

LEADERSHIP STYLES IN PROJECT MANAGEMENT: AN ANALYSIS
BASED UPON THE MULTIFACTOR LEADERSHIP QUESTIONNAIRE

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CHAPTER 4. RESULTS

This chapter is a presentation and analysis of the data that were collected to evaluate the relationship between the transformational, transactional, and laissez-faire leadership styles of project managers and the subordinates' outcomes of satisfaction with the leader, willingness to exert extra effort, and perception of leader effectiveness. Additionally, the demographics of both the participant and leader were provided. This chapter reports respondent characteristics and presentation and summary of the findings of this research study.

General Description of Sample Demographics

The data were organized around general descriptive data about the sample, overall scoring for leadership factors and outcomes, and the three research questions. The MLQ 5X Short Form was linked to PMI's corporate website as a self-administered random survey for PMI members. The demographic questions were designed to obtain information from the participants in four general areas: the hierarchy level within the organization, the industry, the participants' and leaders' gender and age.

The organization level for participants was divided into four categories: 18% was at a higher organizational level than the person rated, 22% rated a person at the same organizational level. 46 % was at a lower level then the person rated, and 13% did not reveal their organizational level. Participants predominantly rated a person that was at a higher level or leadership role in their organizational hierarchy. Of the 197 participants, only 90 of them were subordinate to the leader that was rated.

The hypothesis in this study examines the relationship between leadership styles and the dependent variables of subordinates' willingness to extra effort, perceived effectiveness of their leader, and satisfaction with their leader. Therefore, only the subordinates' responses were included in the analysis for this research study.

The demographic results are presented in Tables 2 through 7. The participants were not required to complete the demographics section of the survey. The industry question was divided into six categories: construction, energy and resources, manufacturing, consulting, IT, and other. The work industry was collected to only identify the primary job responsibility as a project manager.

The age demographic was divided into five categories: 20's, 30's, 40's, 50's, and 60 and older. The majority of both the participants and leaders fell into the 40s age group category. The participants were more evenly distributed, with 41.1% of the sample being female and 34.4% male. The leaders were predominantly male, with 60% male and 16.7% female. The demographics reveal a diverse group of people that represents the sample population for this study,

Table 2. Organizational Level of Participants

Level	Frequency	%	Valid %	Cumulative %
I am at a higher organizational level than the person I am rating	37	18.8	18.8	18.8
The person I am rating is at my organizational level	44	22.3	22.3	41.1
I am at a lower level than the person I am rating	90	45.7	45.7	86.8

I do not wish my organizational level to be known	26	13.2	13.2	100.0
Total	197	100.0	100.0	

Table 3. Industry of Participants

	Industry	Frequency	%	Valid %	Cumulative %
Valid	Construction	8	4.1	7.6	7.6
	Energy and resources	6	3.0	5.7	13.3
	Manufacturing	11	5.6	10.5	23.8
	Consulting	9	4.6	8.6	32.4
	IT	39	19.8	37.1	69.5
	Other	32	16.2	30.5	100.0
	Total	105	53.5	100.0	
Missing	System	92	46.7		
Total		197	100.0		

Table 4. Gender of Participants

	Gender	Frequency	%	Valid %	Cumulative %
Valid	Male	47	23.9	45.6	45.6
	Female	56	28.4	54.5	100.0
	Total	103	52.3	100.0	
Missing	System	94	47.7		
Total		197	100.0		

Table 5. Gender of Leaders

	Gender	Frequency	%	Valid %	Cumulative %
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Valid	Male	77	39.1	74.8	74.8
	Female	26	13.2	25.2	100.0
	Total	103	52.3	100.0	
Missing	System	94	47.7		
Total		197	100.0		

Table 6. Age of Participants

	Age	Frequency	%	Valid %	Cumulative %
Valid	20s	12	6.1	11.5	11.5
	30s	34	17.3	32.7	44.2
	40s	39	19.8	37.5	81.7
	50s	16	8.1	15.4	97.1
	60 or older	3	1.5	2.9	100.0
	Total	104	52.8	100.0	
Missing	System	93	47.2		
Total		197	100.0		

