



Effect of transformational leadership on organizational performance: Focusing on the mediating effect of decision participation by members of IT industry in China

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Abstract

Background/Objectives: This research emphasized the importance of Transformational leadership elements such as role model demonstration, vision motivation, individual consideration and charisma. Moreover, it focused on verifying the effects of these four elements on organizational performance through decision participation. In addition, the mediating role of decision participation was clearly identified as a key variable that can lead to organizational performance. **Methods/Statistical analysis:** To verify this, an empirical analysis was conducted on workers engaged in IT industries in China. **Findings:** Through empirical analysis, it was found that all four elements of Transformational leadership improve decision participation. Furthermore, decision participation was found to increase the level of organizational performance. Thus, it was found that decision participation played a partial mediating role in the relationship between the four elements of Transformational leadership and organizational performance. **Applications:** It has great implications for global companies that have entered China or have plans to enter the country in the future by sampling members of the IT industry in China.

Index Terms

Transformational leadership, Organizational Performance, Decision Participation, Role Model Demonstration, IT Industry

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I. INTRODUCTION

China has announced a series of science and technology development plans, including the 13th 3-year National Science and Technology Innovation Plan and the National Innovation-led Development Strategy, and has promoted technology pursuit strategies since 2002. Thanks to this government support, China's IT companies such as Alibaba, HUAWEI, and ZTE have achieved rapid growth.

However, IT companies are becoming more competitive due to accelerated digital transformation, and in order to survive in this era of super competition, countermeasures are needed to cope with both opportunities and crises.

Transformational leadership improves organizational performance by giving organizational members the right to make voluntary efforts, achievement motivation to satisfy their higher-level needs, and autonomous decisions about their work areas [1].

Decision Participation satisfies organizational members' desire for autonomy and their needs for competence that their opinions are accepted, and this process facilitates the relationship between leaders and organizational members.

Decision Participation can ultimately improve organizational performance because it improves the quality of decision-making by enabling smooth cooperation of organizational members through effective communication in the organization [2-3].

Therefore, the purpose of this study is to verify the mediating effect of Decision Participation of organizational members in the influence of the transformational leadership of the CEO of the IT industry in China on organizational performance. In addition, through this study, the importance of transformational leadership, the mediating effect of Decision Participation, and the positive effect on organizational performance are to be investigated.

II. THEORETICAL CONSIDERATION AND ESTABLISHMENT OF RESEARCH HYPOTHESES

2.1 Transformational leadership theory

Burns (1978) stated that transformational leadership is a process of helping each other and improving motivation and moral standards by establishing an effective communication system with members of the organization [4]. Bass (1985) defined transformational leadership as follows. Transformational leadership helps organizational members understand the meaning of their work, elicits a high level of desire for organizational

members to create a creative atmosphere by trusting each other, and allows organizational members to give up their personal interests and create better-than-expected results, and he classified sub-factors into three factors: charisma, intellectual stimulation, and individual consideration [5].

Based on Bass's transformational leadership theory, Li Chaoping and Shikan (2005) formed a survey by reflecting China's cultural background and classified transformational leadership into four factors: Vision Motivation. Vision is simply a pie in the sky, but different leaders draw different pie, which is determined by the pattern of leadership. Visionary incentives are, above all, internal incentives to members of organizations, working hard to change the world, and to make life better for all human beings unparalleled. Individual consideration, charisma, and role model demonstration vision motivation.

Individual consideration refers to the leader's respect and support of subordinates' needs, and intellectual stimulation refers to attempts to solve problems at work from a new angle by encouraging subordinates to shed light on their work from a different perspective. Charisma refers to the ability to attract and influence others, and the process by which a leader influences subordinates by making them express strong feelings and identities about themselves. Role model demonstration refers to strengthening the identity of the leader perceived by the subordinates by exercising role model influence in the organization [6].

Therefore, in this study, the sub-factors are classified into vision motivation, individual consideration, charisma, and role model demonstration based on the transformational leadership theory of Lee Chaoping & Shikan(2005) written based on China's social background.

