

A Study On Leadership and Management Effectiveness Based on a Multi-Frame Model : A Case Study for Railway Public Enterprises

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Abstract

The main purpose of this study is to highlight the effects of the Bolman and Deal's multi-frame leadership on the several dependent variables such as job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than a manager. To attain this purpose, 488 questionnaires verified to be free from flaws were processed through SPSS 14 Windows. The major finding was that versatile and adroit use of multiple frames can contribute to the effectiveness and success of the leader. That is, the multi-frame leadership had strong relationships with dependent variables such as trust and respects from subordinates, effective attainment of unit's goal, job satisfaction, recognition as more a real leader than as a manager, and promotion speed of boss. When we consider the ever-increasing environmental complexity surrounding every organization and the growing levels of needs of employees, the use of multi-frame leadership is not an 'ought' but a 'must' for all the people who aspire to become effective and successful leaders.

Keywords : *Bolman & deal's leadership frame model, Multi-frame, Management effectiveness, Railway public enterprises*

1. Introduction

Since the advent of trait theory, the studies for leadership have long been a main concern for the behavioral scientists as well as practitioners up to now. In that respect, it's so natural that an enormous amount of literatures on the diverse disciplinary interests and issues such as behavioral theory, contingency theory, power and influence theory, transformational and transactional theory, cultural and symbolic theory, and cognitive theory have been incessantly produced all over the world.

In the midst of this array of leadership study, Bolman and Deal suggested a unique leadership model named 'leadership frame'. This model is considered as significant one by many researchers in that it intends to assemble the partially highlighted aspects of leadership dimension into a whole one [1]. This wholistic perspective resulted to create the concept of multi-frame leadership, whose main

concern is to see thoroughly the leadership reality with more enlarged and enriched perspectives. However, most of the studies on leadership frames have been focused on academic entities, which invariably made the researches on business sector so rare. Besides, the researches focusing only on Korean railway public enterprises seem to be also so rare. The main purpose of this study is to depict the causal relationship between multi-frame leadership and management effectiveness in Korean railway public enterprises which are positioned as one of business sector and experiencing a rapid environmental change, based on the leadership frame model suggested by Bolman and Deal.

2. Background

2.1 Frames

In social science, the concept of frames has been mentioned with diverse terms such as schema, schemata, maps, images, frames of reference, representation, paradigm, pictures, or implicit organizing theories.

Despite the diversity of these terms, they have a certain assumptions in common. That is, everybody has his or her own way of seeing the world differently, based on his or

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her own perspective on this world and reality. This means that the frames of reference can't but influence on the interpretation of situation and the determination of behavior, since the world of human experiences is so complex and ambiguous.

According to Bolman and Deal, frames are windows on the world of leadership and management. Like maps, frames are both windows on a territory and tools for navigation [2], and sensemaking [3].

2.2 Four frame model

Bolman & Deal once suggested 4 types of 'frame' regarding leadership behavior of the leader as follows.

First, the structural frame casts managers and leaders in the fundamental roles of clarifying goals, attending to the relationship between structure and environment, and developing a clearly defined structure appropriate to what needs to be done.

The main job of a leader is to focus on task, facts, and logic, rather than personality and emotions. The structural frame suggests that most people problems stem from structural flaws, not personal limitation or liability.

Second, the human resource frame suggests that people are the center of any organization. If people feel the organization is responsive to their needs and supportive of their personal goals, you can count on commitment and loyalty.

The job of the leader is support and empowerment. Support takes a variety of forms: showing concern for people, listening to their aspirations and goals, and communicating personal warmth and openness. The leader empowers through participation and openness and by ensuring that people have the autonomy and resources they need to do their job.

Third, the political frame suggests that managers have to recognize political reality and know how to deal with conflict. Inside and outside any organization, a variety of interest groups, each with its own agenda, compete for scarce resources. There is never enough to give all parties what they want, so there will always be struggle.

The job of the leader is to recognize major constituencies, develop ties to their leadership, and manage conflict as productively as possible. Above all, leaders need to build a power base and use power carefully.

