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Switch Leadership in Projects An Empirical Study Reflecting the Importance of Transformational Leadership on Project Success across Twenty Eight Nations

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Abstract

“The best way to find yourself is to lose yourself in the service of others.” *Mahatma Gandhi*

This paper documents an empirical analysis of leadership in project management practices on 153 projects across 28 nations. This is a two-phase research study for which 46 projects were studied in phase 1 representing 14 nations and 107 projects were examined in phase 2 originating from 25 nations. The main purpose of this research is to study the importance of project leadership and team related factors and enlist the factors that play a pivotal role in achieving project success.

It is a multinational and thus multicultural research study that represents the present day project environment, which is highly multicultural and multidisciplinary.

The results from the analysis of data obtained from phase 1 lead to the development of the phase 2 questionnaires that further explores the links between different leadership aspects and project success as pointed out in the phase 1.

At the end the author provides a tentative and suggestive list of factors displaying the impact of critical leadership factors on project success using.

Theoretical Background

There are an umpteen number of factors that may affect success on a project ([Lechler, 2000](#); [Gemuenden & Lechler, 1997](#)). The only agreement seems to be the disagreement in the field on what constitutes ‘project success’.

It is the aim of this study to investigate project leadership approaches in relation to success of the project, irrespective of the industry, budget, culture, or the geographic location. In doing this, the following research questions are addressed:

- Which leadership approach leads to a higher level of project success?
- How do leaders switch between different leadership approaches to be more successful?

Effective project manager leadership is an important success factor on projects. The capabilities of the people involved in resolving extraordinary situations and unforeseen problems are an important key for project success (Pinto 1986; Pinto, Slevin, 1988a, Zielasek, 1995). Human beings are complex entities and to generate uniform solutions, that apply to all the projects, irrespective of culture, geography, age, sex, religion, and personality factors, is a very difficult job, if not impossible.

Good leaders do inspire confidence in themselves, but a truly great leader inspires confidence within the people they lead to exceed their normal performance level. Bass and Avolio’s (1994) definition of leadership is centered on the action of transformation.

However, one constant in successful leadership can be established and that is the ability of a project manager to portray a strong role model to his project team. This does not suffice, though, to enhance project performance. The project manager should also display flexibility in his leadership actions towards certain team members, switching his relationship behaviors. This paper explores these two facets of a successful project manager leadership approach.

Previous studies on project success were carried out by Murphy, Baker and Fisher in U.S.A. (1974), Pinto & Slevin in U.S.A. (1988 a & b), Gemuenden and Lechler in Germany (1997), and Shenhar, Levy, and Dvir in

Israel (1997) deal effectively with project success factors. Murphy et al. (1974) had a sample size of 650 aeronautical, construction and other projects, Pinto and Slevin (1988b) had a sample of 409 projects from various industries, Gemuenden and Lechler (1997) used a sample of 448 projects and Shenhar et al. studied 127 Israeli project managers.

Methods

The data for this study was gathered through two different questionnaires distributed to project managers across 2 phases. Phase1 generated 46 responses out of 225 contacts made (a response rate of 20%). Phase 2 resulted in 107 responses out of a total of 400 contacts (a response rate of 27%), which was deemed sufficient, making an average response rate of 24% and a combined N=153. In order to create a theoretical sample, the respondents were selected with a view to ensuring the greatest possible heterogeneity.

The respondents were targeted across 28 countries in the world (please see Exhibit 6). After the initial contact by email and in some cases by telephone, questionnaires were mailed out to project managers electronically and by snail mail. It was done in two phases with respondents filling in the details of the most recent project they had finished. This helped in getting balanced responses so limiting the possibility of obtaining only the results of their best projects and not a more balanced representation.

Demographic Data of Phases 1 & 2 Combined (sample size= 153):

The sample of projects represents a balanced selection of industries as illustrated in the table below:

Type of industry	% of the 153 projects
Information Technology	19%
Production	18%
Education	10%
Health	10%
Consulting	5%
Automotive	5%
Construction	5%
Supply Chain	3%
Retail	3%
Resources (coal/agriculture)	2%
Environment	1%
Aerospace	1%
Other	18%

Exhibit 1

The average age of the project managers was 38 years with a mean experience of 9 years. There was an average of 4 phases in each project and the average number of weeks the projects lasted was 57 with an average budget of €16.4 million.