Table 7. Age of Leaders

	Age	Frequency	%	Valid %	Cumulative %
Valid	20s	3	1.5	2.9	2.9
	30s	23	11.7	22.3	25.2
	40s	44	22.3	42.7	68.0
	50s	25	12.7	24.3	92.2
	60 or older	8	4.1	7.8	100.0
	Total	103	52.3	100.0	
Missing	System	94	47.7		
Total		197	100.0		

Testing of Hypotheses

Each research question is presented along with descriptive statistical analysis. Corresponding tables are described as well. Correlation using correlation coefficients was used to examine the three null hypotheses and alternative hypotheses. The relationship between independent variables of leadership style (transformational, transactional, and laissez-faire) and the three dependent variables of leadership outcome (extra effort, satisfaction with the leader, and leadership effectiveness) were examined using correlation analysis and multiple regressions. Significance was tested at the $\alpha = .05$ level. The data were analyzed to produce results for the following research questions.

Research Question 1

Is there a relationship between the transactional leadership style, transformational leadership style, and laissez-faire leadership style of project managers and subordinate project managers' willingness to exert extra effort?

H01: There is no correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' willingness to exert extra effort.

HA1: There is a correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' willingness to exert extra effort.

Hypothesis 1 test results are reflected in Tables 8, 9, and 10. The correlation analysis concludes that subordinates' willingness to exert extra effort significantly and positively correlates with transformational leadership and transactional (active) traits. Willingness to exert extra effort is negatively and significantly associated with

transactive (passive) and laissez-faire. For each hypothesis, the correlations significance level (p-value) is compared to the corresponding hypothesis value of 0.05 to determine whether the correlation is significant.

The correlation analysis concludes that subordinates' willingness to exert extra effort significantly and positively correlates with transformational leadership and transactional (active) traits. Willingness to exert extra effort is negatively and significantly associated with transactive (passive) and laissez-faire.

Table 8. Correlational and Regression Analysis for Research Question 1

Model	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	Std. error of the estimate
1	.794(a)	.630	.587	1.93751

a. Dependent variable: extra effort.

Table 9. ANOVA(b) for Research Question 1

Model		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Sig.
1	Regression	486.661	9	54.073	14.404	.000(a)
	Residual	285.299	76	3.754		
	Total	771.960	85			

a. Dependent variable: extra effort.

Table 10. Coefficients(a) for Research Question 1

Model	Unstandardized coefficients	Standardized coefficients	<i>t</i>	Sig.

		B	SE	B		
1	(Constant)	1.719	1.336		1.287	.202
	Attributed influence (transform)	.252	.110	.300	2.301	.024
	Idealized influence (transform)	.063	.112	.062	.569	.571
	Inspirational motivation (transform)	.159	.101	.171	1.583	.118
	Intellectual stimulation (transform)	.064	.128	.065	.502	.617
	Individual consideration (transform)	-.062	.109	-.067	-.567	.572
	Contingent reward (transactional)	.154	.120	.158	1.286	.202
	Manage active (transactional)	-.082	.073	-.083	-1.126	.264
	Manage passive (transactional)	-.021	.104	-.020	-.199	.843
	Laissez-faire	-.215	.102	-.216	-2.102	.039

a. Dependent variable: extra effort.

The multiple regression analysis of the leadership trait results is displayed along with the outcome of subordinates' willingness to exert extra effort. The regression model (Table 8, p. 46), explained 58% of the total variance in the dependent variable ($R^2 =$

.587). Table 9 contains the Analysis of Variance (ANOVA) and shows the difference in project managers' leadership style and subordinates' willingness to exert extra effort. The analysis shows that there is difference with an *F score of 9, 76 = 14.40* and significance (.000) well beyond the $\alpha < .05$ standard. The transformational leadership trait, attributed influence ($t = 2.301, p < .05$), emerged as a significant regressor (Table 10, p. 46) of the dependent variable. Laissez-faire emerged as a significant negative regressor. No other variables in the model were significant.

These results imply that there is a significant relationship between transformational leadership style, transactional leadership style, and laissez-faire leadership style of project managers as perceived by subordinates' willingness to exert extra effort. This finding provides support for the alternative hypothesis (HA1). These findings answer Research Question 1 positively. The 0.000 significance level is less than level of significance for the test of (.05); therefore, the null hypothesis is rejected. The results indicate that there is a significant correlation between the three factors of project managers' leadership style (transformational, transactional, and laissez-faire) as perceived by subordinate project managers and subordinates' willingness to exert extra effort.