2.2 Transformational leadership and Decision Participation

Participatory decision-making means the participation of members in the process in which decisions are made in an organization [7], giving members the opportunity to participate in decisions that directly or indirectly affect their members in the process of selecting alternatives to achieve their goals [8].

Seong Nak-don (2008) found that transformational leadership had a significant effect on teachers' Decision Participation [9], Yoo Seung-sang (2016) found that transformational leadership had no significant effect on Decision Participation [10], and Jang Hee-soon (2014) found that individual considerations and intellectual stimuli had a significant effect on Decision Participation.

Therefore, the following hypothesis was derived in

this study.

H1: The transformative leadership of the CEO of an IT company will have a positive effect on the Decision Participation of members of the organization.

H1-1: The role model demonstration of the CEO of an IT company will have a positive effect on the Decision Participation of members of the organization.

H1-2: The presentation of the vision of the CEO of an IT company will have a positive effect on the Decision Participation of members of the organization.

H1-3: The individual consideration of the CEO of an IT company will have a positive effect on the Decision Participation of members of the organization.

H1-4: The charisma of an IT company CEO will have a positive effect on the Decision Participation of members of the organization.

2.3 Decision Participation and Organizational Performance

Decision Participation is a type of decision-making that focuses on the participation of members in the decision-making process and collective problem-solving, attracting their commitment and motivation to the organization from the individual perspective [12-13].

In a study by Ha-yeon Kim and Tae-jun Na (2011), it was verified that Decision Participation has a positive effect on both organizational financial and cognitive performance, but only on cognitive performance in mixed organizations [14]. In a study by Ju-young Koo (2020), it was demonstrated that Decision Participation positively affects the performance of organizational members in a model in which trust in colleagues is included as a moderating variable [15].

Therefore, the following hypothesis was derived in this study.

H2: Decision Participation by organizational members will have a positive effect on organizational performance.

2.4 Mediating Effects of Decision Participation

As previously confirmed, transformative leadership affects Decision Participation, and Decision Participation affects organizational performance. Therefore, in this study, the following hypothesis was established.

H3: Decision Participation of organizational members will play a mediating role in the relationship between transformative leadership and organizational performance.

H3-1: Decision Participation by members of the

organization will play a mediating role in the relationship between the role model demonstration and organizational performance of the CEO of an IT company.

H3-2: Decision Participation by members of the organization will play a mediating role in the relationship between the vision motivation and organizational performance of the CEO of the IT Company.

H3-3: Decision Participation by members of the organization will play a mediating role in the relationship between individual consideration and organizational performance of the CEO of an IT company.

H3-4: Decision Participation by members of an IT company's CEO will play a mediating role in the relationship between charisma and organizational performance.

III. RESEARCH MODEL AND ANALYSIS

METHOD

3.1 Measurement of Variables

In this study, the measurement tool for transformative leadership was measured with 24 items that were modified and supplemented in Lee Chaoping(2005)'s study, and the measurement tool for participatory decision-making was used after revising and supplementing 8 items used in Shin Geum-seok (2011)'s study. In addition, a total of 12 questions were used as the measurement tool for organizational performance, including 6 questions related to job satisfaction developed in the study of Tsui (1992) and 6 questions related to organizational commitment used in Meyer & Allen (1991) [16-17], and all questions were measured on the Likert 5-point scale.

3.2 Analysis Method

In this study, an empirical analysis was conducted using SPSS 26.0. Frequency analysis and descriptive statistical analysis were conducted to understand the demographic characteristics of the measurement target, and exploratory factor analysis, reliability analysis, and correlation analysis were conducted to verify the validity and reliability of the measurement tool. In addition, simple regression analysis and three-step regression analysis were conducted to verify the hypothesis set in this study.

