

Task Conflict on Job Performance: Mediating Role of Knowledge Creation and Moderating Role of Hardiness

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Abstract

Based on componential theory of creativity this empirical research was conducted to investigate mediating role of knowledge creation between task conflict and job performance and moderating role of hardiness. Data were gathered from 410 software developers of Islamabad and Rawalpindi and survey method was used for data collection. Data was collected at two times with the time gap of 15 days; and convenient sampling technique was used. Findings suggests that Task Conflict has positive influence on Job Performance and knowledge creation mediates between task conflict and job performance. Statistical results of the study also provide empirical evidence that Hardiness being a personality trait moderates the relationship between task conflict and knowledge creation.

Keywords: task conflict, job performance, knowledge creation, hardiness.

Introduction

Conflicts occur in almost in all organizations when employees interact to achieve a goal in shared settings; and resolving conflict is a basic need of all organizations. According to Khatib and Rubin (2018), resolving conflict requires deep know-how about the conflict, the foundation of core issues and how the parties involved in the conflict. Dreu & Weingart, (2003) in the meta-analysis reported that if a team member is exposed to a “devil advocate”, there are chances that he/she makes a better decision and come up with the creative idea.

Task conflicts are disagreements among the member’s opinions, views, and ideas about the work. Task conflicts encompass debates over facts (driven via data, evidence) or reviews, and are sometimes cited as cognitive conflicts (Jehn, 1997). Ma, Yang, Wang, and Li (2017) identified the relationship between conflict and performance. Similar research was conducted by Carsten and Dreu (2015) and in their future direction further suggested to study task conflict on innovation. Therefore, the current study will look into the bond between task conflict and Job performance.

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“Knowledge creation” is the competency of an enterprise to develop views and thoughts, and to design methods of creating innovative knowledge to update older knowledge (Pentland, 1995). Therefore, based on the future direction by Clercq, Rahman, and Belausteguigoitia (2017) to investigate when and how employees create novel and useful ideas, as a reaction to task conflict that leads to job performance; the current study aims to investigate the mediating role of knowledge creation between task conflict and Job performance. Hardiness is a characteristic that describes an individual’s tendency to oppose the harmful effects of stress and solutions adapted to cope with a demanding environment. In addition, Nailah, Suzan, Wafa, and Karan (2017) suggested the need to investigate the moderating role of personality characteristics for understanding conflict. Similarly, De Clercq and Belausteguigoitia (2017) in future direction also reported to investigate personal characteristics with task conflict and knowledge creation. Hence, the current study will investigate the moderating role of personality hardiness between task conflict and knowledge creation.

Literature Review

This research is based on the assumptions of “Componential theory of creativity”, developed by Amabile (1983). It describes the creativity process and the numerous impacts on the process and its outcomes. According to the theory; “creativity” is an outcome of a unique and suitable response, product, or methods. Encompassing this theory with the current research, task conflict arises due to the differences in ideas and opinion about tasks which is optimistically related to commitment and decision quality. During the discussion, members bring new ideas, which depend upon the level of personal creativity of group member, higher the creativity higher will be knowledge created.

Theory also focuses on individuals’ characteristics that are favorable to independence, disciplined work style and capabilities in generating ideas. In connection to this perspective of theory, Hardiness as a moderator will be studied to check its effectiveness in handling tasks conflict.

Hypothesis Development

Task conflict and Job Performance (job task performance, innovative work behavior) *Task* conflicts motivate team members to learn new ways to handle conflicts and create fruitful ideas for achieving goals (Jehn, 1997; Eisenhardt, Kahwajy & Bourgeois, 2000). Amabile, Conti, Coon, Lazenby, and Herron (1996) reported that task conflict

brings innovation in organizational outcomes because it forces to change the current organizational situation.

Pelled, Eisenhardt, and Xin (1999) reported that task conflict has more encouraging effects on task performance. Parker, Williams, and Turner, (2006) suggested that individuals, those are eager to innovate, and get involved in their job beyond the capacity of job requirements; consider conflicts as a medium to generate useful and new ideas, procedures processes, and products (Farr & Ford, 1990). Similarly, according to “componential theory of creativity,” organizational creativity and performance are based on how people identify problems, handle those problems in a supportive environment and skills and check possible solutions. Hence based on the above arguments, the following hypotheses are proposed:

H1 (a): Task conflict is positively related to job task performance.