Based upon this population results, transformational leadership traits motivated subordinates to exert extra effort more than both transactional and laissez-faire leadership traits in the project management environment. According to Burns, Bass (1985a) transformational leaders raise employee awareness; motivate employees to transcend their self-interest for the sake of the team and organization, and develop higher level employees in areas such as achievement, autonomy, and affiliation. We can say that it

would benefit project managers to learn and exhibit transformational leadership to motivate subordinates' willingness to exert extra effort.

Research Question 2

Is there a relationship between the transactional leadership style, transformational leadership style, and laissez-faire leadership style of project managers and subordinate project managers' perception of leaders' effectiveness?

H02: There is no correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' self-reported perception of their leaders' effectiveness.

HA2: There is a correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' self-reported perception of their leaders' effectiveness.

Hypothesis 2 results are displayed in Tables 11, 12, and 13. The correlation analysis concludes that transformational leadership is significantly and positively related with subordinates' self-reported perception of their leaders' effectiveness. Perception of leaders' effectiveness is negatively and significantly associated with transactional (passive) and laissez-faire leadership.

The multiple regression analysis of the leadership trait results are displayed along with the outcome of subordinates' perception of leaders' effectiveness. The regression model (Table 11, p. 50) explained 78% of the total variance of the dependent variable ($R^2 = .768$). Table 12 contain the Analysis of Variance (ANOVA) and shows the difference in project managers leadership style and subordinates perception of leaders' effectiveness. The analysis shows that there is difference with an *F score of 9, 76*) =

32.20 and significance (.000) well beyond the $\alpha < .05$ standard. Transformational leadership, attributed influence ($t = 4.093, p < .01$), and transactional, contingent reward ($t = 3.019, p < .01$), emerged as significant positive regressors of the dependent variable. Laissez-faire emerged as a significant negative regressor. No other variables in the model (Table 13, p. 13) were significant.

These results imply that there is a significant relationship between transformational leadership style, transactional leadership style, and laissez-faire leadership style of project managers as perceived by subordinates' self-reported perception of their leaders' effectiveness. This finding provides support for the alternative hypothesis (HA2). These findings answer Research Question 2 positively. The 0.000 significance level is less than level of significance for the test of (.05). Therefore, the null hypothesis is rejected. The results indicate that there is a significant correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinate project managers and subordinates' self-reported perception of their leaders' effectiveness.

Analysis results indicate that even though transactional leadership provides effective leadership, a greater effort of extra effort, effectiveness, and satisfaction is possible with augmenting transformational leadership. Both transformational and transactional (contingent reward) can be utilized in the project management environment to motivate associates to develop and perform beyond standard expectations. However, transformational leadership differs from transactional by recognizing employee needs and attempting to develop those needs from lower to higher levels of maturity (Mindgarden, 2004). Transformational leaders involve the complete person so that employees are

developed into leaders. We can say that it would benefit project managers to learn and exhibit transformational leadership to motivate subordinates to perform to their full potential for the good of the individual, leader, and the organization as a whole.

Table 11. Correlational and Regression Analysis for Research Question 2

Model	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	Std. error of the estimate
1	.890(a)	.792	.768	1.65616

a. Dependent variable: effectiveness.

Table 12. ANOVA(b) for Research Question 2

Model		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Sig.
1	Regression	794.994	9	88.333	32.205	.000(a)
	Residual	208.458	76	2.743		
	Total	1003.451	85			

a. Dependent variable: effectiveness.

Research Question 3

Is there a relationship between the transactional leadership style, transformational leadership style, and laissez-faire leadership style of project managers and subordinate project managers' satisfaction with the leader?

H03: There is no correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' self-reported job satisfaction with their leader.

Table 13. Coefficients(a) for Research Question 2

Model		Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig.
		B	<i>SE</i>	β		
1	(Constant)	2.844	1.160		2.452	.017
	Attributed influence (transform)	.391	.095	.410	4.093	.000
	Idealized influence (transform)	-.049	.096	-.042	-.518	.606
	Inspirational motivation (transform)	.079	.089	.076	.893	.375
	Intellectual stimulation (transform)	-.035	.107	-.031	-.323	.747
	Individual consideration (transform)	.132	.095	.125	1.398	.166
	Contingent reward (transactional)	.317	.105	.282	3.019	.003
	Manage active (transactional)	-.028	.063	-.025	-.451	.653

Manage passive (transactional)	-.002	.089	-.002	-.025	.980
Laissez-faire	-.231	.087	-.202	-2.652	.010

a. Dependent variable: effectiveness.