IV. EMPIRICAL ANALYSIS

4.1 Demographic Analysis

In this study, a survey was conducted on a total of 439 organizational members engaged in IT companies in China. Looking at the gender of the sample, 153 men (34.9%) and 286 women (65.1%) were found to have a slightly higher proportion of women. According to the age, 26 people (5.9%) were under the age of 20, 157 (35.8%) were 20 to 29, 102 (23.2%) were 30 to 39 years of age, 154 (35.1%) were over 40 years of age, 79 (18.0%) were high school graduates, 98 (22.3%) were college graduates, 193 (44.0%) and 69 (15.7%) were graduate students. According to the number of years of service, 203 people (46.2%) were employed for 5 years and below, 67 people (15.3%) for 6 to 10 years, 94 people (21.4%) for 11 to 20 years, 68 people (15.5%) for 21 to 30 years or more, and 7 people (1.6%) for 30 years or more.

4.2 Apply the Validity and Reliability Analysis

As shown in Table 1, the KMO value is .963 (sig=).000), which shows statistically significant values below the significance level of 1%. Therefore, the factor analysis model was found to be valid. The results of the reliability analysis are as follows. The Cronbach Alpha values of each factor are as follows. The role model demonstration is .945, Vision motivation is .902, Individual Consideration is .942, Charisma is .895, Decision Participation is .866, and organizational performance .936. Since it appeared more than .7, it can be said that reliability has been secured.

Table 1. The Result of Factor Analysis

Variables	Item	Component						Communality	Cronbach's α
		1	2	3	4	5	6		
Role Model Demonstration (RMD)	1	.255	.693	.228	.252	.140	.108	.692	.945
	2	.193	.782	.168	.158	.165	.143	.750	
	3	.194	.780	.133	.143	.177	.154	.739	
	4	.215	.737	.238	.196	.186	.068	.724	
	5	.240	.752	.214	.161	.156	.066	.724	
	6	.155	.757	.225	.206	.107	.200	.742	
	7	.153	.714	.327	.248	.189	.109	.750	
	8	.248	.707	.209	.259	.113	.158	.710	
Vision Motivation (VM)	1	.333	.264	.232	.400	.202	.535	.721	.902
	2	.303	.273	.282	.244	.134	.685	.793	
	3	.320	.250	.270	.234	.176	.701	.814	
	4	.397	.322	.244	.193	.130	.605	.741	
Individual Consideration (IC)	1	.202	.398	.612	.211	.189	.165	.681	.942
	2	.204	.323	.703	.234	.208	.176	.770	
	3	.244	.292	.726	.290	.165	.112	.796	
	4	.264	.334	.705	.244	.166	.192	.802	
	5	.238	.341	.726	.250	.154	.183	.819	

	6	.267	.272	.652	.336	.192	.202	.760	
Charisma	1	.240	.204	.197	.739	.057	.091	.695	.895
	2	.266	.305	.307	.645	.108	.109	.698	
	3	.204	.288	.349	.628	.103	.100	.661	
	4	.209	.314	.298	.647	.154	.101	.683	
	5	.197	.351	.099	.569	.183	.304	.622	
	6	.248	.206	.178	.655	.180	.213	.642	
Decision Participation (DP)	1	.220	.171	.056	.079	.740	.141	.655	.866
	2	.071	.185	.142	.200	.684	.118	.582	
	3	.251	.144	.228	.086	.767	.011	.731	
	4	.242	.141	.147	.060	.767	.064	.696	
	5	.277	.169	.090	.106	.723	.071	.652	
Organizational Performance (OP)	1	.702	.113	.019	.194	.135	.155	.585	.936
	2	.739	.097	.072	.260	.061	-.026	.633	
	3	.709	.132	.108	.194	.138	.048	.590	
	4	.705	.081	.046	.196	.142	.140	.584	
	5	.733	.183	.073	.181	.161	.097	.643	
	6	.694	.112	.175	.150	.167	.248	.637	
	7	.676	.109	.197	.065	.192	.184	.583	
	8	.695	.185	.134	.060	.154	.258	.628	
	9	.673	.244	.197	.131	.109	.100	.590	
	10	.671	.229	.248	.057	.191	.097	.614	
	11	.685	.281	.275	.055	.128	.035	.644	
	12	.684	.234	.179	.093	.160	.062	.593	
eigenvalue		7.557	6.350	4.323	3.945	3.594	2.398		
explain rate(%)		18.432	15.488	10.545	9.622	8.766	5.850		
accumulation rate(%)		18.432	33.921	44.466	54.088	62.854	68.704		
KMO=.963(sig=.000)									

