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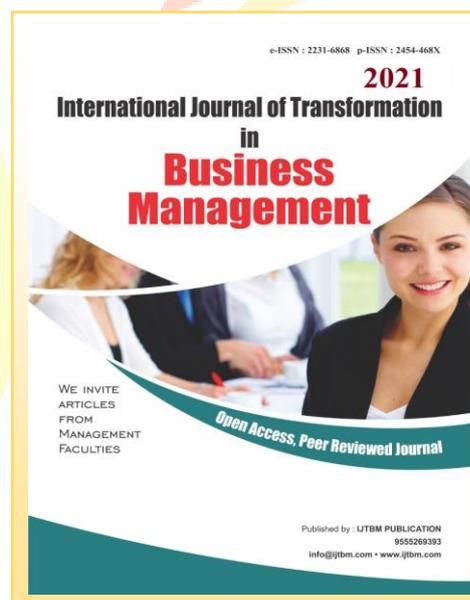
LINKING LEADERSHIP STYLES TO PROJECT  
SUCCESS IN AFRICA: A CASE STUDY OF  
MOROCCAN ENGINEERING COMPANY

Dr. Mohamed Rhaihat  
University of Mohamed VI Polytechnic  
Morocco

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## ABSTRACT

### Purpose

The purpose of the study was to identify to what extent leadership styles and characteristics associated among project managers contribute to project success and provide recommendations on how to apply it in Moroccan companies.

### Research method

This study is a descriptive quantitative case study to gain knowledge and used to answer the research questions in the area of leadership and project management. The main leadership styles (transformational and transactional) and characteristics of project managers along with project success indicators are measured with a survey inspired from the Multifactor Leadership Questionnaire 6S developed by Bass and Avolio in 1995.

### Findings

Results revealed that leadership has a positive impact on project success and helps improve the overall project performance. Implications and lessons learned were explored to provide recommendations for future application in other Moroccan engineering companies.

### Practical implications

The findings of the paper would contribute to producing a practical framework of leadership dedicated to Moroccan companies.

### Originality/value

There is hardly any research in Morocco, which has been conducted which has surveyed how a leadership could have a positive impact on project success, and can be successfully employed in Moroccan companies.

**Keywords:** Morocco, Project Success, Project Managers, Transformational Leadership, Transactional Leadership.

## INTRODUCTION

It is commonly held that in today's context of high competitiveness and globalization, organizations' leadership must understand the implications of market changes on processes and individuals to respond most efficiently to client expectations by adapting the business given their history, culture, and values. (Kissi et al., 2013)

In this context, the Kingdom of Morocco is launching megaprojects to renew its infrastructures and increase its industrial production approach. (Bensalem & El Mostafa, 2014) To deliver successful projects, Moroccan engineering companies, in particular, have to respond to the nation's ambition of becoming an African economic hub by dealing with competition, complying with world class standards, and improving the overall project performance. (Doherty et al., 2015)

An industrial project, in this scope, is considered as an organization of individuals with a mission to achieve a specific goal within a specific timeframe. Therefore, this organization is led by the project manager whose leadership is important to deliver the project to the client according to quality, schedule, budget and safety standards.

During the last few decades, many theories of leadership styles emerged, including those styles such as transactional and transformational leadership. These leadership styles claim to add benefit to a project's success. Moreover, such leadership may help improve effectiveness and efficiency and manage change successfully along a project's lifecycle. (Anantatmula & al., 2010; Nixon et al., 2011)

The purpose of this paper is to review such leadership styles in a project context, using the case study of a Moroccan-based company. The paper's aim is to identify possible associations between leadership styles and characteristics associated with project success among project managers in this particular company.

### **Problem Statement**

Despite many advances in project management methodologies that have been made, some projects continue to fail. There is a strong emphasis on the key leadership role of the project manager, who must be

empowered to motivate team members and create an effective atmosphere for the project team to meet greater challenges in today's global economy. (Nixon et al., 2011; Yang et al., 2010). According to the research conducted by Zakaria et al. (2015), the lack of effective leadership will cause project's failure regarding cost (unnecessary expenditures), schedule (delays in project delivery,) and design errors.

The problem is that projects continue to fail due to ineffective leadership. (Nixon et al., 2011)

Empirical evidence suggests that the existence of leadership characteristics could contribute to the effective direction to deal with different challenges and obstacles confronted by project managers. (Berg & Karlsen, 2007; Muller & Turner, 2007).

### **Purpose**

The aim of this paper was to explore the extent to which leadership styles and characteristics associated with project managers, contribute to successful projects. The study investigated two leadership styles: transactional and transformational with their characteristics, based on the Multi Leadership Style Questionnaire 6S (MLQ 6S).

