ISSN(E):2522-2260 ISSN(P):2522-2252

Journal DOI: https://doi.org/10.29145/jqm

Indexing/Abstracting













































Published by

Department of Quantitative Methods



School of Business and Economics

University of Management and Technology, Lahore, Pakistan

This manuscript has been published under the terms of Creative Commons Attribution 4.0 International License (CC-BY). JQM under this license lets others distribute, remix, tweak, and build upon the work it publishes, even commercially, as long as the authors of the original work are credited for the original creation and the contributions are distributed under the same license as original.





The Role of Top Management as a Moderator on Project Success during Project Life Cycle

Author(s)
Magsood Ahmed¹, Raheela Habib²

Affiliations

¹Riphah School of leadership, Islamabad, Pakistan ²Iqra University, Islamabad, Pakistan Email: maqsood366@yahoo.com

Manuscript Information

Submission Date: May 12, 2020

Publication Date: February 28, 2021

Conflict of Interest: None

Supplementary Material: No supplementary material is associated with the article

Funding: This research received no external funding **Acknowledgment:** No additional support is provided

Citation in APA Style: Ahmed, M., & Habib, R. (2021). The Role of Top Management as a Moderator on Project Success during Project Life Cycle. *Journal of Quantitative Methods*, 5(1), 111-135.

The online version of this manuscript can be found at https://ojs.umt.edu.pk/index.php/jqm/article/view/401

DOI: https://doi.org/10.29145/2021/jqm/050105



Additional Information

Subscriptions and email alerts: editorasst.jqm@umt.edu.pk
For further information, please visit https://ojs.umt.edu.pk/index.php/jqm



Journal of Quantitative Methods 5(1) 111-135

https://doi.org/10.29145/2021/jqm/050105



The Role of Top Management as a Moderator on Project Success during Project Life Cycle

Maqsood Ahmed¹, Raheela Habib²

¹Riphah School of leadership, Islamabad, Pakistan ²Iqra University, Islamabad, Pakistan Email: maqsood366@yahoo.com

Received: May 12, 2020, Last Revised: Jan 24, 2021, Accepted: Feb 28, 2021

Abstract

The paper identifies the role of top management as a moderator during planning, monitoring, controlling, and evaluation phases for the success of a project. This study also discusses the novelties of the coordination between role of top management and legitimate power of project manager as significant impact on project performance and success during project life cycle phases. The instrument is adapted to measure planning, monitoring, controlling, evaluation, the role of project manager, project performance, project success, and the role of top management. Managers are targeted for data collection from the construction sector, education sector, and IT sector for the analysis. The findings show that coordination between variables as well as the role of a project manager is like a bridge between top management and other team members in four phases of project life cycle (planning, monitoring, controlling, and evaluation) for ultimate success. This study has a significant advantage for the organization and industries before implementing any project as it will be helpful for the top management to give authority and responsibility to the project managers while considering the scope of the project. For academia, this study helps to enhance the knowledge area of project management by introducing coordination management while discussing the other knowledge areas of project management.

Keywords: project planning, project monitoring, project controlling, project evaluation, role of project manager, project performance, project success.

Jell Classification: H43; O22

Copyright © 2021 The Authors. Production and hosting by School of Business and Economics, University of Management and Technology, Lahore, Pakistan.



This is an open access article and is licensed under a <u>Creative Commons Attribution 4.0 International License.</u>

1. Introduction

Project management is splendidly shining on the face of globe and appended to itself in all fields of life as it has evolved a prestigious topic for business, public institutions, science, and management (Bannerman, 2008; Morris, et al., 2006; Wastian, et al., 2014). It not only tells the feasibility of project but also states the scope of the project (Archibald, et al., 2012). This study extended the research of project life cycle theory by introducing the evaluation in the execution phase (monitoring & controlling) with side by side evaluation by the project manager and taking instant actions which facilitate to run the project in a better way. Furthermore, project manager has been neglected in the process of performance evaluation (Wastian, et al., 2014). Therefore, firstly in this study, role of project manager has been shown in evaluation during monitoring and controlling. Secondly this study showed the significant impact of personal factor in the domain of planning, monitoring, and controlling of project life cycle with integrating skill and knowledge of these phases.