4.3 Correlation Analysis

The results of the correlation analysis are as follows. Role Model Demonstration ($r=.556, p<.001$), vision motivation ($r=.665, p<.001$), individual consideration ($r=.590, p<.001$), Charisma ($r=.587, p<.001$), Decision Participation ($r=.523, p<.001$). All factors showed a positive correlation with organizational performance. Also, role model demonstration ($r=.493, p<.001$), vision motivation ($r=.493, p<.001$), individual consideration ($r=.516, p<.001$), Charisma ($r=.458, p<.001$). It was found that all the factors had a correlation with the Decision Participation.

Table 2. The Result of Descriptive Statistics, Reliability and Correlation Analysis

	Average	Standard deviation	RMD	VE	IC	Charisma	DP	OP
RMD	4.087	.6291	1					
VM	4.163	.5919	.656***	1				
IC	4.109	.6427	.726***	.710***	1			
Charisma	4.125	.6106	.683***	.702***	.729***	1		

DP	3.721	.7638	.493***	.493***	.516***	.458***	1	
OP	3.995	.5764	.556***	.665***	.590***	.587***	.523***	1

*** $p < .001$, ** $p < .01$, * $p < .05$

4.4 Hypothesis Verification

Simple regression analysis and three-step regression analysis were conducted to verify the hypothesis of this study, and the analysis results of the effect of transformational leadership on Decision participation are as shown in Table 3. Role Model Demonstration ($\beta = .493$, $p < .001$), vision motivation ($\beta = .493$, $p < .001$), individual consideration ($\beta = .516$, $p < .001$), Charisma ($\beta = .458$, $p < .001$). It was confirmed that all the factors had a significant positive effect on decision participation. Therefore, Hypothesis 1-1, Hypothesis 1-2, Hypothesis 1-3, and Hypothesis 1-4 were found to be approved.

Table 3. The Influence of Transformational Leadership on DP

Dependent variable: DP					
	Unstandardized		Standardized	t	p
	B	SE	β		
constant	1.276	.209		6.106	.000
RMD	.598	.051	.493	11.842	.000
$R^2 = .243$ Adjusted $R^2 = .241$ $F = 140.228$ *** Durbin-Watson = 2.034					
	Unstandardized		Standardized	t	p
	B	SE	β		
constant	1.072	.226		4.746	.000
VM	.636	.054	.493	11.849	.000
$R^2 = .243$ Adjusted $R^2 = .241$ $F = 140.409$ *** Durbin-Watson = 1.947					
	Unstandardized		Standardized	t	p
	B	SE	β		
constant	1.201	.203		5.930	.000
IC	.613	.049	.516	12.595	.000
$R^2 = .266$ Adjusted $R^2 = .265$ $F = 158.639$ *** Durbin-Watson = 2.011					
	Unstandardized		Standardized	t	p
	B	SE	β		
constant	1.358	.222		6.122	.000
Charisma	.573	.053	.458	10.772	.000
$R^2 = .210$ Adjusted $R^2 = .208$ $F = 116.038$ *** Durbin-Watson = 1.978					

*** $p < .001$, ** $p < .01$, * $p < .05$

Next, Table 4 examines the results of verifying the effect of participatory decision-making on organizational performance ($\beta = .523$, $p < .001$). It was confirmed that decision participation had a significant positive effect on organizational performance. Therefore, Hypothesis 2 was approved.

Table 4. The Influence of DP on OP

Dependent variable: OP					
	Unstandardized		Standardized	t	p
	B	SE	β		
constant	2.525	.117		21.611	.000
DP	.395	.031	.523	12.834	.000
$R^2 = .274$ Adjusted $R^2 = .272$ $F = 164.700$ *** Durbin-Watson = 1.820					

*** $p < .001$, ** $p < .01$, * $p < .05$

Finally, the results of verifying the mediating effect of decision participation in the relationship between role model demonstration, vision motivation, individual consideration, charisma and organizational performance, which are sub-factors of transformational leadership, are shown in Table 5.