The findings revealed that the existence of certain leadership characteristics helps project managers to improve project success. Implications and lessons learned were

explored to provide recommendations for future application in other Moroccan engineering companies and project managers more widely.

### Research Question and Hypothesis

- To what extent leadership styles relates to project success in Moroccan engineering companies?
- What recommendations can be formulated for the practice of project managers and further research based on the findings of this study?

The following hypotheses are therefore suggested:

H1: There is no relationship between project success and transformational leadership among project managers?

H1: There is no relationship between project success and transactional leadership among project managers?

### LITERATURE REVIEW

Academic research on leadership theory started in the 21<sup>st</sup> Century, and some approaches have been developed continuously over time. However, a newfound theory of leadership emerged in the last decades called the “transformational approach” whereby a leader manages to push performance beyond the expectations of his followers. (Bass, 1985)

This review begins by covering the leadership styles studied in this paper such as transactional, and transformational. Secondly, it reviews the link between project performance and project success, and the influence of leadership style on project success. Finally, it highlights the leadership and project success in Morocco’s context.

A gap in the literature is observed regarding the role of project managers’ leadership on project success (Turner & Muller, 2007) in general, and particularly in Morocco, and how it can be applied to fit the local context to help position the country as an emerging African economy.

### Leadership Styles

Over time, organizations have developed their leadership style from one that is autocratic to one where collaborators are comfortable and empowered to participate in the leadership and management processes of their organizations for greater growth. During the last decades, contemporary thinking has explored the idea of leadership from different perspectives, rather than seeking ‘one true theory’ of leadership.

James Burns (1978) describes transactional leadership, as a win-win relationship of rewards between the leader and followers that in a way motivates them to perform and achieve.

Transactional leadership, which is also called managerial leadership, emphasizes the role of control and command of the team members whereby the leader encourages compliance of his/her subordinates through rewards and punishments.

According to Avolio (2004) and Burns (1978), transactional leadership is based on:

- Contingent Rewards: Rewards that are set up by transactional leaders and linked to the goals achieved. Role and responsibilities with expectations are clarified in advance. Resources are provided to reach successful performance and results.
- Management by Exception: Transactional leaders manage the work of followers and intervene when there is a deviation from the rules and standards by taking corrective actions.
- Laissez-faire leadership is a delegative process where the leader allows the team or the followers to deal with situations and make the decisions. This style can be efficient with highly competent and skilled team members and when the objectives and path forward or strategy are

well understood, and the leader or organization's vision is well embraced.

The transformational leadership which is commonly thought to have completed the other leadership schools and has become part of them, is defined by Bass and Avolio (1990) as the main "Four Is" characteristics:

- Idealized influence (charisma): by setting the example and developing self-led followers.
- Individualized consideration: where a leader should develop each follower to get the best value for the organization
- Intellectual stimulation: a process used to arouse high awareness in individuals by encouraging problem and solving innovation to address companies challenges
- Inspirational motivation: where a leader set a vision and make followers believe in it and sacrifice their own life to attain it.

Rong Li et al. (2015) conducted a survey of 388 senior managers in Taiwan which showed that a CEO's transformational leadership improves communication with middle-level managers, fosters effective collaboration and problem solving and then, in turn, enhances ambidexterity, not only at

the organizational level but also at the managers level.

### *The Project Manager's Role and Project Success*

Projects are considered as small organizations within the overall organization established to accomplish a certain strategic objective. Billions of dollars of investments are made each year for such projects, and yet, despite the progress of project management processes and tools, many projects continue to fail on the ground (Williams, 2005). Consequently, many current research efforts are focused on improving project success. Kerzner (2006) confirmed that projects continue to fail by not meeting budgets and schedules due to lack of motivated employees, communication, productivity and commitment from team members. It is clear that from Kerzner's work, people are the crux of either success or failure of projects. Therefore the leadership role of the project manager is very crucial.

Many studies explore the term 'Project Success.' Some consider it as a uni-dimensional concept related to meeting cost, schedule and quality (Müller and Turner, 2007; Turner, 2009) whereas others consider project success as a multi-dimensional concept including many more attributes such as team performance, client satisfaction,

project performance,... (Jugdev and Muller, 2012). A survey conducted by Mir and Pinnington (2014) in UAE-based organizations demonstrates that PM performance is correlated to Project Success. By paying greater attention to this relationship, organizations can attain project success. The Project Management Body of Knowledge (Project Management Institute (PMI), 2008) asserted that the project success criteria should be determined in the project charter by stakeholders.

However, in this study, we refer to "project success" when project performance is met (schedule, cost, and quality), and client satisfaction is met according to PMI definition, and the work of Mir & Pinnington (2013).

### *Leadership and project success*

In Turner and Muller's (2005) study where they review the contribution of the project manager's leadership role about project success, they concluded that "the literature has largely ignored the impact of the project manager, and his/her leadership style and competence, on project success."