Fourth, the symbolic frame suggests that the most important part of a leader's job is inspiration - giving people something they can believe in. People become excited about and committed to a place with a unique identity, a special place where they feel that what they do is really important.

Effective symbolic leaders are passionate about making the organization the best of its kind and communicating

that passion to others. Symbolic leaders are sensitive to an organization's history and culture. They seek to use the best in an organization's traditions and values as a base for building a culture that has cohesiveness and meaning. They articulate a vision that communicates the organization's unique capabilities and mission [1].

2.3 Multi-Frame leadership and its effectiveness

Bolman and Deal(1991, 1992a, 1992b) [4-6] and Bolman and Granell(1999) [7] studied populations of managers and administrators in both business and education. They found that the ability to use multiple frames was a consistent correlate of effectiveness. Effectiveness as a manager was particularly associated with the structural frame, whereas the symbolic and political frames tended to be the primary determinants of effectiveness as a leader.

Bensimon(1989, 1990) [8,9] studied college presidents and found that multiframe presidents were viewed as more effective than presidents wedded to a single frame. In her sample, more than a third of the presidents used only one frame, and only a quarter relied on more than two. Single-frame presidents tended to be less experienced, relying mainly on structural or human resource perspectives. Presidents who relied solely on the structural frame were particularly likely to be seen as ineffective leaders. Heimovics, Herman, and Jurkiewicz Coughlin(1993) [10] found the same thing for chief executives in the nonprofit sector, and Wimpelberg(1987) [11] found comparable results in a study of 18 school principals. His study paired nine more effective and less effective schools. Principals of ineffective schools relied almost entirely on the structural frame, whereas principals in effective schools used multiple frames. When asked about hiring teachers, principals in less effective schools talked about standard procedures(how vacancies are posed, how the central office sends a candidate for an interview), while more effective principals emphasized "playing the system" to get the teachers they needed.

Bensimon found that presidents thought they used more frames than their colleagues observed. They were particularly likely to overrate themselves on the human resource and symbolic frames, a finding also reported by Bolman and Deal(1991) [4]. Only half of the presidents who saw themselves as symbolic leaders were perceived that way by others.

Despite the low image of organizational politics in the minds of many managers, political savvy appears to be a primary determinant of success in certain jobs. Heimovics, Herman, and Jurkiewicz Coughlin(1993, 1995) [10,12] found this for chief executives of nonprofit organizations, and Doktor(1993) [13] found the same thing for directors

of family service organizations in Kentucky.

In a study of Thompson(2000) [14], it was found that educational leaders who utilize three or four leadership frames, regardless of their leadership dimension, are perceived to be more effective in their leadership role. As a most recent study, Sasnett and Ross(2007) [15] also found that effective leadership was related to all four frames as a completely balanced approach to leadership, despite the existence of dichotomy between effective management associated with structure and human resource frames and effective leadership associated with political and symbolic frames.

Beyond a series of studies mentioned above, there have appeared many doctoral dissertations based on the Bolman and Deal's multi-frame model. In his study for depicting the relationship between the leadership styles of academic department chairs and faculty utilization of instructional technology in teaching, Chang(2004) [16] found that chairs' leadership styles(no, single, paired, and multi-frame) were significantly associated with both technical and administrative support, that is, chairs using multiple frames were more likely to provide effectively these two kinds of support for faculty use of technology. In her study on the relationship between the perceived leadership of nursing chairpersons and the organizational climate in one program, Mossor(2000) [17] also found that there were statistically significant relationships between the various combinations of leadership frames of nursing chairpersons and the organizational climate domains of consideration, intimacy, disengagement, and production emphasis. The use of all four frames showed the highest endorsement of consideration, followed by the paired frame, the multi-frame (in this case, combination of three among four frames), the single frame, and no frame. The paired frame combination demonstrated the highest endorsement of intimacy, followed by all four frames, the multi-frame, the single frame, and no frame. No frames showed the highest endorsement of disengagement, followed by the multi-frame, the single frame, all four frames, and the paired frame. And finally, all four frames demonstrated the highest endorsement of production emphasis, followed by the paired frame, the multi-frame, the single frame, and no frame. In case of Korean situation, Lee(2008) surveyed many private firms using leadership frame model and demonstrated that the more frames are used by boss, the more effective in the perception of subordinates [1].