Age	No. Weeks	Budget	Experience	Phases
38	57	€16,387,915	6	4

Phase 1

This phase with 46 respondents was more qualitative in nature where questionnaire method was used alongside the interview technique. Questions were formulated to determine the predominant leadership style of the project managers using the Jerrell and Slevin (1984) leadership instrument. Project managers were asked if they changed their style and, if so, was it due to time, task or pressures.

The most successful style was identified by measurement against the Pinto and Slevin's (1988b) 12 Factor Model. This model is considered to be the best current measure available in the field, as it is empirically proved and closely linked to the project implementation stage. This scale is based on the reported opinions of a large number of project managers across various industries.

In phase 1 the following hypotheses were postulated and tested:

- *Hypothesis 1a. A switch in leadership style produces more overall success on projects*
- *Hypothesis 1b. The time factor has an impact on the choice of the project leadership style*
- *Hypothesis 1c. Projects with mainly autocratic project leadership tend to be successful*

Phase 2

In phase 2, with 107 responses and was more quantitative in nature, the link between switches in leadership style and project success was further explored through more detailed analysis of the project manager's leadership styles and behaviors using questions on leadership switches and the following assessment instruments: The project manager's overriding leadership style was contrasted against his timely use of certain other leadership behaviors displaying flexibility towards the individual team members.

For this study, the Multifactor Leadership Questionnaire-6S (MLQ) by Bass & Avolio (1992) was used to measure transformational leadership behaviors of idealized influence, inspirational motivation, intellectual stimulation, & individualized consideration. LBDQ (Leader Behaviour Description Questionnaire) by Stogdill (1963) was also used to evaluate Task-Relationship behaviors.

In phase 2 the following hypotheses were postulated and tested:

- *Hypothesis 2a. There is a link between transformational leadership and project success.*
- *Hypothesis 2b. The more experienced a project manager, the higher the project success.*

Results from Phase 1

Hypothesis 1a. A Switch in Leadership Style Produces More Overall Success on Projects

The qualitative data shows that there exists a relationship between switches in leadership style and a high success level on a project. This suggests that a project manager should exercise switch leadership in a project situation.

Eighty six percent of these switches were from the autocratic form toward a more consultative phase showing a tendency for project managers to start a project in the autocratic mode and, thereafter, switch to a more consultative approach.

The reasons for a project leader's decision to exercise switch leadership could arise from an awareness that the project is either progressing too slowly towards the desired goals, veering in the wrong direction, not moving at all, slipping backwards or that the team has lost direction.

Hypothesis 1b. The Time Factor Has an Impact on the Choice of the Project Leadership Style

There is a clear, overriding element of the set timescale in a project leadership situation. This temporal aspect gives researchers a natural, fixed starting point from which to develop a project management leadership model and this was the angle taken for this phase.

Indeed, successful project managers cited time as a reason for employing switch leadership to closely adhere to the project deadline.

Successful project managers are therefore able to carefully join time elements on a project. Pinto and Thoms (1999) underlined the importance of personal temporal skills as being desirable to a project manager.

Hypothesis 1c. Projects With Mainly Autocratic Project Leadership Tend to be More Successful

In terms of success the autocratic approach seems to be the most favored and even when the leader adopts this approach, there is not a high degree of storming on the team.

Verma (1997) sees project team leaders as using a shared leadership style that emphasizes participation, empowerment and trust. Successful project managers whom I interviewed practice a switch to or from this style, but do not remain in it all through the implementation sub-phases.

Fifty three percent of autocratic leaders correctly identified their leadership style indicating an awareness of being highly task-oriented.

Results from Phase 2

Findings from the qualitative survey in phase 1 helped in the formulation of research strategy for the phase 2 as I further explored the impact of various transformational leadership factors on project success. The first step of the data analysis investigates the main leadership styles and behaviors of project managers linked to project success.