Leadership is an indispensable part of project management, directly impacting project outcomes (Shenhar et al., 2002). The importance of leadership has been noted throughout the project management literature, as a requirement for project

excellence (Kerzner, 1987), a determinant of overall project culture (Shore, 2008), and a vehicle for mobilizing people for change (Patterson, 2010).

Anantatmula (2010) confirmed that Leadership is helping: “motivating and guiding people to realize their potential and achieve tougher and challenging organizational goals”. In much research, leadership style and personal traits have also been identified as a critical success factor, determining either the success or failure of a project (Anantatmula, 2010).

#### *Leadership and Project Success in Morocco*

Dickson et al. (2012) found that as a general statement, culture does matter, and not in a small way. It matters in how leaders emerge, how they are selected, developed, and seen (or not seen) as role models to be emulated, and it matters in ways that are predictable, and that organizations can respond to strategically. Campbell (2005) suggested a universal leadership competency model including such factors as vision, empowerment, and entrepreneurialism, and Bass (1997) provided evidence that transformational leadership is preferred and effective worldwide.

The Project Management Institute (PMI) conducted an in-depth study spanning four years and involving 65 case study

organizations from 14 countries to find what value Project Management (PM) delivers to organizations (Thomas and Mullaly, 2009). The PMI study confirmed the value of PM, but indicated that its value is dependent on culture, implementation ‘fit’ with organization needs and it raised questions about the sustainability of value generation. The study concluded that PM creates both tangible and intangible benefits (Thomas and Mullaly, 2008). This result is supported by many other researchers (Bryde, 2003; Kwak et al., 2000) but such value is defined differently from one study to another.

According to Doherty et al. (2015), Morocco is the unique country in the transatlantic basin that is demonstrating leadership competency at the national level by defining a new regional identity in North Africa, and in leading regional agendas which helped the country avoid the turmoil of the Arab spring, unlike its neighbors. To address the country’s challenges, Bensalem and El Mostafa (2014) suggested that leadership culture should be encouraged in Moroccan companies and also proposed to create a think tank in leadership to define a Moroccan model of leadership.

#### **RESEARCH DESIGN & METHOD**

The case study theory framework based on Yin (2013) was utilized for this paper to generate theory from data. The research

analyzed a single case study scenario for the following reasons: the Engineering company is the leader in Morocco in project management and engineering services with a \$200 million turnover and 1700 employees, and it is a unique case in Morocco. (2) Leadership and project success from typical cases in Morocco have never been studied before; therefore, a single case study scenario was appropriate for finding a new concept (Yin, 2013).

This study is a descriptive quantitative case study intended to gain knowledge and used to answer the research questions in the area of leadership styles and project success. In this research, the main leadership attributes of Moroccan project managers are measured with a survey inspired from the Multifactor Leadership Questionnaire 6S developed by Bass and Avolio in 2004, while the project success indicators are developed by the author.

### **Measure & Instrument**

We measured leadership characteristics using the Multifactor Leadership Questionnaire (MLQ) form 6S, also known as MLQ 6S. The short form is made up of 21-items instrument on a 5 point Likert scale (0—"Not at all" and 7—"Frequently, if not always"). According to Avolio and Bass (2004), "the MLQ offers researchers the most validated and efficient measure of transformational leadership, and

a full range of leadership behaviors". Furthermore, it assesses a broad range of leadership types from transactional, laissez-faire, and transformational.

We also measured project success with two indicators: project performance and client satisfaction, on the 6-item instrument on 5 points Likert scale (1—"Strongly Disagree" and 5—"Strongly Agree"). Data on demographic such as age, gender, experience, average project budget, educational level, and leadership training were also gathered.

The first part describes the information of the respondents; the second part measures the two styles of leadership; the third part measured project success. For the present study, the focus is on the second part that reflects two styles of leadership and their characteristics. Transformational leadership scale consists of 12 items grouped in 4 subscales (Intellectual Stimulation, Idealized Influence, Inspirational Motivation and Individual consideration). Transformational leadership is the mean of the four characteristics.

Transactional leadership scale consists of 9 items, categorized in 3 subscales (Contingent Reward, and Management-by-exception, and laissez-faire). Transactional leadership is the mean of the three characteristics.

The third part an assessment of project success developed by the author,

consisting of 6 items grouped in 2 subscales (client satisfaction, and project performance). Every subscale consists of 3 items. Project success is the mean of the two characteristics.

**Theoretical Framework**

The conceptual framework developed for this study is presented in Figure 1. The

researcher contends that the characteristics of transformational, transactional and laissez-faire leadership styles have an association with project success. The detailed justification was provided earlier in the literature review section of this paper.