HA3: There is a correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinates' self-reported job satisfaction with their leader.

Hypothesis 3 results are displayed in Tables 14, 15, and 16. The correlation analysis concludes that transformational leadership is significantly and positively related with subordinates' self-reported perception of their leaders' effectiveness. Perception of leaders' effectiveness is negatively and significantly associated with manage passive and laissez-faire leadership.

The regression model (Table 14, p. 53) explained 71% of the total variance of the dependent variable ($R^2 = .718$). Table 15 contain the Analysis of Variance (ANOVA) and shows the difference in project managers leadership style and subordinates satisfaction with the leader. The analysis shows that there is difference with an *F score of 9, 76 = 25.085* and significance (.000) well beyond the $\alpha < .05$ standard. Transformational leadership, attributed influence ($t = 5.008, p < .01$), emerged as a significant positive regressor of the dependent variable as indicated in Table 16. Transactional leadership (manage-active) emerged as a significant negative regressor. No other variables in the model were significant.

These results imply that there is a significant relationship between transformational leadership style, transactional leadership style, and laissez-faire

leadership style of project managers as perceived by subordinates' self-reported perception of their leaders' effectiveness. This finding provides support for the alternative hypothesis (HA3). These findings answer Research Question 3 positively. The 0.000 significance level is less than level of significance for the test of (.05); therefore, the null hypothesis is rejected. The results indicate that there is a significant correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinate project managers and subordinates' self-reported job satisfaction with their leader.

Based upon this population results, transformational leadership traits increased job satisfaction with their leader more than both transactional and laissez-fare leadership traits in the project management environment. Leaders exhibiting transformational leadership traits use their power to gain higher levels of performance. Followers identify with leaders and their mission, developing trust and confidence in such leaders (Mindgarden, 2004). We can say that it would benefit project managers to learn and exhibit transformational leadership traits to increase satisfaction with their leader and motivate subordinates to perform to their fullest potential.

Table 14. Correlational and Regression Analysis for Research Question 3

Model	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	Std. error of the estimate
1	.865(a)	.748	.718	.98263

a. Dependent variable: satisfaction.

Table 15. ANOVA(b) for Research Question 3

Model		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Sig.
1	Regression	217.990	9	24.221	25.085	.000(a)
	Residual	73.383	76	.966		
	Total	291.372	85			

a. Dependent variable: satisfaction.

Summary

This chapter has presented respondent demographics and the analysis and presentation of findings evaluating the relationship between leadership styles and subordinated outcomes of extra effort, leadership effectiveness, and satisfaction with the leader in the project management environment. The results of this study were based upon a self-administered online survey for members of the Project Management Institute. The findings support Bass and Avolio's (1990a) full range model of leadership theory in the project management environment.

Table 16. Coefficients(a) for Research Question 3

Model		Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig.
		<i>B</i>	<i>SE</i>	β		
1	(Constant)	.857	.673		1.272	.207
	Attributed influence (transform)	.278	.056	.548	5.008	.000

Idealized influence (transform)	.029	.056	.048	.520	.605
Inspirational motivation (transform)	.027	.051	.048	.520	.604
Intellectual stimulation (transform)	.041	.065	.069	.627	.533
Individual consideration (transform)	-.009	.095	-.017	-.164	.870
Contingent reward (transactional)	.075	.061	.128	1.228	.223
Manage active (transactional)	-.073	.036	-.123	-2.004	.049
Manage passive (transactional)	-.015	.052	-.024	-.286	.776
Laissez-faire	-.053	.051	-.086	-1.023	.310

a. Dependent variable: satisfaction.

Hypothesis tests were performed to answer the three research questions which questioned the relationship between transformational, transactional, and laissez-faire leadership styles and the dependent variables, extra effort, effectiveness, and job satisfaction. Three out of the six null hypotheses were rejected. The analyses indicates that transformational leadership style positively and significantly affects the extra effort exerted by subordinates, their satisfaction with their leaders, and their perceptions of their leader's effectiveness.