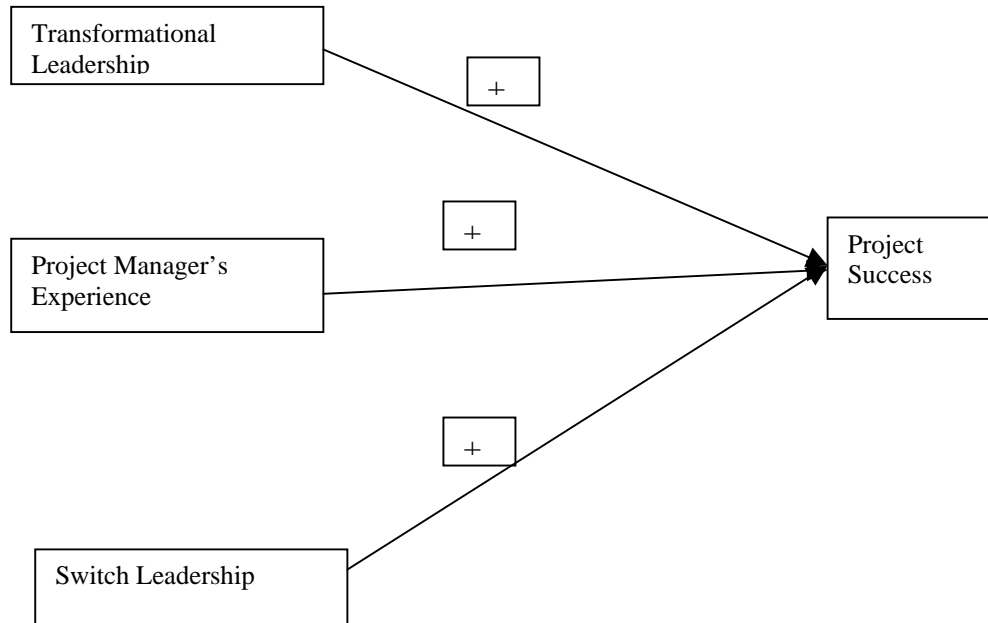


Exhibit 2: Hypothesized Relations between the Leadership variables and Project Success

Hypothesis 2a. There is a link between transformational leadership and project success. The transformational approach, being a positive role model for the team. Individual consideration is directly linked to project success ($r = .29$, $p = .003$), as is the ideal influence approach ($r = .36$, $p = .000$). (Please refer to Exhibit 3).

Hypothesis 2b. *The more experienced a project manager, the higher the project success.* The more experienced the project manager, the higher the project success ($r = .20$, $p = .042$). A strong relationship orientation also produces a more favourable outcome on a project ($r = .28$, $p = .003$).

Leadership Questions	Correlation with project success
The project manager is relationship-oriented	.28 $p = .003$
The project manager does not constantly remind the team that they have an incentive programme in place to reward the team efforts	.46 $p = .000$
The team understands the technology and expertise required to accomplish the specific technical action steps	.45 $p = .000$
The project manager exercises little managerial authority	.41 $p = .000$
The project manager is seen to be a strong, positive role model, displaying the transformational leadership behaviour of idealized influence	.36 $p = .000$
The project manager exercises the transformational leadership behaviour of inspirational motivation	.19 $p = .057$
The project manager is able to quickly identify and solve problems with the team	.34 $p = .000$
The project manager exercises the transformational leadership behaviour of individual consideration	.29 $p = .003$
The project manager level of experience	.20 $p = .042$

Exhibit 3

		Mean	s.d.	1	2	3	4	5	6	7
1	No. of years of PROJECT EXPERIENCE	7.85	6.43	1						
2	RELATIONSHIP ORIENTATION (out of a max score of 50)	40.00	4.41	.015	(.75)					
3	IDEALIZED INFLUENCE (out of a max score of 12 on MLQ-6s)	8.62	1.37	.04	.32**	(.53)				
4	INSPIRATION(out of a max score of 12 on MLQ-6s)	8.71	1.61	.22*	.34**	.41**	(.44)			
5	INDIVIDUAL CONSIDERATION(out of a max score of 12 on MLQ-6s)	8.77	1.70	.18	.40**	.26**	.56**	(.36)		
6	INTELLECTUAL(out of a max score of 12 on MLQ-6s)	8.27	1.92	.12	.21*	.11	.49**	.43**	(.72)	
7	PROJECT SUCCESS (out of a max score of 84 on Pinto Slevin Model)	67.55	10.08	.20*	.28**	.33**	.19	.29**	.08	(.87)

Exhibit 4

*the correlation is significant at the level of 0.05 (bilateral)

**the correlation is significant at the level of 0.05 (bilateral)

N=107 for all the above calculations. Figures in brackets in the table display Cronbach's Alpha.

Figures in brackets in the table display Cronbach's Alpha. I have found low values for the Cronbach's alpha of the subscales of the MLQ which indicates that these subscales are of dubious reliability (please refer to Exhibit 4). However, the Pinto and Slevin (1988b) project success measure has an alpha value of .87 which is excellent.

The findings in Exhibit 4 indicate that transformational leaders who inspire and motivate others by "providing meaning and challenge to their followers' work" (Avolio & Bass, 1995, 2002) have more project success. The spirit of the team is "aroused" while "enthusiasm and optimism are displayed" (Bass, 1998). The transformational leader builds relationships with followers through interactive communication, which forms a cultural bond between the two participants and leads to a shifting of values by both parties toward common ground. The leader inspires followers to see the attractive future state, while communicating expectations and demonstrating a commitment to goals and a shared vision.

