

**THE IMPACT OF TRANSFORMATIONAL LEADERSHIP AND CONTINGENT
REWARD LEADERSHIP STYLES ON INNOVATIVE BEHAVIOUR: MEDIATING
ROLE OF LEADER-MEMBER EXCHANGE QUALITY**

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Abstract

Innovation is utmost factor of organizational success during the period of unbelievable global competition. Innovation is generally triggered by leader's strategic behaviors and leadership styles are decisive in organizations' vision and mission nowadays. Employee's innovation perception and also innovative behavior have an important role at the execution process of innovation. From this aspect, determination of factors which effect innovative behavior is an important research area. The paper focus on the determination of leader-member exchange quality's (LMX) mediator role at the effects of transformational and contingent reward leadership's style, at private and public sector, to employee's innovative behaviors.

Key words: *Transformational Leadership, Contingent Reward Leadership, Leader-Member Exchange Quality, Innovative Behavior*

JEL Classification: M1, M10

1. INTRODUCTION

Nowadays, when the dimensions of global competition have reached high point, one of the most crucial factors in my accomplishment of organization is revolutionism. It is a critical success factor for revolutionism organizations in the process of being able to survive.

The strategic behaviors of leaders mainly lie at the root of revolutionism. Leader's attitudes towards business life shape their management and applications. Revolutionism is presented as an

important goal in mission and vision which give direction to operation activities. The styles of leadership play a determining role in leaders, mission and vision of operation which is carried out by leaders or sometimes leaders and their employees.

One of the most important factors to form revolutionism is leader-member exchange quality. The quality of interaction between leaders and employees helpocur favorable circumstances for creativity which is one of the keystones of innovation behavior.

The revolutionism perception of people who work in application process of revolutionism and more importantly, their innovative behaviors have an important place in terms of operation, innovation performance. In this context, to determine effective factors in providing innovative behavior is an important fieldwork. Therefore; determining the mediation role of leader-member exchange quality in the effect of transformational leadership and contingent reward leadership on occurring employee's innovative behaviors is established as basic problematic point of this thesis.

2. THE METHOD OF THESIS

In this thesis being aimed at determining the effect of transformational leadership and contingent reward leadership on leader-member exchange quality and innovative behavior, firstly the information about measures and sampling is mentioned. Next, analyses relating to the model which is established in the light of data obtained are done. At this point, firstly the confirmative factor analyses of all the variants are done, and then correlations between variants are detected. Later, the structural equation modeling relating to current model is done and goodness of fit of the model tests is carried out. While goodness of fit test is being performed, the results of regression analysis between variables and hypothesis testing are presented. As a result of comparing findings obtained in all these analysis with existing literature, some suggestions are made to managers and researches. Hypotheses which are formulated through theory and empirical research are presented below. The research model configured in this context is presented in Figure 1.

Hypothesis 1. Transformational leadership style affects leader-member exchange quality significantly and positively

Hypothesis 2. Transformational leadership style affects innovative behavior significantly and positively

Hypothesis 3. Contingent reward leadership style affects member interaction significantly and positively

Hypothesis 4. Contingent reward leadership style affects innovative behavior significantly and positively

Hypothesis 5. Leader-member exchange quality affects innovative behavior significantly and positively

Hypothesis 6. Leader-member exchange quality has a mediator role in impact of transformational leadership style on innovative behavior

Hypothesis 7. Leader-member exchange quality has a mediator role in impact of contingent reward leadership style on innovative behavior