Laissez-faire leadership style significantly affects the dependent outcome variables in a negative manner. When project managers were rated high in laissez-faire leadership style, the extra effort exerted by subordinates, job satisfaction, and perceptions of leader's effectiveness was low.

Results were mixed with transactional leadership components. Active and passive transactional components were perceived to be less effective than the leaders who demonstrated the other leadership components. Positive correlations are associated with traits of contingent reward, a transactional leadership style component. Contingent reward was perceived as a favorable management style by the participants of this study.

These findings further support the purpose of this study: to examine the relationship of leadership behaviors to employee outcomes in the project management environment. The hypotheses indicated that there would be a significant correlation between the three factors of project managers' leadership style (transactional, transactional, and laissez-faire) as perceived by subordinate project managers and subordinates' willingness to exert extra effort, leadership effectiveness, and satisfaction with the leader. The findings were validated using correlation and regression analysis.

CHAPTER 5. DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter will present a summary of the findings, discussion of implications, and recommendation for future research. The purpose of this study was to examine the relationship of leadership behaviors to employee outcomes in the project management environment. This research study examined the relationship among the transactional, transformational, and laissez-faire leadership styles of the leaders of project managers, as perceived by subordinate project managers' self-reported outcomes: perception of the leaders' effectiveness, satisfaction with the leader, and a willingness to exert extra effort in the project management environment.

Effective organizations are recognizing that improved project management capabilities can maintain and improve their competitiveness. Organizations are requiring creative leaders who can “combine, mix, and expand past experience so that new, non-obvious concepts, variations, or extensions of knowledge are generated” (Jessen, 1992, p. 2). This study provides an insight on the relationship project managers' leadership style—transformational, transactional, or laissez-faire—has on employee satisfaction and performance.

The theoretical framework was based upon Bass's (1985b) leadership theory, as illustrated in Figure 1. This study examined the relationship that transformational, transactional, and laissez-faire leadership styles have on subordinate satisfaction with the leader, perception of leaders' effectiveness, and willingness to exert extra effort.

Burns (1978) reasoned that some leaders exceeded further than gaining follower cooperation by stimulating followers through an appealing vision of a striking future.

According to Burns' (1978), transformational leaders fulfilled followers' highest-level needs and develop higher expectations and ambitions in them. Burns contrasted transformational leaders with transactional leaders that negotiated with followers and assured benefits in return for performance.

Bass (1985) expanded on Burns' transformational leadership model by recommending a full range of leadership traits characterized by transformational, transactional, and passive leadership traits. Idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation characterized transformational leadership traits; contingent reward and active management by exception characterized transactional leadership behavior; and passive and laissez-faire management characterize passive traits. The full-range leadership model indicated that leaders displayed the full range of these traits, but the most effective leaders more frequently demonstrated transformational behaviors than passive behaviors. Bass and colleagues (Avolio, 2004; Avolio & Bass, 2004; Bass, 1999; Bass et al., 2003) maintained that leaders who demonstrated transactional traits with transformational traits led their followers and their organizations to outstanding performance.

Summary of Findings

The findings in this study are based on a self-administered online survey to members of the Project Management Institute and support the conceptual framework of Bass's (1985b) transactional, transformational, and laissez-faire leadership model in the project management environment. Strong empirical data were presented in the literature review that transformation leadership is an effective leadership style in various settings.

The highest mean score for the perceived leadership traits overall was inspirational motivation (8.12) indicating that this transformational leadership trait was perceived by the project managers to be the most often utilized trait in the project management's role. Attributed influence and idealized influence traits were the second and third highest traits, with means scores of (7.24) and (7.23) respectively. There is a strong positive relationship between the transformational leadership style of the leaders of project managers and their subordinates' willingness to exert extra effort, perceived leadership effectiveness, and satisfaction with the leader.

This sample population indicated that transformational leadership style produced the greatest effects on the outcome variables of extra effort, effectiveness, and satisfaction; laissez-faire leadership produced negative effects on all of these variables; and transactional leadership factor, contingent reward correlated positively and significantly with all of the transformational leadership traits and correlated negatively with the other two transactional leadership traits: management-by-exception active (MBEA) and management-by-exception passive (MBEP). It is evident that the sample population views contingent reward as a positive trait, but they view the other transactional leadership traits—MBEA and MBEP—negatively.