Project managers who are relationship-oriented generate more successful projects ($r = .28, p = .003$). Hersey and Blanchard (1977) suggest that leaders need to display more relationship-oriented behaviour in some instances and more task oriented behaviour for other situations. In the present research, although a strong correlation was found between relationship-orientation and project success, there was no direct link found between project manager task-orientation and project success ($r = .08, p = .423$).

Autocratic	Consultative Autocratic	Democratic	Laissezfaire
4%	69%	18%	9%

Exhibit 5

The leadership decision-making approaches of the respondents (Table 4) suggest that Project Managers prefer an autocratic style of leadership. This does not correspond to the findings of Odusami, Iyagba and Omirin (2003) whose respondents were more inclined towards a democratic style. This can perhaps be explained by the demographic profile of the respondents and the type of industry. Odusami, Iyagba and Omirin (2003) studied 60 Project Managers in the construction industry in Nigeria, whereas results in Exhibit 5 are based on 107

respondents over 25 countries in various industries. The choice of leadership style is therefore perhaps affected by industry-specific or intercultural issues.

Results of regression analysis suggest that 51.7 % ($r^2 = .517$) of variance in 'project success' is explained by the following mentioned nine variables. First six of these nine variables were continuous and the remaining three were dichotomous.

List of variables explaining 51.7 % variance in project success (please see appendix for details):

1. No. of years of project experience
2. Relationship orientation
3. Idealized influence
4. Individual consideration
5. Inspirational motivation
6. Intellectual stimulation
7. The team understands the technology and expertise required to accomplish the specific technical action steps.
8. The project manager does not remind the team that they have a good incentive program in place to reward their efforts.
9. The project manager does not exercise managerial authority over the team to improve performance.

Discussion

"Leadership behaviours are flexible. It would be a mistake to assume that once identified as possessing a certain style, it is impossible to alter that style for different circumstances or situations. In fact, successful project managers have been shown to employ a great deal of flexibility in their use of leadership approaches" (Slevin & Pinto, 2004).

Qualitative data from phase 1 suggests that project managers exercise 'switch leadership', consciously or not with the aim of producing a more successful outcome. Further investigation was carried out in phase 2 using quantitative methods. No significant correlations have been found stemming from the sample data, so no clear indications have been established of the impact of 'switch leadership' on project success.

Phase 2 results show the link between the two leadership orientations: relationship-oriented project managers are more able to leverage the idealised influence transformational leadership approach ($r = .31$, $p = .001$). The data supports the current view that the reactive, one-dimensional project manager will find his or her leadership style may work well under some situations, but is totally unsuited for others (Kangis & Lee-Kelly, 2000).

My findings show that successful project managers do not constantly remind the team that they have an incentive program in place to reward the team efforts. However, the leadership contingent reward behavior is linked to management by exception on projects ($r = .33$, $p = .001$) which suggests that the project manager offers incentives on a case basis where required to correct a problematic situation. This supports Path-Goal theory (House, 1971), whereby rewards must correspond to the needs and interests of the individual team member.

When the team understands the technology and expertise required to accomplish the specific technical action steps the project is more successful as shown in Exhibit 3. Yukl (2002) similarly highlights the need for the project manager to choose his or her leadership actions according to technical aspects of the team members' work. There are higher scores on Pinto and Slevin (1988 a & b) success factors when the project manager is seen to be a strong, positive role model by the project team, displaying the transformational leadership behaviour of idealized influence and exercising little managerial authority. The more the team understands the technology and expertise required to accomplish the specific technical action steps, the less is the need to remind them that they have a good incentive program in place ($r = .35$, $p = .000$). There was a link between project managers who display inspirational approach and their ability to quickly identify and solve problems with his team ($r = .43$, $p = .000$).

Keegan and Den Hartog (2004) have suggested that transformational leadership is relevant to the field of Project Management, but the development of new forms of leadership theories are perhaps required for project managers as line managers appear to have more charismatic influence over followers.

Findings show that the project manager who exercises the transformational leadership behaviour of inspirational motivation enjoys project success. Inspiration is defined as inspiring and empowering followers to

enthusiastically accept and pursue challenging goals and a mission. The development of a shared vision is an integral component of the idealized, transformational leader's role (Jung & Avolio, 2000). It helps the team to look towards the future, while gaining group acceptance of ideas through the alignment of personal values and interests to the group's purposes (Avolio & Bass, 2002; Bass, 1990, 1998; Jung & Avolio, 2000).