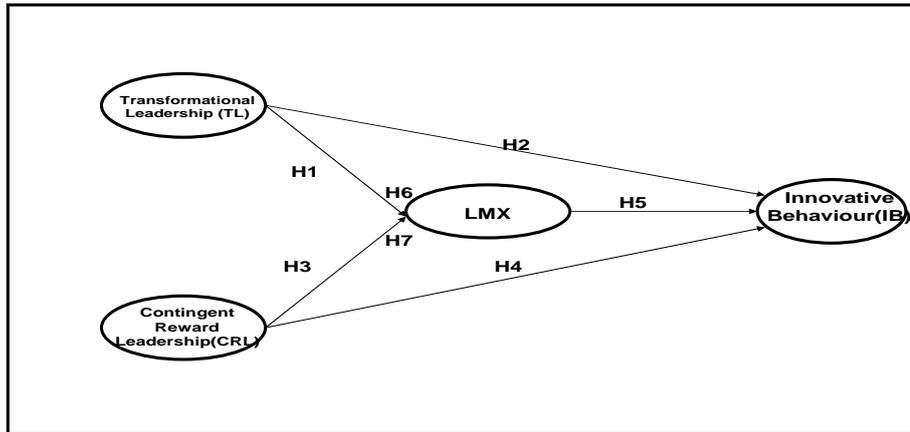


Figure 1. Research Model and Hypotheses

2.1. Sample and Procedure

Finance sector workers whose activities in Ankara consist of field of research. A total 175 people are employed in this sample. After taking 5% margin of error in 95% confidence interval of the main body into consideration, the sample size is calculated as 120 people. (Sekaran, 1992:253). In this regard, to survey a total of 150 people who are randomly selected by the method of sampling according to groups is planned to be performed. 127 of questionnaires sent are turned back, 120 of them are suitable for analysis.

74,2% (n=89) of people who participate in this study are women, 25,8%(n=31) of them are men. 5,8%(n=7) of employees have high school, 40,8%(n=49) have university, 53,3%(n=64) have postgraduate education. Of the sample, 11,7%(n=14) is 18-24 years, 28,3%(n=34) is 24-31 years, 45,8%(n=55) is 32-38 years and 14,2%(n=17) is between the ages of 39 and above. 10,8%(n=13) of people have less than one year, 23,3%(n=28) between 1-5 years, 27,5%(n=33) between 6-10 years, 22,5%(n=27) between 11-15 years and 15,8%(n=19) at and above 16 years of work experience. 58,3%(n=170) of research participants are married, 40,8%(n=49) unmarried, and 0,8%(n=1) has another marital status.

2.2. The Measures and Procedure

The information about measures used in this thesis being aimed at determining the effect of transformational leadership and contingent reward leadership on leader-member exchange quality and innovative behaviour is mentioned below. Path analysis with hidden variables is conducted with the purpose of testing models and hypotheses generated in research. All the measurement tools used to measure variables in the model for path analysis with hidden variables must be reliable and valid (Şimşek, 2007: 19). For this purpose, the results relating to validity and reliability activities about all measures used in research are given at the end of each section about measures

Transformational leadership: The measure developed by Podsakoff and his colleagues (1990, 1996) is used to determine whether managers have transformational leadership style. In this measure comprising total 5 item measure, All constructs were measured using 5-point scales anchored by 1 = *strongly disagree* and 5 = *strongly agree*.

In this study, the measure used in Bettencourt's study is described in Turkish by ourselves and used. Exploratory factor analysis (with SPSS package program) and confirmatory factor analysis (with AMOS packet using) are made with using in the sample and pilots carried out by researches qualified in the field of Turkish-English, English-Turkish translation in accordance with the measure's measure validation procedures. After reliability analyses made by Bettencourt (2004), coefficient alpha for this measure was .93 in this study.

The analysis is determined as first exploratory factor with the purpose of testing the measure's structure validity in this study. As a result of exploratory factor analysis made with SPSS 16.0 package program, it is revealed that the data fit the measure's single factor structure. After continuing analysis, it is determined that the measure with 5 points has factor loadings in between .89 and .91. It becomes clear that the result of Keiser-Meyer-Olkin analysis is .83 and Barlett testing is meaningful. Following these analyses, confirmatory factor analysis is made with Amos 6.0 package program. As a result of factor analysis, it is determined that the data fit the measure's single-factor structure and factor loadings are between .84 and .91.

Goodness of fit values of the measure values are presented in Table 1 together with those of other measures. After reliability analysis, coefficient alpha for this measure was .94 in this study.

Contingent Reward Leadership: The measure which is developed to determine whether managements have contingent reward leadership style by Padsokoff and hid friends (1984) and used by Padsakoff, Mackenzie, Moorman, Fetter (1990), MacKanzie's friends (2001) is used. In this mesure comprising total 4 item measure, All constructs were measured using 5-point scales anchored by 1 = *strongly disagree* and 5 = *strongly agree*.

In this study, this measure is used through describing the measure used in Bettencourt's study in Turkish by ourselves. Exploratory factor analysis (with SPSS package program) and confirmatory factor analysis (with AMOS packet using) are made with using in the sample and pilots carried out by researches qualified in the field of Turkish-English, English-Turkish translation in accordance with the measure's measure validation procedures. After reliability analyses made by Bettencourt (2004), coefficient alpha for this measure was .95 in this study.