Analysis of Variance (ANOVA) showed that the difference in the mean scores of extra effort, effectiveness, and satisfaction for leaders exhibiting the three different leadership styles are statistically significant, with f scores over 14 and significant (.000) exceeds the $\alpha < .05$ standard.

Hypothesis 1 in this study examined the relationship between transformational, transactional, and laissez-faire leadership and the dependent variables of extra effort.

Strong empirical analysis resulted in the rejection of the null hypothesis 1. The results were strong, with positive correlations between transformational and transactional (active) leadership trait scores and the dependent variable—extra effort—being positive beyond the $\alpha < .05$ required.

A strong negative correlation was found between the transactional (passive) and laissez-faire style leadership of the leaders of project managers and their subordinate project managers' willingness to exert extra effort. This is confirmed by the correlational analysis.

The regression analysis was conducted to test whether the independent variables—transformational, transactional, and laissez-faire leadership—and the dependent variables would be significantly associated with willingness to exert extra effort. The regression model explained 58% of the total variance in the dependent variable ($R^2 = .587$) and the model as a whole was significant. Transformational leadership traits (attributed influence) emerged as a significant regressor of the dependent variable. Laissez-faire emerged as a significant negative regressor. No other variables in the model were significant.

Hypothesis 2 in this study examined the relationship between transformational, transactional, and laissez-faire leadership and the dependent variables of the subordinates' perception of the leaders' effectiveness. Strong empirical analysis resulted in the rejection of the null hypothesis 2. The results were strong, with positive correlations between transformational and transactional (active) leadership trait scores and the dependent variable—effectiveness—being positive beyond the $\alpha < .05$ required.

A strong negative correlation was found between the transactional (passive) and laissez-faire style leadership of the leaders of project managers and their subordinate project managers' perception of leaders' effectiveness. This was confirmed by the correlational analysis.

The regression analysis was conducted to test whether the independent variables—transformational, transactional, and laissez-faire leadership—and the dependent variables would be significantly with associated leaders' effectiveness. The regression model explained 78% of the total variance in the dependent variable ($R^2 = .768$) and the model as a whole was significant. Transformational (attributed influence) and transactional (active) leadership traits emerged as a significant regressor of the dependent variable. Laissez-faire emerged as a significant negative regressor. No other variables in the model were significant.

Hypothesis 3 in this study examined the relationship between transformational, transactional, and laissez-faire leadership and the dependent variables of the subordinates' satisfaction with the leader. Strong empirical analysis resulted in the rejection of the null hypothesis 3. The results were strong, with positive correlations between transformational leadership trait scores and the dependent variable—effectiveness—being positive beyond the $\alpha < .05$ required.

A strong negative correlation was found between the transactional and laissez-faire style leadership of the leaders of project managers and their subordinate project managers' satisfaction with the leader. This was confirmed by the correlational analysis.

The regression analysis was conducted to test whether the independent variables—transformational, transactional, and laissez-faire leadership—and the

dependent variables would be significantly associated with satisfaction with the leader. The regression model explained 71% of the total variance in the dependent variable ($R^2 = .718$) and the model as a whole was significant. Transformational leadership traits (attributed influence) emerged as a significant regressor of the dependent variable. Transactional leadership (active) traits emerged as a significant negative regressor. No other variables in the model were significant.

This study further supported Bass's (1985b) and Bass and Avolio's (1994, 1996, 1997) work in transformational leadership behavior. The project management can benefit from this full range leadership model. The study demonstrated that transformational leadership behaviors can lead to greater outcomes of extra effort, effectiveness, and satisfaction in the project management environment.

Discussion of Implications

The results of this study contribute to the body of knowledge of leadership in the project management environment. Organizations recognize that leaders are a key element in organizational effectiveness and success. Project managers must conduct research to understand how the organization operates, the culture, and what was done in the past. Relationships have to be built to determine the inner workings of the organizations. To ensure success, organizations must recruit, select, develop, and cultivate leaders. The study's results indicate that subordinates favor project managers whose leadership styles are perceived as transformational. With one exception, subordinates indicated that contingent reward behaviors were perceived as a favorable management style by the participants of this study.