In step 1, role model demonstration ($\beta = .493$, $p < .001$), vision motivation ($\beta = .493$, $p < .001$), individual consideration ($\beta = .516$, $p < .001$), Charisma ($\beta = .458$, $p < .001$) was found to have a significant effect on decision participation. In step 2, role model demonstration ($\beta = .556$, $p < .001$), vision motivation ($\beta = .665$, $p < .001$), individual consideration ($\beta = .590$, $p < .001$), Charisma ($\beta = .587$, $p < .001$) was found to have a significant effect on organizational performance. In the last three step, decision participation was found to have a significant effect on organizational performance, indicating that it had a mediating effect.

In step 3, role model demonstration ($\beta = .393$, $p < .001$), vision motivation ($\beta = .538$, $p < .001$), individual consideration ($\beta = .436$, $p < .001$), Charisma ($\beta = .440$, $p < .001$) had a significant effect on organizational performance, and decision participation was found to have a partial mediating effect in the relationship between role model demonstration, vision motivation, individual consideration, charisma and organizational performance. Therefore, Hypothesis 3-1, Hypothesis 3-2, Hypothesis 3-3, and Hypothesis 3-4 were approved.

Table 5. Mediating Effect of DP: Transformational Leadership and OP

Dependent variable: OP						
	Model 1		Model 2		Model 3	
	β	t	β	t	β	t
constant		6.106***		12.705***		10.827***
RMD	.493	11.842***	.556	13.972***	.393	9.157***
DP	-	-	-	-	.329	7.666***
R^2	.243		.309		.391	
Adjusted R^2	.241		.307		.388	
F	140.228***		195.214***		139.890***	
constant		4.746***		8.870***		7.603***

VM	.493	11.849***	.665	18.627***	.538	13.727***
DP	-	-	-	-	.258	6.577***
R ²	.243		.443		.493	
Adjusted R ²	.241		.441		.491	
F	140.409***		346.962***		211.882***	
constant		5.930***		12.635***		10.899***
IC	.516	12.595***	.590	15.279***	.436	10.188***
DP	-	-	-	-	.298	6.959***
R ²	.266		.348		.413	
Adjusted R ²	.265		.347		.411	
F	158.639***		233.462***		153.618***	
constant		6.122***		11.209***		9.269***
Charisma	.458	10.722***	.587	15.166***	.440	10.782***
DP	-	-	-	-	.322	7.886***
R ²	.210		.345		.427	
Adjusted R ²	.208		.343		.424	
F	116.038***		229.995***		162.190***	

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

V. CONCLUSION

5.1 Results and Implications

In this study, we verified the mediating effect of decision participation in the relationship between transformational leadership and organizational performance. The sub factors of transformational leadership such as role model demonstration, vision motivation, individual consideration and charisma have a significant positive effect on decision participation and decision participation of organizational members had a significant positive effect on organizational performance.

In addition, it was verified that decision participation by organizational members has a partial mediating effect in the relationship between each sub-factor of transformational leadership of the CEO of an IT company and organizational performance.

Based on these research results, this study reaffirmed that decision participation of organizational members is an important variable that can strengthen organizational performance, suggesting that at the organizational level, an organizational atmosphere that can actively communicate and voluntarily participate in important decisions is needed.

Finally, it has great implications for global companies that have entered China or have plans to enter the country in the future by sampling members of the IT industry in China. More effective human resource management measures can be prepared based on the results of this study targeting Chinese organizational members with different values, cultures, attitudes toward work and organizations, and ways of working.

5.2 Limitation and Future Research Directions

The limitation of this study has limitations in the generalization of samples because a survey was conducted on organizational members working at IT companies in Shandong, China. Therefore, in the future, more convincing theories should be designed and implemented through sample design considering various industries, regions, ages, and years of service. In addition, in this study, in order to expand the transformative leadership theory and provide more useful practical implications, it is necessary to conduct a study that considers various variables in addition to the variables used in this study.

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