The analysis is determined as first exploratory factor with the purpose of testing the measure's structure validity in this study. As a result of exploratory factor analysis made with SPSS 16.0 package program, it is revealed that the data fit the measure's single factor structure. After continuing analysis, it is determined that the measure with 4 points has factor loadings in between .87 and .93. It becomes clear that the result of Keiser-Meyer-Olkin analysis is .83 and Barlett testing is meaningful. Following these analyses, confirmatory factor analysis is made with Amos 6.0 package program. As a result of factor analysis, it is determined that the data fit the measure's single-factor structure and factor loadings are between .76 and .95. Goodness of fit values of the measure are presented in Table 1 together with those of other measures. Coefficient alpha for this measure was .93 in this study.

Leader-Member Exchange Quality (LMX): The measure developed by Graen, Liden and Hoel (1982) is used to determine the perception of employees about leader-member exchange quality. In

this measure comprising total 5 item measure, All constructs were measured using 5-point scales anchored by 1 = *strongly disagree* and 5 = *strongly agree*. Coefficient alpha for this measure was .89.

In this study, this measure is used through describing the measure used in Bettencourt's study in Turkish by ourselves. Exploratory factor analysis (with SPSS package program) and confirmatory factor analysis (with AMOS packet using) are made with using in the sample and pilots carried out by researches qualified in the field of Turkish-English, English-Turkish translation in accordance with the measure's measure validation procedures. After reliability analyses made by Bettencourt (2004), coefficient alpha for this measure was .89 in this study.

The analysis is determined as first exploratory factor with the purpose of testing the measure's structure validity in this study. As a result of exploratory factor analysis made with SPSS 16.0 package program, it is revealed that the data fit the measure's single factor structure. After continuing analysis, it is determined that the measure with 5 points has factor loadings in between .86 and .92. It becomes clear that the result of Keiser-Meyer-Olkin analysis is .87 and Barlett testing is meaningful. . Following these analyses, confirmatory factor analysis is made with Amos 6.0 package program. As a result of factor analysis, it is determined that the data fit the measure's single-factor structure and factor loadings are between .78 and .91. Goodness of fit of the measure values are presented in Table 1 together with those of other measures. Coefficient alpha for this measure was .94.

Innovative Behaviour (IB): The measure used by Scott and Bruce is used to measure tendency of employees to innovative behavior. In this measure comprising total 6 item measure, All constructs were measured using 5-point scales anchored by 1 = *strongly disagree* and 5 = *strongly agree*. Coefficient alpha for this measure was .89.

In this study, this measure is described in Turkish and used by ourselves. Exploratory factor analysis (with SPSS package program) and confirmatory factor analysis (with AMOS packet using) are made with using in the sample and pilots carried out by researches qualified in the field of Turkish-English, English-Turkish translation in accordance with the measure's measure validation procedures.

The analysis is determined as first exploratory factor with the purpose of testing the measure's structure validity in this study. As a result of exploratory factor analysis made with SPSS 16.0 package program, it is revealed that the data fit the measure's single factor structure. After continuing analysis, it is determined that the measure with 5 points has factor loadings in between .53 and .88. It becomes clear that the result of Keiser-Meyer-Olkin analysis is .86 and Barlett testing is meaningful. . Following these analyses, confirmatory factor analysis is made with Amos 6.0 package program. As a result of factor analysis, it is determined that the data fit the measure's single-factor structure and factor loadings are between .73 and .88. Goodness of fit values of the measure is presented in Table 1 together with those of other measures. Coefficient alpha for this measure was .90 in this study.

Table 1: Goodness Of Fit Of The Measure Values in Consequence of Confirmatory Factor Analysis

	CMIN/DF <5	GFI >.85	AGFI >.80	CFI >.90	NFI >.90	TLI >.90	RMSEA <.08
1. Transformational Leadership (TL)	2.18	.98	.89	.99	.99	.98	.08
2. Contingent Reward Leadership (CRL)	.37	.99	.98	1.00	.99	1.01	.00
3. Leader-Member Exchange Quality (LMX)	.69	.99	.96	1.00	.99	1.00	.00
4. Innovative Behaviour (IB)	.64	.99	.96	1.00	.99	1.01	.00

3. FINDINGS

The analyses in SPSS 16 and Amos 0.6 program are made to data obtained from research. In this context, the averages, correlations between them, standard deviations of data relating to transformational leadership in a way of what participants perceived at first stage, contingent reward leadership, leader member exchange quality, innovative behavior are looked at. The second hierarchical regression and mediator effect of the analysis are investigated. Then the path analysis relating to the model which is designed with structural equation modeling is made. The averages, standard deviations and correlation values obtained from the outcome of analysis are given in table 2.

