyzed; only reliability of the scales was examined.

The construct validity of Organizational Climate was tested by factor analysis. For the measure, items which factor weight 0.50 and unique items in a factor, and items with close factor weights are leaved out of evaluation. The factor loadings and the Cronbach's alpha scores of the factors are shown in Table 1:

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Table 1: Factor Loadings of the Organizational Climate

	Factors		
	Intrinsic Recognition + Support + Impartiality	***Cohesion***	***Pressure***
My boss is interested in me getting ahead in the company	0.867		
I can count on my boss to help me when I need it	0.862		
My boss does not play favorites	0.850		
My boss backs me up and lets my learn from my mistakes	0.841		
My boss is quick to recognize good performance	0.819		
If my boss terminates someone, the person probably deserved it	0.811		
My boss is easy to talk to about job-related problems	0.780		
My boss uses me as an example of what to do	0.502		
People take a personal interest in one another		0.925	
People pitch in to help each other out		0.855	
People tend to get along with each other		0.845	
There is a lot of “team spirit” among people		0.752	
I feel like I never have a day off			0.907
I have too much work and too little time to do it in			0.840
Too many employees at my level get “burned out” by the demands of their jobs			0.836

As a result of the analysis, it has been found out that organizational climate consist of three dimensions. There are 8 items in the first factor of the scale. This factor includes 2 items of impartiality, 4 items of support, and 2 item of intrinsic recognition, thus the first factor is labeled as "impartiality + support + intrinsic recognition (ISI)".

The second factor has 4 items. The based on the literature this factor have named as "cohesion". The third factor has 3 items and it is labeled as "pressure". Both factors have same items as the literature.

For the reliability of the scales, The Cronbach's alpha scores were calculated. As seen in Table 2, factors and scales are reliable. The item numbers and Cronbach's alpha scores of the scales and factors are shown in Table 2:

Table 2. Cronbach's Alpha Values

Variables	*Number of Items*	*Cronbach's Alpha*
Transformational Leadership	20	0.952
Creativity	15	0.933
ISI	8	0.931
Cohesion	4	0.897
Pressure	4	0.844

The research model can be shown as follows under the light of the dimensions obtained as a result of the factor analysis:

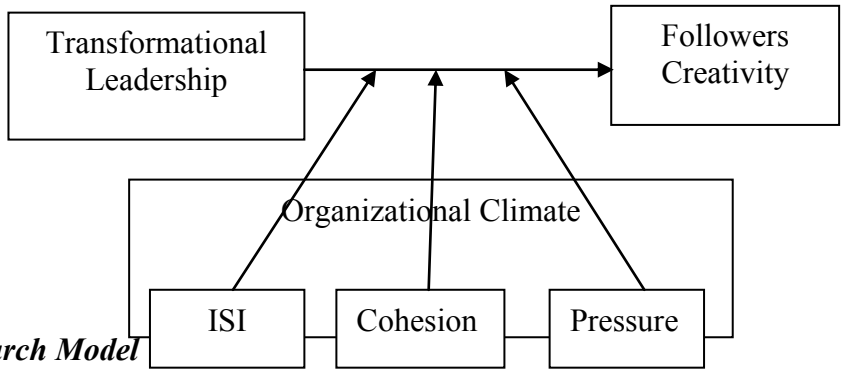


Figure1: Research Model

According to factor analysis results, the second hypothesis of the research is composed as given below:

H2a: The effect of transformational leadership on creativity is moderated by ISI.

H2b: The effect of transformational leadership on creativity is moderated by cohesion.

H2c: The effect of transformational leadership on creativity is moderated by pressure.

Table 3 summarizes the means, standard deviations, and correlations among the study variables. As a result of the correlation analysis, it has been found out that the transformational leadership was significantly correlated with creativity (r=0,517) and organizational climate (r=0,801 for ISI; 0,385 for cohesion; 0,216 for pressure). Creativity was significantly correlated with support (r=0,563) and cohesion (r=0,753). There was no significant correlation between creativity and pressure.

Table 3: Means, Deviations and Correlations among the Variables

	Variables	**Mean**	**SD**	**1**	**2**	**3**	**4**	**5**
1	Transformational Leadership	3.3671	.88050	1				
2	Creativity	2.9838	.75737	.517**	1			
3	ISI	3.2162	1.07802	.801**	.563**	1		
4	Cohesion	3.3362	.94794	.385**	.753**	.458**	1	
5	Pressure	3.3487	1.12644	.216**	-.066	.149	-.078	1

*p<0,05, **p<0,01

For analyzing the hypothesis 1, regression tests are applied to the data. As a result of the regression analysis it has been found out that the transformational leadership has a significant positive effect on creativity (p=0,000; β =0,517) and the regression equation is,

Transformational Leadership= 1,550 + 0,437*Creativity. Thus, regression analysis results support H1.