(Solga, et al., 2015) described political behavior which can help project manager's to behave skillfully and competently based on their power to achieve the goals for performing tasks. Hence, project manager has responsibility to achieve tasks as personal factor in project life cycle phases. Top management has a power to influence on the development of team, gives formal power to leader, and controls them. Project manager needs support from top management for some actions and decisions. Furthermore, he/she becomes helpless especially in large organization without the support of top management for high decisions.

2. Literature Review

Success is a word that has different meanings for different individuals at one time within a project (Blaikie, et al., 2014; Williams, et al., 2015) as the ultimate goal of project management is to earn success. After the signing off the project, its delivery is important to the customers within the ironic triangle (cost, time, quality) (Pinto & Prescott, 1988; Shenhar & Dvir, 2007). The project manager is an important variable and has leading role over project success and personal factor which is not included as an independent variable in this theory (Belout & Gauvreau, 2004). Project manager has a power of doing work within the processes & procedures of the organization. Moreover, project manager is

responsible to keep the client in touch during execution of the project and establish the good relation with them for future (Anderson, et al., 2015).

Project manager can obtain project success with the help of work break down structure (WBS) and good evaluation as it possesses strong relationship between team members, planning, controlling, and project success(Thomas, Jet al., 2008). Project manager gives direction and clarification for any confusion to team members and controls the project and completes it according to the plan (Thomas et al., 2008). Proper planning, estimation, team skill, leadership, and involvement of the user is the main characteristics of the project success(Attarzadeh & Ow, 2008). Likewise, it was found that user involvement, good planning, and estimation, good leadership, and technical skill of team members are the three main important factors for project success (Attarzadeh & Ow, 2008).

Organizational structure also influence on project success (Petro & Gardiner, 2015). For the portfolio success, project manager has a great impact on success of any organizational structure with involvement in steering committee as moderator also effect portfolio success(Petro & Gardiner, 2015). The project efficiency, business success, customer satisfaction, and future preparation are the main dimensions for the project success (Bannerman, 2008; Shenhar, et al., 1997). Project managers attach with the organization's strategy and goals of the organization for long term. The project performance and project success is different for short projects and for long projects (Zwikael & Unger-Aviram, 2010). Likewise, top management also adds more information to our understanding and supports in the new product development(Bonner, et al., 2002).

Portfolio management distributes the authorities to the managers for running the projects with selection of new managers. Likewise, power re-distribution also affects the success in portfolio management. Top management also mediates the effect on mimetic pressure, coercive pressure, and normative pressure during institutional burdens. In addition, institutional pressure is important to adopt the IT implementation, contribute post implementation adaptation, prolonged process, dynamic outcomes, and uncertain situation (Liang, et al., 2007). Similarly, virtuous square which added customer satisfaction in

ironic triangle (cost, time, quality) is also main ingredients of project management (Williams et al., 2015). While on contrary, for the management of different stakeholders, a proper responsible and authorized leadership is needed.

3. Theoretical framework and hypotheses

Project life cycle is a basic constituent of project management for having knowledge and skill in each domain. The life cycle is the only thing that uniquely distinguishes projects from non-projects stated by Patel and Morris (1999). It is the backbone of project management and help in getting project success step by step(Pinto & Prescott, 1988) and same researcher also proved that there is least impact of personal factor on project success. But on contrary,(Belout & Gauvreau, 2004) proved that personal factor strongly influences project success with moderator effect of project structure. So the factor of organizational structure has positive impact on project success (Belout & Gauvreau, 2004; Petro & Gardiner, 2015).

There is not robust relationship between the project management process, procedures, and project success but these are highly correlated with technical specifications and requirements (Ruiz-Martin & Poza, 2015). Project planning is a critical and challenging phase of project management in which manager has to put more efforts to combine all the interdependency activities ((Ruiz-Martin & Poza, 2015). Project performance and project success not only depends upon central role of project manager as a personal factor but they also need the involvement of top management for timely resolve of the issues during the process of completing the project.