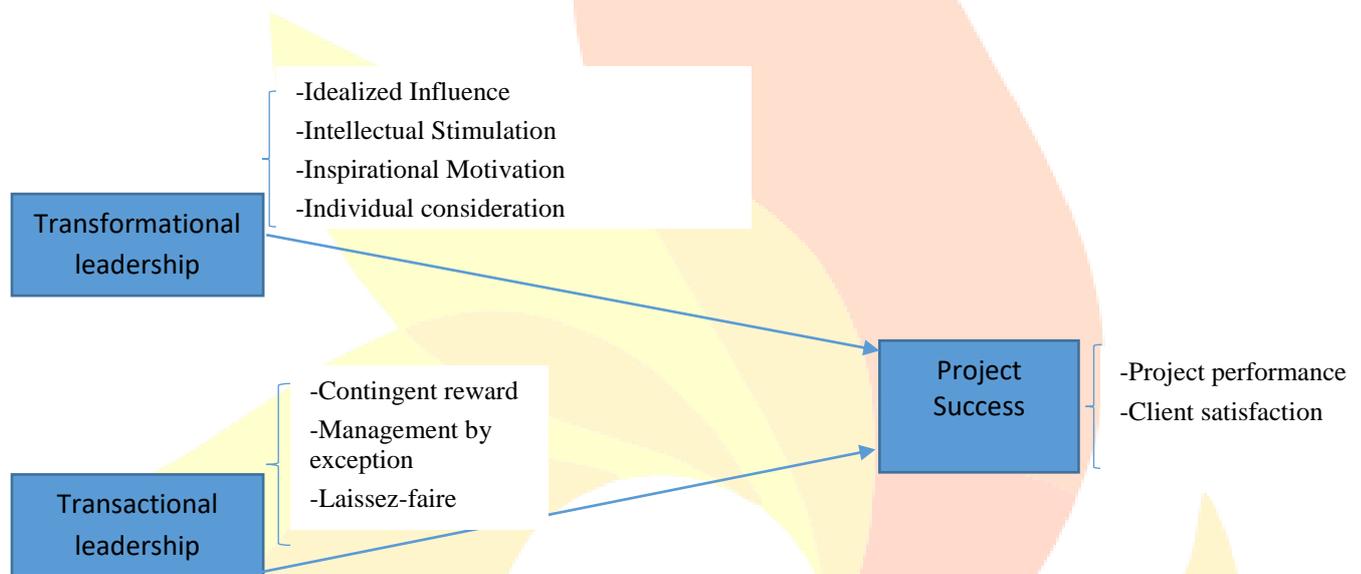


Figure 1: Conceptual framework of the model

**SAMPLE AND PROCEDURE**

The objectives of the study were to examine ways by which project manager's leadership styles and characteristics influence project success. We considered quantitative data collection and testing of hypotheses as the most suitable approach to achieve the objectives. The organization under study employed about 1,700 staff based in Morocco offices.

A sample of 100 employees was selected in mainly the department of project

management called Process Industry, as they are directly responsible for project outcomes, and was also sent to clients, to provide accurate information on project performance and success. The sample is supposed to present the company project leadership from project director, project managers, project coordinators/engineers, and clients. An internet-based questionnaire was prepared and sent via an e-mail link. Respondents were initially given one week to respond. At the end of the first week, we extended the

response deadline by another week. The 32 respondents assessed their leadership characteristics. Finally, they provided data on the performance and success of their projects.

The key variables examined were:

- Demographics of project managers (age, gender, experience, education, project budget, leadership training,...)
- Independent variable of project success (project performance and client satisfaction) and
- Dependent variables of the characteristics of leadership: transformational (charismatic, motivational, individualized consideration, and intellectual stimulation), and transactional (contingent reward, management by exception, and laissez-faire style)

## **DATA ANALYSIS**

### **Respondents Profile**

The total population of managers involved directly in project management is around 100, from project directors, project

managers, project coordinators, and clients. The total active response rate of the survey was 32%; 32 respondents completed and returned the survey out of 100 who were contacted.

In term of demographics, the majority of respondents were male (75%) of an age between 23 to 44 years (96%) which is due, in part, to the young age of the joint venture (founded in 2010). Respondents held various positions, ranging from client (6.3%, n=2), project director (9.4%, n= 3), project managers (34%, n=11), and project coordinators (50%, n=16). 50% of the respondents have only 5 to 10 years of experience (n= 16) which shows a relatively inexperienced team of project managers and coordinators already holding project management positions.

Among the respondents, 52% (n=17) managed projects of more than \$10 million dollar budgets which are due to the large influx of investment made by the clients (\$15 billion dollar from 2010-2025) into the joint venture. 62% respondents (n=21) have already a leadership training which part of the Engineering company annual training plan for project managers.