H1 (b): Task conflict is positively related to innovative work behavior.

Task Conflict, Knowledge Creation and Job Performance (Mediation)

Knowledge creation (KC) is “the course of action that uses available information to produced new knowledge by crystallizing and connecting it to an organization’s fact system” (Nonaka, Krogh 2009). KC is a continuous process in which individual boundaries are altered and a new view, context, and knowledge are accomplished (Nonaka et al., 2000); that may also be the consequence of task conflict (Jehn, 1997). Higher level of effective and efficient employee performance will be achieved by knowledge creation process (Hui; Yuan U, Huang, Wen; Nan 2008). According to the “componential theory of creativity”, new ideas and outcomes which are novel and appropriate (KC) brings creativity (JP) and is based on task motivation, employee skills creativity process (TC). Hence, based on the above-mentioned arguments, the following mediation hypotheses are proposed.

H2a: Knowledge creation mediates the relationship between task conflict and innovative work behavior:

H2b: Knowledge creation mediates the relationship between task conflict and job task performance:

Task Conflict, Hardiness, Knowledge Creation (Moderator)

Hardiness is an aggregate of the 3Cs: “Challenge, Commitment and control” (Kobasa, 1979) i.e. if employees are with strong challenge, commitment and control will keep themselves engaged with the events and peers no matter how demanding and stressful situation is. They will

never withdraw themselves into disaffection and separation and they will continuously influence the outcomes, regardless of how difficult the situation will be. These employees will never leave any opportunity of learning, developing and growing in, they will take workplace stress as a normal part of living (Bananno, 2004).

Chan (2000) bifurcate hardiness as low and high hardiness, therefore in relation to the current study, employees with low hardiness may use strategies to avoid task conflict and try to get more positive outcomes (KC). According to “Componential theory of creativity” processes related to creativity include personality traits that are favorable to independence and taking the new attitude that can help in problem-solving, as well as in generating ideas. Hence, the following hypothesis is proposed:

H3: *Hardiness moderates between task conflict and knowledge creation.*

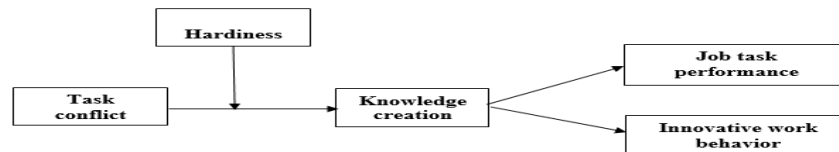


Figure 1: Research Model

Methodology

Research Design and Sample

This research aims to analytically analyze the influence of task conflict and job performance (JTP, IWB) through hypothesis testing. The survey was conducted, and data was collected from software developers of Islamabad and Rawalpindi. The sampling technique was convenient sampling. Time lagged study was conducted to control the common method biases, and data was gathered at 2 time periods with a gap of 15 days. A total of 500 software developers were contacted to participate in the study. Out of 500, 410 questionnaires received were complete with valid information.

Measures

All questions were measured using a 5-point Likert scale (from 1=strongly disagree to 5=strongly agree). Task Conflict was measured using a four-item scale developed by Jehn, (1997) and Jehn et al., (1999). Knowledge Creation was measured using a 25 items scale developed by Huang and Wang (2002). Job Task Performance (JTP) and Innovative Work Behavior (IWB): was measured by scale developed by Janssen

(2001). Hardiness was measured by 15 item scale developed by Bartone (1995).

Results

Descriptive Statistics

According to the descriptive statistics, as shown in table 1, 58.3% of the respondents were males, while 41.7% of respondents were female's .64.9% respondents ages from 20-30; 18% from 31-40 and 5.1% from 41-50. 33.2% has a Bachelor's degree; 35.1% has a Master's degree; whereas 21.7% are M. Phil degree holders. Details of demographics are given in table 1 below.