Table 2. Means, Standard Deviations, And Standardized Loadings For The Measures

Değişkenler	Mean	S.D.	1	2	3	4
1. Contingent Reward Leadership (CRL)	3.4	1.05	(.94)			
2. Transformational Leadership (TL)	3.1	1.03	.749**	(.93)		
3. Leader-Member Exchange Quality (LMX)	3.2	1.00	.822**	.877**	(.94)	
4. Innovative Behaviour (IB)	4.0	.63	.215*	.227*	.263**	(.90)

*p< .05 ** p< .01

As you see in Table-1, there are meaningful relations between all dependent and independent variables which are subject of the research. High-level relation between LMX-TL and LMX-CRL is striking. Due to this fact considerable effects between variables can be predicted.

Also collinearity is looked with the purpose of determine whether the model has multicollinearity connection problem in the context of the analysis. Tolerance VIF values obtained show results which confirms that there are no multiple connections between variables (Tolerance > .6, VIF< 10).

The three-step regression analysis proposed by Baron and Kenny (1986) is performed with the purpose of explaining mediator role in the impact of contingent leadership, transformational leadership and leader-member exchange quality in a way of what participants perceived on innovative behavior. According to this method, three conditions must exist to talk through mediator effect.

- (1) The tool of independent variable must have an impact on the variable.
- (2) The independent variable must have an impact on dependent variable.
- (3) When the one whose tool is variable is included, the one whose tool is variable must have an significant impact on dependent variable while the regression coefficient of independent variable on the dependent variable decreases. With the purpose of determining mediator role of LMX - Level of employees who work in this context, relations between TL-CRL and IB are analyzed with hierarchical regression analysis. The findings relating to mediator test are given Table-3.

Tablo 3. The Results of Mediating Test

	β	
	LMX	IB
Test 1		
CRL	.38***	
TL	.59***	
R^2	.836	
Adjusted R^2	.833	
	(F=298***)	
Test 2		
CRL		.10
TL		.15
R^2		.06
Adjusted R^2		.04
		(F=3.49*)
Test 3		
CRL		-.003
TL		-.01
LMX		.28
R^2		.06
Adjusted R^2		.04
		(F=2.88*)

*p< .05 ** p< .01 ***p< .001

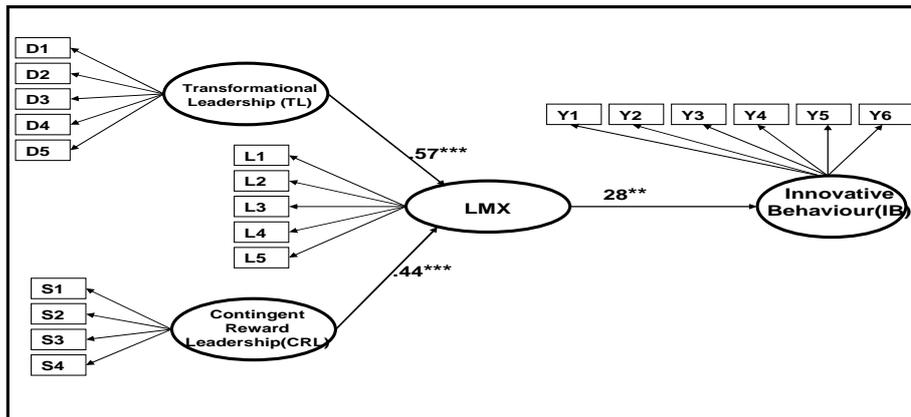
In the context of mediator test, firstly the impact of independent variable which is transformational leadership and contingent leadership behavior on leader-member exchange quality is investigated. As a result of hierarchical regression analysis made in this context, it is found that CRL affects LMX ($\beta = .58$, $P < .001$) and TL affects LMX ($\beta = -.59$, $P < .001$) significantly. These findings confirm the first stage of mediator analysis.

In second stage, it is determined that independent variables have no impact on dependent variable which is innovative behavior – that behavior is neither CRL nor TL, it is IB- These findings don't confirm the second stage of mediator analysis. Therefore; it is not necessary to get to third stage. As a result of second stage, it is concluded that LMX has no mediator role in impact of both CRL and TL on IB.

With making path analysis through designing structural equation model which is designed after mediator test in which negative findings are reached and correlation findings which are mostly reached in meaningful way, the relations between variables and the model's goodness of fit values are looked over as a whole.