Further characteristics of the respondents are presented in Table 1

Table1: Table of frequencies

Respondents	Frequencies	Percentage (%)
<b>Gender</b>		
Male	24	75,0
Female	8	25,0
<b>Age</b>		
23 to 34	23	71,9
35 to 44	8	25,0
45 to 54	1	3,1
<b>Educational level</b>		
Bachelor degree	5	15,6
Master degree	8	25,0
Doctoral degree	19	59,4
<b>Position</b>		
Client	2	6,3
Project director	3	9,4
Project manager	11	34,4
Project coordinator	16	50,0
<b>Years of experience in PM</b>		
At least 1 year but less than 3 years	2	6,3
At least 3 years but less than 5 years	9	28,1
At least 5 years but less than 10 years	16	50,0
Less than 1 year	5	15,6
<b>average size project</b>		

budgets			
	less than 10 million \$	15	46,9
	10 million \$ - 100 million \$	4	12,5
	more than 100 million \$	13	40,6
Leadership training	Yes	21	62
	No	11	38

### Descriptive Statistics and Reliability Analysis

Findings from table 2 show that client satisfaction and overall project success were at the top of the variables means (8.88) which explains the high priority of the population to satisfy and meet client expectations. For leadership characteristics, management by exception and idealized influence scored means over 8 which is a high score according to the MLQ. Moreover, it asserted that transactional and transformational characteristics exist in the population and may be subject to more investigation and analysis. Overall

transformational and transactional leadership indicators are over 7 which is moderate according to the instrument used, and it proves their existence in the sampled project management population.

Based on Table 2, the reliability analysis result shows acceptable values of Cronbach's Alpha superior to 0,8 which means that the instrument used (questionnaire) is valid and stable for the scales used for leadership characteristics and styles (transformational and transactional), and project success (project performance and client satisfaction).



Table 2: Descriptive statistics and reliability analysis

Descriptive Statistics & reliability analysis				
	Maximum	Mean	Standard Deviation	Cronbach's Alpha
client satisfaction	11	8,88	1,264	,873
Management by exception	11	8,16	2,343	,878
Idealized influence	12	8,03	2,584	,874

Project Success	10	7,88	1,136	,884
Inspirational motivation	11	7,72	2,581	,869
Transformational Leadership	11	7,66	2,109	,881
Contingent Reward	12	7,47	2,578	,898
Individual consideration	12	7,47	2,540	,995
Intellectual stimulation	11	7,41	2,030	,885
Transactional Leadership	10	7,21	1,724	,875
Project performance	11	6,88	1,755	,911
Laissez faire leadership	9	6,00	1,967	,906

**Inter-correlation**

After the descriptive statistics, we checked the inter-correlation between the variables to see if there is an evident correlation. We observe weak and negative correlations between the variables in this study and strong correlation between the same set of variables ( dependant and independent) which proves the validity and robustness of the instrument.

However, we can conclude that no correlation is observed to support the research question and hypothesis between the leadership styles and project success.

Table 3: Inter-correlation

Correlation									
	Idealized influence	Inspirational motivation	Intellectual stimulation	Individual consideration	Transactional leadership	Management by exception	Laissez-faire leadership	client satisfaction	Project performance
Idealized influence	1								
Inspirational motivation	,814**	1							
Intellectual stimulation	,791**	,712**	1						
Individual consideration	,533**	,567**	,600**	1					
Transactional leadership	,797**	,665**	,752**	,537**	1				
Management by exception	,298	,264	,603**	,584**	,372*	1			
Laissez-faire leadership	,628**	,724**	,630**	,362*	,413*	,224	1		
client satisfaction								1	
Project performance									1

n	-,068	-,100	-,269	-,172	-,209	,050	-,013	1	
Individual considerat ion	,164	-,022	,196	,151	-,008	-,050	,224	,109	1
Transactio nal leadership									
Managem ent by exception									
Laissez- faire leadership									
client satisfactio n									
Project performan ce									

### Hypothesis testing

A Pearson chi-squared test was run on the variables of transformational leadership characteristics in the respondents and the projects' success. (Table 4) The Chi-Squared test can be applied to test goodness of fit and a test of independence. We observed a strong association between transformational leadership and project success,  $\chi^2 (104) = 223.111, p=.000$ . Significant and we can reject the null hypothesis. So there is an association between transformational leadership and project success.

Same test was ran for the transactional leadership,  $\chi^2 (88) = 193.88, p=.000$ . We conclude that we can reject the null hypothesis H2. So there is an association between transactional leadership and project success.