3. Research Procedures

3.1 Statement of the problem and research question

The main purpose of this study is to highlight the effects

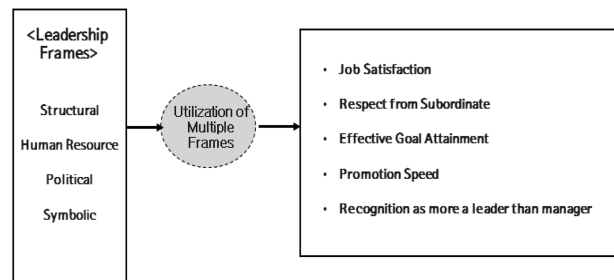


Fig. 1 The model of this study

of the Bolman and Deal's multi-frame leadership(the various combinations of leadership frames of bosses) on the several dependent variables such as job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than a manager [Fig. 1], all of which were already testified based on the Bolman and Deal's model in the past.

In this study, the authors adopt research question instead of hypothesis, because this study intends to exploratorily testify the Bolman and Deal's multi-frame model in terms of Korean situation. The research question is like this:

“Are there statistically significant relationships between the various combinations of leadership frames of bosses perceived by their subordinates and such dependent variables as job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than a manager?”

3.2 Participants

The questionnaires were distributed to the several rail-

Table 1. Demographics of Participants

Hierarchy	Frequency	%
Grade 1 and 2	44	9.0%
Grade 3	118	24.2%
Grade 4	81	16.6%
Grade 5	78	16.0%
Grade 6 and Rank & File	102	20.9%
No Response	65	13.3%
Total	488	
Job Type	Frequency	%
General Affairs	189	38.7%
Rolling Stock	52	10.7%
Station Affairs	29	5.9%
Train Crew	58	11.9%
Technology	62	12.7%
Technical General Affairs	44	9.0%
No Response	54	11.1%
Total	488	

way public enterprises, in 2006 and 2010 respectively. The latter one was to include KR(Korea Rail Network Authority). A total of 488 among 535 responses were verified to be free from flaws. Thus, the analysis was based on these 488 responses. The sample sizes of each enterprise (Korail, Seoul Metro, SMRT, Korail Airport Railroad and KR) were 59, 60, 209, 62, and 98 respectively. In case of gender, male participants were 429, and female were 59. Other demographics of participants are like as Table 1.

3.3 Variables

3.3.1 Leadership frames

The Leadership Orientations Survey created by Bolman was used to obtain perceptions of the leadership styles or frames of leaders. In this case, only the questionnaire for describing other (that is, the boss as a leader) was adopted. So, the one for describing leader's own leadership frames or styles were not used. And among 32 items (8 items per frame × 4 frames = 32 items) provided by Bolman, only half of them (4 items per frame × 4 frames = 16 items) was selected in order to shun the complexity and redundancy of items.

3.3.2 Dependent variables (leadership effectiveness dimensions)

As described above, the dependent variables to be

addressed in this study are job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than a manager, all of which were based on Bolman and Deal's theory and other researcher's findings.

3.4 Analysis

The main statistical methods were factor analysis, reliability test, and regression analysis (hierarchical). In this study, factor analysis was given the most important concern, since an additional purpose of this study was to exploratorily testify the validity of Bolman's items in Korean situation.