Table 1: Respondent's Statistics profile (% , SD & Mean)

S.no.	Demography	Sub classes	%	Mean	SD
1	Gender	Male	58.3%	1.41	.49
		Female	41.7%		
2	Age	20	11.7%	2.17	0.70
		20-30	64.9%		
		31-40	18.0%		
		41-50	5.1%		
		50	.2%		
3	Qualification	Graduate	33.2%	2.14	1.1
		Masters	35.1%		
		M.Phil.	21.7%		
		PhD	4.1%		
		Others	5.9%		
		IT	59.5%		
		others	11.2%		
		Little	25.6%		
		Some	40.7%		
		A lot	13.2%		

Control Variables

To check the impact of "Demographic variables" on the dependent variable one-way ANOVA was calculated. All these demographic variables showed a positive impact on both dependent variables; therefore, all were taken as control variables.

Mean, Standard deviation Correlation and Cronbach's alpha:

Table 2 shows the values of correlation, mean, SD and Cronbach's alpha of core variables of this study. Correlation analysis is conducted to check the association between the variables. The results in

table 2 depicts a positive association between TC and JTP ($r=.45^{**}$, $p<.01$); TC and IWB ($r=.27^{**}$, $p<.01$); KC with JTP and IWP ($r=.560^{**}$, $p<.01$, $r=.716^{**}$, $p<.01$) respectively. The values given in diagonal in brackets illustrate the Cronbach's alpha values that are above the threshold value i.e. 0.7.

Table 2: Mean, Standard deviation, Correlation and Cronbach's alpha value

	Mean	SD	IWB	HD	TC	KC	JTP
IWB	3.83	0.50	(.717)				
HD	3.88	0.79	.464 ^{**}	(.809)			
TC	3.38	0.77	.272 ^{**}	.502 ^{**}	(.805)		
KC	3.93	0.70	.716 ^{**}	.486 ^{**}	.564 ^{**}	(.705)	
JTP	3.89	0.68	.411 ^{**}	.288 ^{**}	.453 ^{**}	.560 ^{**}	(.700)

Note. N=410; *Correlation is significant at the level 0.05 level (2 tailed); **Correlation is significant at the level 0.01 level (2-tailed); * $p<.05$, ** $p<.01$

TC= Task conflict, HD= Hardiness, IWB = Innovative work behavior, KC= Knowledge creation, JTP= Job task performance

Regression Analysis (Mediation and Moderation)

Mediation and Moderation testing was done by a method introduced by Hayes (2013); confidence interval was calculated by the bootstrapping method. Model 1 was used for moderation and Model 4 for mediation analysis. Table 3 illustrates the mediation results using Model 4. TC has positive effect on KC ($B=.3854$, $t=13.583$, $***p<.001$); and on IWB and JTP ($B=.0954$, $t=3.746$, $**p<.01$), ($B=.4552$, $t=11.48$, $**p<.01$) respectively. KC has a positive effect on IWB and JTP positively ($B=.5309$, $t=14.551$, $***p<.001$), ($B=.5710$, $t=8.883$, $***p<.001$) respectively. KC mediates the relationship among TC and IWB and JTP in the way CI (.1537, .2668) and (.1428, .3051) respectively. As there is no opposite signs for ULCI and LLCI, and have no zero; so according to Hayes (2013) mediation is approved. From these results Hypothesis, H1 and H2 are approved.

Table 3: Regression Results (Mediation)

	Variable	B	SE	t	P
1	TC on JTP	.4552	.0396	11.48	.0000
2	TC on IWB	.0954	.0255	3.746	.0002
3	TC on KC	.3854	.284	13.583	.0000
4	KC on JTP	.5710	.0643	8.883	.0000
5	KC on IWB	.5309	.0365	14.551	.0000

Bootstrap Mediation Results through Indirect Effects

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	B	SE	LL95% CI	UL 95% CI
TC → KC → JTP	.2201	.0425	.1428	.3051
TC → KC → IWB	.2046	.0291	.1537	.2668

Note: N=410 Unstandardized regression coefficients. Bootstrap sample size =5000; LL= lower limit; CI confidence interval; UL upper limit
 TC= Task conflict, HD= Hardiness, IWB = Innovative work behavior, KC= Knowledge creation, JTP= Job task performance

Moderation results of hardiness (HD) between task conflict (TC) and knowledge creation (KC) is shown in table 4; revealing a significant interaction, (B= -0.457, t = -8.565, ***p<.05) hence approving hypothesis H3. For additional clarification of the moderation results of HD, the graph is sketched using the interaction plot. Interaction plot value at low HD depicts (B=2.55, p<.01) and value at high HD depicts (B= 1.75, p<.001). So the proposed hypothesis is proved; i.e. the relationship between TC and KC will be stronger in case of low HD.