Table 4: Chi-Square Tests

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square (transformational)	223,111 <sup>a</sup>	104	,000
Likelihood Ratio	115,348	104	,210
Linear-by-Linear Association	,004	1	,948
N of Valid Cases	32		
Pearson Chi-Square (Transactional)	193,244 <sup>a</sup>	88	,000
Likelihood Ratio	105,845	88	,095
Linear-by-Linear Association	,000	1	,988
N of Valid Cases	32		

**Control Variable**

Avolio and Bass confirmed that managers could be trained and prepared to practice transactional and transformational leadership skills with their teams and in their corporations. (1990) Rong Li et al. recommended designing specific training and coaching programs for followers to enhance their perceptions of transformational leadership. (2015)

In alignment with the purpose, we will dig deeper and look only for the project manager’s stream and who had previous leadership training. We believe that the training help managers to be better leaders.

We will seek to find an association and then the correlation.

Based on the tables (5, and 6) in Appendix 2, we observed a strong association between transformational leadership and project success,  $\chi^2 (24) = 47.45, p=.00$ . Significant and we can reject the null hypothesis. So there is a strong association between transformational leadership and project success.

Moreover, the correlation results for the association between transformational leadership and project success ( $r_s = 0,794, p < 0,000$ ) provide strong support to H1, indicating that there is a positive relationship

between transformational leadership among Project Managers on project success.

Based on Tables (7 and 8) in appendix 2, the same conclusion is valid for transactional leadership and project success; strong correlation ( $r_s = 0,905$ ,  $p < 0,000$ ) which support H2, indicating that transactional leadership has a positive impact on project success.

## **CONCLUSION AND RECOMMENDATIONS**

The main objective of this research was to examine the impact of leadership styles both transactional and transformational of project managers on project success in Morocco at the engineering company. The results from this study demonstrate that project managers' transformational and transactional leadership impact positively on project success explaining the high correlation which was superior to 0.7 with  $P < 0.000$ , more than was it expected. This is reliable with many researches previously done in other western organizations such as Waldman and Atwater (1994) who studied R&D project teams found that transformational leadership of higher level managers positively influence project

outcomes and Kiss et al. (2013) who concluded that transformational leadership of portfolio managers has a positive impact on project performance.

This study has some limitations regarding the research design, the sample, and the findings. Since this research is a case study, the size may not affect the results. The size of the sample placed some limitations as to the total number of participants surveyed (30 respondents over 1700 employees). Communication around the study was not done before this study which could be an improvement of relevance of future studies. The study adopted a quantitative approach using a survey as a tool of data gathering. It has certain limitations to capture the complexities within the associations and the relationships studied. Qualitative approach mixed with quantitative tools may explore in greater detail the effect of transformational and transactional leadership on project success.

A large survey based on MLQ for all stakeholders might add value to a future and for more in-depth study. Such a small sample size of project managers limited the possible insights gained and only partially addressed the research questions. The findings can not be generalized for all Moroccan companies.

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APPENDIX 1: QUESTIONNAIRE

Linking project managers' leadership styles to project success in Morocco

Part 1: About you

1. What is your age?

- 23 to 34
- 35 to 44
- 45 to 54
- 55 or older

2. What is your gender?

- Male
- Female

3. What is the highest level of school you have completed or the highest degree you have received?

- Bachelor degree
- Master degree
- Doctoral degree

4. what is your current position?

- Project director
- Project manager
- Project engineer /coordinator
- Project control manager
- Client

Other (please specify)

5. About how many years have you been in your current position?

- Less than 1 year
- At least 1 year but less than 3 years
- At least 3 years but less than 5 years
- At least 5 years but less than 10 years

- 10 years or more

6. In what type of business do you work?

- engineering and construction
- education
- industry
- banking

Other (please specify)

7. Average size project budgets you have worked with?

- less than 10 million \$
- 10 million \$ - 100 million \$
- more than 100 million \$

8. Did you receive any formal training in leadership during your role?

- yes
- no

## Part 2: Multifactor Leadership Questionnaire (MLQ) Form 6S

**Instructions:** This part of questionnaire provides a description of your leadership style.

Twenty-one descriptive statements are listed below. Judge how frequently each statement fits you. Please answer all the items.

### KEY

0 - Not at all 1 - Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always

9. I make others feel good to be around me

- 0
- 1
- 2
- 3
- 4

10. I express with a few simple words what we could and should do

- 0
- 1
- 2
- 3
- 4

11. I enable others to think about old problems in new ways

- 0
- 1
- 2
- 3
- 4

12. I help others develop themselves

- 0
- 1
- 2
- 3
- 4

13. I tell others what to do if they want to be rewarded for their work

- 0
- 1
- 2
- 3
- 4

14. I am satisfied when others meet agreed-upon standards

- 0
- 1
- 2
- 3
- 4

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15. I am content to let others continue working in the same ways always

- 0
- 1
- 2
- 3
- 4

16. Others have complete faith in me

- 0
- 1
- 2
- 3
- 4

17. I provide appealing images about what we can do

- 0
- 1
- 2
- 3
- 4

18. I provide others with new ways of looking at puzzling things

- 0
- 1
- 2
- 3
- 4

19. I let others know how I think they are doing

- 0
- 1
- 2
- 3
- 4

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20. I provide recognition/rewards when others reach their goals