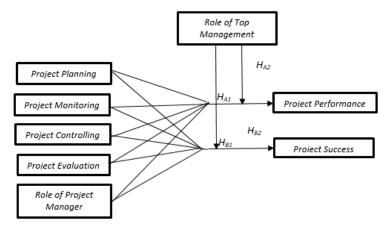


Figure 1: Theoretical Model

H_{A1}: Planning, monitoring, controlling, evaluation and project manager affect the project performance.

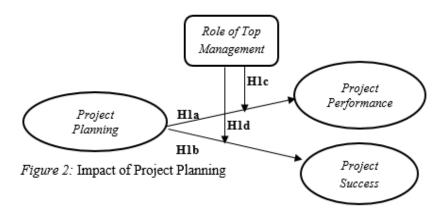
H_{A2}: Top management moderately affects the project performance in planning, monitoring, controlling, and evaluating with the coordination of project manager.

H_{B1}: Planning, monitoring, controlling, evaluation, and project manager affect the project success.

H_{B2}: Top management moderately affects the project success in planning, monitoring, controlling, and evaluating with the coordination of project manager.

Impact of planning on project performance and project success with the moderator role of top management

There is a productive liaison between planning and project success (Pinto & Prescott, 1988) with practices of project management, related requirements, and technical specification that are the three main aspects of project planning which leads the project successfully (Souffront, 2011). Proper planning is the process of proper thinking (Mintzberg, 2000) hence, it is a decision making procedure which gives the answers i.e. What, How, When and Who. When the activities will be done at what time and what cost? Who is going to conduct?



H1a: Planning positively affects the project performance contained by ironic triangle.

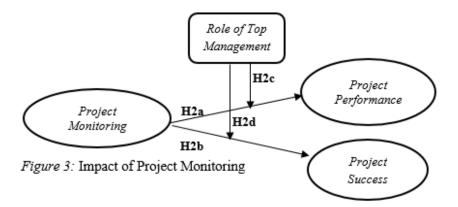
H1b: Planning is positively effects the project success contained by ironic triangle.

H1c: Top management moderates the effects between planning and project performance.

H1d: Top management moderates the effects between planning and project success.

Impact of monitoring on project performance and project success with the moderator role of top management

The effect of project cost and time monitoring on progress of construction project is more important for significant success of the project. Moreover, it was emphasized on the usefulness of monitoring and controlling project management especially in construction project. An effective project performance control cannot be achieved only by monitoring the cost and time for actual and planned values but other issues should also be monitored. Abeid, et al. (2003) explained the execution of a programmed real-time monitoring system for construction projects as top management is also benefited by this system (Cheung, et al., 2004). In addition, project monitoring and evaluation has significant impact on project performance and project success as proved by (Mahaney & Lederer, 2010).



H2a: Project monitoring has positive impact on project performance.

H2b. Project monitoring has positive impact on project success.

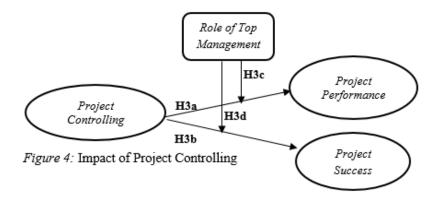
H2c: Top management moderates the effect of monitoring on project performance.

H2d: Top management moderates the effect of monitoring on project success.

Impact of controlling on project performance and project success with the moderator role of top management

(Packendorff, 1995)identified that project organization and follow up plan are the two areas that need project control. Similarly, project control measures progress towards objective, monitor's deviation from the plan, corrective action to match progress, and the active participation of project manager (Schwalbe, 2015). Top management brings new ideas for the organization as they understand the market strategy, process the new ideas, and action plans to be taken (Robert, 1991). Likewise, (Bonner, et al., 2002)conducted a study and they proved that there is a great stimulus by top management on project performance while adopting a new product or to follow the formal process for development. Controlling is main aspect of management process that has a bird eye view on individuals get the organization's aim. It is difficult for the top management to look after the system for overall activities. Top-down and bottom-up control approaches are used to control the activities for good performance (Colin & Vanhoucke, 2015). There are many controlling techniques used in

(Colin et al., 2014) study for project cost control on theoretical basis like Earned Value Analysis (EVA) with its three D method.