The participants in this study indicated significantly that leaders who display transformational leadership traits generate effects in their subordinates work behavior and willingness to exert extra effort, effectiveness, and satisfaction with the leader. It is important for project managers and leaders to receive training in these areas because of the valuable services they provide in the organization.

Based upon the findings, it appears that subordinates willingness to exert extra effort and satisfaction with their leader can be increased by project leadership selecting managers who utilize transformational leadership behaviors and by implementing training and development programs that focus on improving these same behaviors for all project leadership. Transformational leadership behaviors can be taught as indicated by Bass and Avolio (2004). This study did not address whether leadership development courses can alter the perception of subordinates of their leaders' behaviors under stress and nonstressful conditions.

The mean scores of all leadership traits are presented in Appendix B. The highest score of (8.1284) being a transformational leadership factor. When comparing this score to the Likert scale in the survey form (0=not at all, 1=once in awhile, 2=sometimes, 3=fairly often, 4=frequently), these findings indicate that the highest scores on all transformational leadership factors, "sometimes" and "fairly often" were more frequent. This indicates that even though project managers use transformational traits more frequently than transactional, the skills resulting in positive employee outcomes are being utilized.

When accessing the means of the individual factors, it is evident that project managers perceive managers as utilizing all three of the Full Range Model Leadership (FRML) to some degree. Transformational and contingent reward traits scored the highest with management by exception (passive and active) and laissez-faire utilized the least. A hierarchical order of leadership was discussed by both Avolio et al. (1995) and Bass and Avolio (1997). This concept is supported by this study. The FRLM makes the inference that every leader demonstrates each style of leadership to some degree. Bass (1988) argues that leaders partake in some type of exchange for performance. Transformational leaders go beyond that level of exchange. Burns (1978) views the FRML components as polar, other theorist supports this concept that transformational leadership complements transactional leadership (Bass, 1998). Leaders must understand both transformational and transactional leadership and apply the best model of leadership appropriate in order to be successful.

As revealed from this study and others, subordinates have common needs and wants from their leadership. One common trait of transformational leadership literature is communication. It appears that subordinates want to know what is to be accomplish and why, with a realistic view of the vision. They desire an attachment to the ultimate goal. One can conclude from this study that leaders' who are proactive in communicating, provide support, reward for achievement, have subordinates with a higher perception of leaders effectiveness, leading to higher levels of satisfaction with their leader, and a willingness to exert extra effort.

The results of this research study add to the project management and leadership body of knowledge. The study provides insights into leadership styles that affect the

project management and leadership environment. The study examined the effects that leadership styles have on subordinates' extra effort, perception of the leader, and satisfaction. Project managers who are satisfied with their jobs will produce and perform more effectively on the job, are more willing to meet and exceed client's needs, achieve project deliverable more effectively, thereby increasing multiple organizational performance benefits.

Recommendations for Future Research

Future research on leadership and management in the project management environment is recommended because of the fundamental role projects play in organizational performance and implementation of strategy, change, and innovation. It is about building relationships throughout the organizational hierarchy in dealing with the challenges associated with a project's success. This study included the members of the Project Management Institute across the United States. There are opportunities to conduct this research in other countries. Future researchers may be able to examine findings from specific organization types and industries, and to study gender differences in the project management and leadership area.

The study of transformational leadership is pertinent in project management. Such studies endorse the opportunity to involve sets of project teams in a study to provide inputs linked to a specified set of project managers and leaders. Further research includes providing related leadership training as a treatment, examining potential pre- and postchanges, and effects on organizational outcomes.

Organizations must implement the most effective leadership practices to remain successful in today's competitive economy. Further knowledge of Bass's (1985a) transformational leadership model in project management is needed to understand and expand the development and effectiveness of project leadership, related competencies, capabilities, and performance of project managers, their leaders, and their organizations (Bass, 1998).

This study provided conclusive findings relative to the style of leadership (i.e., transformational) that is most effective in the project management work environment. Findings conclude that subordinates have common desires from their leadership. Subordinates desire to know what is to be accomplished and why, a realistic view of the vision, and an attachment to the ultimate goal. Most project managers are project goal oriented. Therefore, having project managers that reward project success and are concerned with career goals builds a positive relationship between project managers and subordinates.