- 0
- 1
- 2
- 3
- 4

21. As long as things are working, I do not try to change anything

- 0
- 1
- 2
- 3
- 4

22. Whatever others want to do is OK with me

- 0
- 1
- 2
- 3
- 4

23. Others are proud to be associated with me

- 0
- 1
- 2
- 3
- 4

24. I help others find meaning in their work

- 0
- 1
- 2
- 3
- 4

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25. I get others to rethink ideas that they had never questioned before

- 0
- 1
- 2
- 3
- 4

26. I give personal attention to others who seem rejected

- 0
- 1
- 2
- 3
- 4

27. I call attention to what others can get for what they accomplish

- 0
- 1
- 2
- 3
- 4

28. I tell others the standards they have to know to carry out their work

- 0
- 1
- 2
- 3
- 4

29. I ask no more of others than what is absolutely essential

- 0
- 1
- 2
- 3
- 4

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The MLQ-6S measures your leadership on factors related to transformational and transactional leadership styles. Your score for each factor is determined by summing three specified items on the questionnaire.

Idealized influence (items 9, 16, and 23) \_\_\_\_\_ Factor 1  
Inspirational motivation (items 10, 17, and 24) \_\_\_\_\_ Factor 2  
Intellectual stimulation (items 11, 18, and 25) \_\_\_\_\_ Factor 3  
Individual consideration (items 12, 19, and 26) \_\_\_\_\_ Factor 4  
Transformational leadership \_\_\_\_\_ (Factor 4)/3  
Contingent reward (items 13, 20, and 27) \_\_\_\_\_ Factor 5  
Management-by-exception (items 14, 21, and 28) \_\_\_\_\_ Factor 6  
Laissez-faire leadership (items 15, 22, and 29) \_\_\_\_\_ Factor 7  
Transactional leadership \_\_\_\_\_ (Factor 7)/3

**Score range:** HIGH = 9-12, MODERATE = 5-8, LOW = 0-4

**Part 3: Project success assessment**

**PLEASE RESPOND** to each of the following statements about your project. Indicate the degree to which you agree or disagree with the statement by marking one response for each item.

**KEY**

0: strongly disagree 1: disagree 2: neither agree or disagree 3: agree 4: strongly agree

30. end product/service /project met client requirement?