For analyzing the hypothesis 2, hierarchic regression tests are applied to the data. The results of this analysis are shown on Table 4. In addition, tolerance and VIF values calculated, so there is no collinearity between independent variables. In other words, the tolerance and VIF values are all quite acceptable.

Table 4: Regression Analyses Investigating Interaction Effect: Creativity as the Dependent Variable

		Non-standardized Coefficients		Standardized Coefficients	t	R Square Change	Sig. F Change
Model	Independent Variables	B	Std. Error	Beta			
1	(Constant)	1.554	.217		7.156		
	Transformational Leadership	.439	.063	.519**	6.974		
2	(Constant)	1.550	.209		7.407	.000	
	Transformational Leadership	.170	.100	.201	1.693		
	ISI	.277	.082	.399**	3.365		.809
3	(Constant)	1.651	.469		3.523		
	Transformational Leadership	.138	.165	.163	.834		
	ISI	.232	.204	.334	1.134		
	Transfor. Lead. X ISI	.013	.054	.100	İ243		
1	(Constant)	1.528	.215		7.121		
	Transformational Leadership	.442	.062	.522**	7.133		
2	(Constant)	.561	.163		3.446	.030	.000
	Transformational Leadership	.194	.046	.229**	4.231		
	Cohesion	.542	.042	.697**	12.855		
3	(Constant)	1.616	.324		4.985		
	Transformational Leadership	-.175	.109	-.207	-1.610		
	Cohesion	.181	.106	.232	1.711		

	Transfor. Lead. X Cohesion		.121	.032	.779**	3.709		
1	(Constant)		1.552	.214		7.265		
	Transformational Leadership		.439	.062	.520**	7.100		
2	(Constant)		1.878	.239		7.840		
	Transformational Leadership		.470	.061	.557**	7.658	.028	.019
	Pressure		-.133	.048	-.201*	-2.767		
3	(Constant)		.851	.491		1.732		
	Transformational Leadership		.791	.148	.937**	5.358		
	Pressure		.256	.170	.386	1.504		
	Transfor. Lead. X Pressure		-.118	.050	-.775*	-2.382		

Dependent Variable: Creativity; *p<0.05, **p<0.01

As seen in Table 4, there is no moderating effect of ISI from sub-dimensions of organizational climate on the relationship between transformational leadership and follower creativity, so regression analysis results do not support H2a.

In spite of this, cohesion and pressure from sub-dimensions have a moderating effect on the relationship between transformational leadership and follower creativity. According to the results, the effect created by transformational leader on follower creativity increases with cohesion but decreases with pressure. According to regression analysis, hypothesis 2b and 2c are supported.

5. Conclusion

This study is conducted in order to test the moderating effect of organizational climate on the relationship between transformational leadership and follower creativity. Firstly, the effect of transformational leadership on follower creativity is tested in the research. According to the results of analysis, it is seen that there is a positive effect of transformational leadership on follower creativity. In line with this, hypothesis 1 is accepted.

In the analysis carried out to determine the moderating effect of organizational climate on the relationship between transformational leadership and follower creativity, it is seen that cohesion and pressure dimensions of organizational climate has a moderating effect on this relationship. There is no finding for moderating effect of ISI dimension. In line with this, hypothesis 2 is partly accepted.

The first factor of the organizational climate, named as "intrinsic recognition + support + impartiality (ISI)", has no moderating affects on the relationship between transformational leadership and follower creativity. It is reasonable because the first factor of climate in our sample is composed of the three different dimensions of the organizational climate in the literature.

Cohesion, one of the dimensions of organizational climate that has a moderating effect on the relationship between transformational leadership and follower creativity, puts emphasis on the cooperative environment in the organization. According to the results, the more the cooperative and helpful environment increases, the more the positive effect of transformational leaders on follower creativity.

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In addition to this, pressure dimension emphasizes the pressure created by heavy workload. There is moderating effects on the relationship between transformational leadership and creativity in a negative way. If the pressure environment resulting from workload increases, the positive affect of transformational leaders on follower creativity decreases. Accordingly, these results can be considered as very appropriate.

The most important contribution of this study to the related literature is that it deals with organizational climate as a moderating variable in the relationship between transformational leadership and follower creativity. In the studies aiming to determine the relationships between the variables in the literature, organizational climate is generally considered as a mediator. There are a few studies considering organizational climate as a moderator. Accordingly, this study is aims to contribute to studies conducted in this literature.

The constraint of this study is that it has been conducted on a definite group of samples. In order to generalize the research results, this research should be carried out on different sample groups in different countries.

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