A project manager must be a strong transformational role model for the team and display a second, more tactical approach to adapt relationship actions towards the team to achieve task success.

Limitations

In the present study, the project managers assessed their own leadership style and the views of the team were not taken into account to give a 360 degree view.

The managers gave a subjective analysis of their project success. It is possible that bias was introduced as managers, in their retrospections, cannot, or do not, always accurately recall the state of the decision situation attributes. The passing of time may add to the error of recalls.

Conclusion

Idealized influence is an important leader quality that has an impact on project success. It must be used in conjunction with relationship behaviors. Project manager experience helps develop an idea on how and when to use various styles to achieve a higher success on projects. The carrot and stick approach to get the work done needs to be replaced by a more humane style by project managers.

A leadership approach is a way of behaving to influence a group of people towards achieving a goal. Different theories could be more useful in different situations

The challenge is therefore to fit the theory, skills, and knowledge of the leader to the situation. Project managers who employ transformational leadership and, more specifically, idealized influence, in conjunction with a relationship-oriented approach enjoy more project success as defined by Pinto and Slevin (1988).

Qualitative data from phase 1 suggests that project managers exercise 'switch leadership' consciously or not with the aim of producing a more successful outcome. Further investigation was carried out in Phase 2 using quantitative research, but no significant correlations have been found stemming from the sample data, so no clear indications have been established of the impact of 'switch leadership' on project success. Future research is required to further define and quantitatively relate switches in leadership approaches with success on projects.

Definitions

Idealized influence indicates whether you hold subordinates' trust, maintain their faith and respect, show dedication to them, appeal to their hopes and dreams, and act as their role model.

Inspirational motivation measures the degree to which you provide a vision, use appropriate symbols and images to help others focus on their work, and try to make others feel their work is significant.

Intellectual stimulation shows the degree to which you encourage others to be creative in looking at old problems in new ways, create an environment that is tolerant.

Individualized consideration indicates the degree to which you show interest in others' well-being, assign projects individually, and pay attention to those who seem less involved in the group.

Project Success reflects the total score a project manager has got on the Pinto & Slevin's 12 factor model measuring project success.

Experience shows the experience in years a project manager has.

Relationship is assessed using the task-relationship instrument developed by Stogdill (1963).

Switch leadership is the conscious ability to manoeuvre from one leadership approach to another to enhance performance on a project. It is more in the domain of situational leadership approaches.

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Exhibit 6

Country-wise distribution of data obtained from the two phases is represented in the table below:

Combined Phase I and II					
#	Country	# of Respondents Phase 2	# of Respondents Phase 1	TOTAL	%
1	France	49	29	78	51
2	U.S.A	10	1	11	7
3	U.K.	7	3	10	7
4	India	7	1	8	5
5	Malaysia	4	1	5	3
6	Germany	5		5	3
7	Morocco	4	3	7	5
8	China	3		3	2
9	South Africa	2		2	1
10	Europe*	2		2	1
11	Africa	1		1	1
12	Canada	1	1	2	1
13	Hong Kong	1		1	1
14	Hungary	1		1	1
15	Czech Republic	1		1	1
16	Spain	1		1	1
17	Sweden	1	1	2	1
18	Ukraine	1		1	1
19	New Zealand	1		1	1
20	Mexico	1		1	1
21	Lebanon	1		1	1
22	U.A.E.	1	1	2	1
23	Iran	1		1	1
24	Thailand	1		1	1
25	Indonesia		1	1	1
26	Australia		1	1	1
27	Congo		1	1	1
28	Cameroon		1	1	1
29	Belgium		1	1	1
	Total Responses	107	46	153	104

*not counted as a separate country.

Appendix

Variables introduites /éliminées^b

Modèle	Variables introduites	Variables éliminées	Méthode
1	IDEALINF, B3AGREE3, EXPERIEN, D4_5, INTELLEC, RELATION, B2GOAL4, INDCONS _a , INSPIRAT	,	Introduire

a. Toutes variables requises introduites

b. Variable dépendante : PINTOTAL

Récapitulatif du modèle

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,747 ^a	,558	,517	7,00914

a. Valeurs prédites : (constantes), IDEALINF, B3AGREE3, EXPERIEN, D4_5, INTELLEC, RELATION, B2GOAL4, INDCONS, INSPIRAT