Table 2 shows the results of factor analysis and reliability test for the 16 items (4 items per every frame) used for this study. The bold figures are factor loadings of each item. As shown in Table 2, even though four factors were yielded, two items were eliminated when the cut-rate was set at 0.5. The probable reason was that most participants were liable to recognize one item of the structural frame - '*Sets specific, measurable goals and holds people accountable for results.*' - as the symbolic, and another item of the symbolic frame - '*Generates loyalty and enthusiasm.*' - as a human resource on account of ethnic semantic misunderstanding. As the Table 2 shows, KMO (Kaiser-Meyer-

Table 2 Results of Factor Analysis and Reliability Test

Items	Leadership Frames			
	Factor 1 (HR)	Factor 2 (Str.)	Factor 3 (Pol.)	Factor 4 (Sym.)
1. Shows high sensitivity and concern for other's needs and feelings.	.838	.126	.198	.273
2. Shows high levels of support and concern for others.	.660	.467	.242	.182
3. Foster high levels of participation and involvement in decisions.	.684	.449	.293	.091
4. Listens well and is unusually receptive to other people's ideas and input.	.595	.584	.140	.185
1. Thinks very clear and logically.	.381	.711	.292	.251
2. Has extraordinary attention to detail.	.295	.700	.301	.259
3. Develops and implements clear, logical policies and Procedures..	.205	.711	.283	.373
1. Shows exceptional ability to mobilize people and resources to get things done.	.277	.481	.634	.278
2. Develops alliances to build a strong base of support.	.225	.374	.768	.174
3. Is politically very sensitive and skillful.	.134	.138	.844	.266
4. Anticipates and deals adroitly with organizational conflict.	.351	.214	.660	.389
1. Communicates a strong and challenging vision and sense of mission.	.338	.482	.331	.541
2. Is highly imaginative and creative.	.264	.427	.267	.694
3. Is highly charismatic.	.163	.200	.356	.773
KMO and Bartlett Test	.960 (p-value=.000)			
Bartlett' Sphericity (%)	5182.927			
Reliability (Cronbach's Alpha)	.880	.870	.895	.845

Olkin) value was 0.96 higher than 0.5, which means that the result of factor analysis is acceptable. And the value of Bartlett' sphericity was 5182.927 with 0.01 of p-value. In this case, the factor scores of each leadership frame produced through factor analysis are independent one another, the mean score of every frame is 0, and the standard deviation is 1.

In case of job satisfaction scale (4 items), KMO value was 0.68 which was also acceptable. And the value of Bartlett' sphericity was 54.344 with 0.01 of p-value. And the Cronbach's Alpha was .719. And other scales of dependent variables were asked only with one item respectively.

4. Results

4.1 Frequency of frame usage

Even though two items were eliminated through factor analysis, resulting in some unbalance in the number of each frame items, the overall distribution of frame usage seems to be similar to the results of previous studies, showing that the most frequently used frame is structural(37.3%), followed by human resource(34.4%), symbolic(24.2%), and political(18.6%) respectively(Table 3).

Table 3. Frequency of Frame Usage

Leadership Frames	No. of Items Perceived To Be Used By Respondent's Boss	Frequency	%
Human Resource	0	111	22.7
	1	68	13.9
	2	75	15.4
	3	66	13.5
	4	168	34.4
Structural	0	147	30.1
	1	91	18.6
	2	68	13.9
	3	182	37.3
Political	0	199	40.8
	1	77	15.8
	2	61	12.5
	3	60	12.3
Symbolic	4	91	18.6
	0	207	42.4
	1	82	16.8
	2	81	16.6
	3	118	24.2

4.2 The effects of multi-frame leadership

Table 4 shows the relationship between multi-frame leadership and five dependent variables processed by hierarchical regression.

As seen from the Table 4, control variables such as sex, job type, position, and firms were input first in order to shun the interference of these factors. When the usage of multi-frame leadership, as an independent variable was entered, it showed statistically a very significant relationship with five dependent variables respectively.

First, the multi-frame leadership had strong relationships with trust and respect from subordinates, and effective attainment of unit's goal ($\beta = .654$ and $.647$). As described above, many an earlier researches based on Bolman and Deal's model reported that structural and human resource leadership frames were more related with trust and respect from subordinates, and effective attainment of unit's goal. However, the result of this study shows that the usage of diverse frames also has positive effects on these two dependent dimensions. This is the same as Chang (2004) [15] and Mossor(2000) [16] had supposed through their dissertations.