Analysis results of structural equation modeling designed for determining effects of leader-member exchange quality, contingent reward leadership behaviour, and transformational leadership in a way of what participants perceived in their innovative behaviour is presented in Figure 2. When fit indices of model are examined; it is determined that the value of GFI (Goodness of fit index) is 88, the value of AGFI (Adjusted goodness of fit index) is 83, the value of CFI (Comperative fit index) is 99, the value of TLI (Tucher-Lewis index) is 98, the value of NFI is 92, the value of CMIN/DF is 1,21 and the value of RMSEA (Root mean square error of approximation) is 0.04. The value of RMSEA must be 0.08 for a model to be accepted (Şimsek, 2007). In the light of these values obtained, it can be said that the structural equation model designed because of that data present good goodness of fit values and acceptable values can be accepted (Joreskog ve Sorbom, 1993; Kline, 1998).

When hierarchical regression and the results of structural equation analysis are examined, it is determined transformational leadership in a way of what employees perceived and contingent reward leadership behavior affects leader-member exchange quality positively and significantly but innovative behavior. In addition this, it is determined that leader-member exchange quality in a way of what employees perceived affects innovative behavior positively and significantly.



*p< .05 ** p< .01 *** p< .001

Figure 2. Structural Model and The results of Analysis

The results of hypothesis test relating to the model are presented in Table-4 as a whole. As seen in the table, transformational leadership in a way of what employees perceived, H2 and H4 hypotheses which examine the impact of contingent reward leadership behavior on innovative behavior, H6 and H7 hypotheses which examine the mediator role of LMX are not supported. On the contrary, transformational leadership behavior in a way of what employees perceived, H1 and H3 hypotheses which test the impact of contingent reward leadership behavior on leader-member exchange quality and H5 hypothesis which examine the impact of LMX on innovative behavior are supported. 3 hypotheses of 7 hypotheses which are tested in this context are supported.

Table 4. The results of hypothesis test

	Hypotheses	β	Result
H1	TL \diamond LMX	.57***	Supported
H2	TL \diamond IB	-.15	Not Supported
H3	CRL \diamond LMX	.44***	Supported
H4	CRL \diamond IB	.10	Not Supported
H5	LMX \diamond IB	.28**	Supported
H6	Mediating effect on TL \diamond IB	-	Not Supported
H7	Mediating effect on CRL \diamond IB	-	Not Supported

*p< .05 ** p< .01 ***p< .001

4. DISCUSSION

With this study, the effects of transformational leadership in a way of what employees perceived in their innovative behavior, contingent reward leadership and leader-member exchange quality are examined. For this purpose, an applied research on a private finance company is done and the impacts of variables included in the analysis on innovative behavior are explained with the help of hierarchical regression and structural equation model. Exploratory findings in terms of relation between innovative behavior and leadership styles which are related to the sampling being research subject are obtained.

When analysis results are examined, it is determined that transformational leadership behavior heightens leader-member exchange quality positively and significantly. This finding is consistent with similar studies (Li and Hung, 2009). It is determined that working contingent reward leadership styles of employees who work in similar way affect leader-member exchange quality positively and significantly. This finding is also consistent with similar studies. It is determined that leader-member exchange quality on which both of the variables have impact heightens innovative behavior of employees significantly.

As a result of research, it is determined that transformational leadership style has no significant impact on innovative behavior of employees. This finding is not consistent with similar studies (Bass & Avolio, 1990; Sosik, Avolio & Kahai, 1997; Mumford et al., 2002; Bettencourt, 2004).

In addition to this, it is determined that contingent reward leadership style has no significant impact on innovative behavior. This finding is not consistent with similar studies (Bass & Avolio, 1990; Sosik, Avolio & Kahai, 1997; Mumford et al., 2002; Bettencourt, 2004).

Whether leader-member exchange quality has role in the impact of transformational leadership style on innovative behavior of employees and the impact of contingent reward leadership style on

innovative behavior is searched through making three-stage regression analysis proposed by Baron and Kenny (1986) and any mediator role is not found.

Concludely, it is determined that in this sampling, both of the transformational leadership and contingent leadership style in a way of what employees perceived heightens leader-member exchange quality positively and significantly and leader-member exchange quality heightens innovative behavior significantly. It is striking that both of the leadership styles which are investigated affect leader-member exchange quality significantly. Today, it is thought that it results from the importance of leader-member exchange quality. As a result of research; it is determined that unlike leadership styles, leader-member exchange quality heightens innovative behavior. It is thought that this finding is important for managers to be taken into consideration. It is determined that the values of goodness of fit of structural equation model are in acceptable standards.

Beside all these, the research has some limitations. That the research is made in one sector is an important constraint of research. Therefore, different results of researches made in different sectors can be obtained. It can be advised academics who will do research about this field in future to test the mediator role of organizational identification in the impact of leadership styles on revolutionism and to bring up these effects with structural equation model.

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