Table 4 (a). Moderation regression of Hardiness between Task conflict and Knowledge Creation

Sr#	Predictor	B	SE	T	P
1	constant	-5.4988	.7587	-7.248	.0000
2	HD	2.0005	.1942	10.3034	.0000
3	TC	1.9416	.1953	9.9418	.0000
4	TC*HD	-.4574	.0534	-8.5659	.0046

Conditional direct effects of X on Y

Mod	Effect	SE	T	P	LLCI	ULCI
MOD-1 SD (-1.08)	474	.034	13.565	.0000	.405	.542
MOD M (.00)	.227	.027	8.171	.0000	.173	.282
MOD+1 SD (1.08)	-.018	.044	-.408	.682	-.105	.069

Note: N=410; Unstandardized regression coefficients. Bootstrap sample size = 5000; LL= Lower Limit; UL= Upper Limit; CI=Confidence Interval;

Table 4 (b) : Result of simple slope tests for significant interactions

Interaction	Dependent variable			
	Knowledge Creation			
	Moderator Condition			
	Low HD		High HD	
	B	P value	B	P value
Int_1 (TC*HD)	2.55	.0000	1.75	.0002

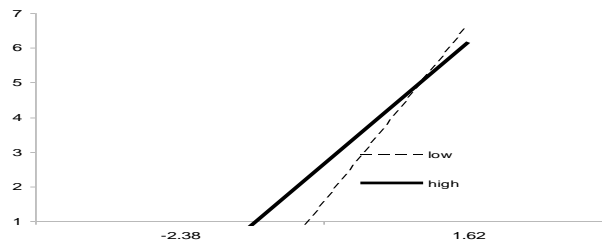


Figure 2: Interaction Plot

Discussion

The purpose of conducting this study was to investigate the mediating effect of knowledge creation and the moderating effect of hardiness between task conflict and job performance. Mediation and Moderation Regression analysis using MACRO PROCESS developed by Hayes (2013) was used for hypothesis testing. The statistical results depict that knowledge creation fully mediates the relationship between task conflict and job task performance and innovative work behavior, resembles with the results of study done by Ancona and Caldwell: (1992) that during the discussion team brings a verity of new ideas and solutions; they may help in solving the problem and completing the task. This study is also in agreement with the study conducted by Chan; (2000), in which comparison was made between high hardy students and low hardy students. Low hardy students were more sensitive to negative situations and reported using more avoidant coping strategies whereas; hardiness moderated the relationship between task conflict and knowledge creation. Hence, approving hypotheses 1, 2, 3.

Limitation and future direction:

Besides the practical implication, the following limitations and future direction are suggested. Firstly, for this research, data were collected from software developers working on projects. As project duration differs; therefore, the level and sequence of conflict occurring during the project may also differ; that may affect job performance differently. Hence, in the future, the duration of the project should be considered while measuring job task performance. Secondly, in the future, other personality traits like avoidant and anxious attachment style can be used as a moderator between task conflict and knowledge creation.

Conclusion

Based on the research gaps identified and the research problem suggested, the purpose of conducting this study was to investigate the mediating role of KC between TC and JTP/IWB and the moderating role of HD between TC and KC. Team members who amicably handle task conflicts and consider it as a part of the creative process for knowledge creation, with positive skills and motivation; have a chance to perform better. To statistically test, the proposed hypothesis, the mediation and moderation regression analysis was conducted and the results depict that all hypotheses 1, 2, 3 were approved. The results of this study can help software engineers and developers to understand that in order to work creatively and innovatively, task discussions should be promoted; that may help in creating new knowledge. Because the conflict between software developers is inevitable, and it may direct to a series of negative effects on the organization. Effectively managed work conflict has many positive results for the organization. So, it is important to study conflict in relation to job performance.

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