Second, the multi-frame leadership also showed very high relationships with job satisfaction and recognition as more a real leader than as a manager ($\beta = .588$ and $.539$). In earlier studies, the latter dimension - recognition as more a real leader than as a manager was seen more related to symbolic and political frames. However, multi-frame leadership also was shown to have positive effects to this dimension.

Third, the influence of multi-frame leadership on the promotion speed was shown relatively low ($\beta = .299$). Presumably, this means that when it comes down to the aspects of promotion, somewhat different mechanism from the previous ones might operate. When another regression was performed with every frame as independent variables, it was made clear as shown in Table 5. As seen from the Table 5, structural and human resource frames did not show strong effects on the promotion speed of boss, and understandingly, multi-frame leadership could not but show only partial effects on promotion. Notwithstanding this limited influence of multi-frame leadership, the overall results are enough to certify the strong effects of multi-frame leadership behaviors on every important aspect of management and organizational life.

As a result, the research question ("Are there statistically significant relationships between the various combinations of leadership frames of bosses perceived by their subordinates and such dependent variables as job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than

Table 4. Effects of Multi-Frame Leadership

Variables	Model2 (Standardized Coefficient : β)				
	Job Satisfaction	Trust and Respect from Subordinate	Promotion Speed of Boss	Effective Attainment of Unit's Goal	Recognition as a Leader, not Manager
Control Variable:					
Sex	-.047	.005	-.080	-.006	-.019
Job Type	.034	-.008	.000	.045	.072
Position	-.070	-.044	-.022	-.067	-.050
Firms	.053	-.007	.011	.030	-.007
Independent Variable:					
Usage of Multi-Frame Leadership	✓.588***	✓.654***	✓.299***	✓.647***	✓.539***
Figures					
	F=59.427 R ² =.381 Δ R ² =.332 (p=.000)	F=74.393 R ² =.436 Δ R ² =.411 (p=.000)	F=10.966 R ² =.102 Δ R ² =.086 (p=.000)	F=76.505 R ² =.442 Δ R ² =.403 (p=.000)	F=41.772 R ² =.302 Δ R ² =.280 (p=.000)
Durbin-Watson	1.932	2.055	1.951	2.050	2.053

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

Table 5. Relationship between Leadership Frames and Promotion

Variables	Model1 (Standardized Coefficient : β)	Model2 (Standardized Coefficient : β)
	Control Variable:	
Sex	-.080	-.085
Job Type	-.005	-.001
Position	-.055	-.023
Firms	.056	-.007
Independent Variables:		
Structural		.113**
Human Resource		.000
Political		✓.267***
Symbolic		✓.306***
Figures		
	F=1.960 R ² =.016 (p=.099)	F=13.871 R ² =.188 Δ R ² =.172 (p=.000)

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

manager?") was testified with significant statistical implications. It can be described in another term this way. "The more the leaders can use diverse leadership frames, the more enormous the management effectiveness."

5. Conclusion

The main purpose of this study is to highlight the effects of the Bolman and Deal's multi-frame leadership on the

several dependent variables such as job satisfaction, respect from subordinates, effective goal attainment, promotion speed, and recognition as more a leader than a manager.

To attain this purpose, 488 questionnaires verified to be free from flaws were processed through SPSS 14 Windows.

The major finding was that versatile and adroit use of multiple frames can contribute to the effectiveness and success of the leader. This finding gives us some valuable implications. When leaders take too narrow a view, they are liable to fail. Unless they can think flexibly about organizations and see them from multiple angles, they will be unable to deal with the full range of issues they inevitably encounter. Multi-frame thinking is challenging and often counterintuitive. To see the same organization simultaneously as machine, family, jungle, and theater requires the capacity to think in several ways at the same time about the same thing.

When we consider the ever-increasing environmental complexity surrounding every organization and the growing levels of needs of employees, the use of multi-frame leadership is not an 'ought' but a 'must' for all the people who aspire to become effective and successful leaders.

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