- 0
- 1
- 2
- 3
- 4

31. Project accomplished stakeholders' objectives

- 0
- 1
- 2
- 3
- 4

32. Improved performance for client

- 0
- 1
- 2
- 3
- 4

33. Scope was effectively managed and met client requests

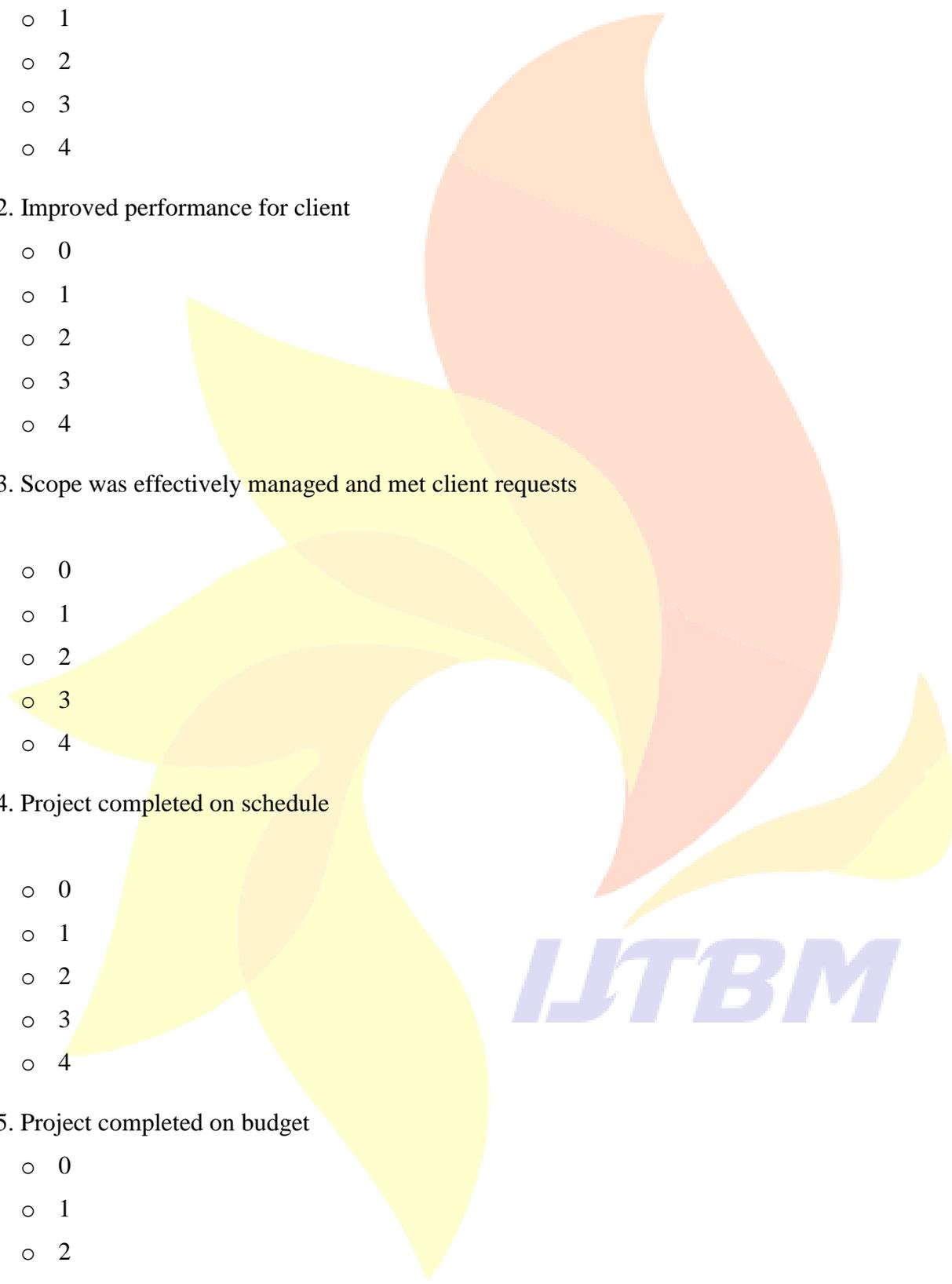
- 0
- 1
- 2
- 3
- 4

34. Project completed on schedule

- 0
- 1
- 2
- 3
- 4

35. Project completed on budget

- 0
- 1
- 2
- 3
- 4

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**IJTBM**

This part of questionnaire assesses on factors related to project success. Your score for each factor is determined by summing three specified items on the questionnaire.

Client satisfaction ( item 30, 31, 32)\_\_\_\_\_Factor8

Project performance ( item 33, 34, 35)\_\_\_\_\_Factor9

Project success\_\_\_\_\_ (Factor8+Factor9)/2

**Appendix 2: Chi-square and correlation results**

Table 5: Chi-Square Test transformational leadership and project success with control variables

Did you receive any formal training in leadership during your role?	Position		Value	df	Asymptotic Significance (2-sided)
NO	Project manager	Pearson Chi-Square	26,111 <sup>m</sup>	16	,052
		Likelihood Ratio	21,778	16	,151
		Linear-by-Linear Association	5,137	1	,023
Yes	Project manager	Pearson Chi-Square	47,259 <sup>f</sup>	24	,003
		Likelihood Ratio	33,217	24	,100
		Linear-by-Linear Association	9,449	1	,002

Table 6: correlation between transformational leadership and project success with control variables

Symmetric Measures							
Did you receive any formal training in leadership during your role?	Position			Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
	NO	Project manager	Interval by Interval	Pearson's R	,873	,095	3,583
Ordinal by Ordinal			Spearman Correlation	,707	,228	2,000	,116 <sup>c</sup>
Project manager		Interval by Interval	Pearson's R	,794	,079	4,882	,000 <sup>c</sup>
		Ordinal by Ordinal	Spearman Correlation	,857	,052	6,229	,000 <sup>c</sup>
YES							

Table 7: Chi-Square Test transactional leadership and project success with control variables

Chi-Square Tests							
Did you receive any formal training in leadership during your role?	Position		Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
	NO	Project manager	Pearson Chi-Square	6,000 <sup>j</sup>	2	,050	
Likelihood Ratio			5,407	2	,067		
Linear-by-Linear Association			4,122	1	,042		
Project manager		Pearson Chi-Square	59,111 <sup>f</sup>	28	,001		
		Likelihood Ratio	37,036	28	,118		
		Linear-by-Linear Association	10,538	1	,001		
YES							

Table 8: correlation between transactional leadership and project success with control variables

Symmetric Measures							
Did you receive any formal training in leadership during your role?	Position			Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
NO	Project manager	Interval by Interval	Pearson's R	,908	,078	4,333	,012 <sup>c</sup>
		Ordinal by Ordinal	Spearman Correlation	,707	,228	2,000	,116 <sup>c</sup>
YES	Project manager	Interval by Interval	Pearson's R	,838	,047	5,750	,000 <sup>c</sup>
		Ordinal by Ordinal	Spearman Correlation	,905	,052	7,981	,000 <sup>c</sup>