H3a: Project controlling has a positive impact over project performance.

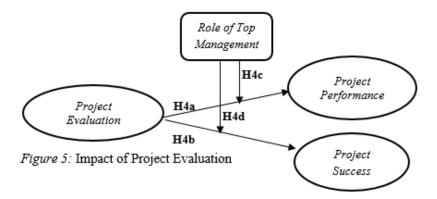
H3b: Project controlling has a positive impact over project performance project success.

H3c: Top management moderates the effect between controlling and project performance.

H3d: Top management moderates the effect between controlling and project success.

Impact of evaluation on project performance and project success with the moderator role of top management

The ultimate goal of project management is to achieve the target with positive evaluation. Evaluation is a term that justifies the whole project in a single snap shot either the project is completed within all good Similarly, perspective or failures. efficiency, effectiveness, sustainability, impact, and relevance are the five dimensions with the strategic level, tactical level, and operational level that showed the holistic view for the structure of the project evaluation (Zidane, et al., 2013). IT evaluation is considered to be the best management practice of construction SMEs as it gives a strong base to implement the proper IT investment. The evaluation concludes the contributory association between project process, outcome, and impact as evaluation is an essential phase to check oneself and the current performance of the project or organization commitment. But in current study the concept of evaluation is to check the project performance side by side with the planning and to understand the flaws for inefficient progress of the project and correction according to the plan. Moreover, project manager evaluates the project periodically to check the performance and consult to the top management for improving the process of completion of the project. The time spam of evaluation depends upon the nature of project whether it is a shorter or long term project. It also guides when the evaluation should be conducted, either weekly or monthly as the top management is also influenced by the evaluation.



H4a: Evaluation has a positive impact on project performance.

H4b: Evaluation has a positive impact on project success.

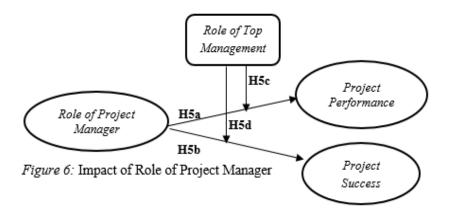
H4c: Top Management moderates the effect of evaluation on project performance.

H4d: Top Management moderates the effect of evaluation on project success.

Impact of project manager on project performance and project success with the Moderator role of top management

Lovell (1993) described that the project manager achieve success by using his/her power and political strategies and relationships with project stakeholders. According to Lovell Project managers use their power to deal upward and sideways, and downward situations. (Callon & Blackwell, 2007) described actor—network theory which involves the steps from problem definition, negotiation, and control of the activities

by the manager. Actor-network theory helps to take decision in more modified and enhanced way rather than personal decision making process. Likewise, (Turner, 1999) suggested 4 styles for leadership which are if adopted by project manager can give good results like laissez-Faire, democratic, autocratic, and bureaucratic. There is a Path-Goal theory which is contingency theory present the idea that a leader must help the team to find or track the path which leads them towards the achievements of their goal. Project information system helps the project manager in achieving their managerial tasks for better planning, controlling (Raymond monitoring, and & Bergeron, Competency of manager also means that how he/she behaves with the team members and the subordinates either positively or negatively specially in construction sector (Sommerville, at al., 2010).



H5a: Leading role of project manager affects the project performance.

H5b: Leading role of project manager affects the project performance.

H5c: Top management moderates the relationship between the project manager and project performance.

H5d: Top management moderates the relationship between the project manager and project success.

4. Methodology and Sampling

Current study used descriptive research design with Likert scale to measure the responses of variables. Project managers, top management, middle managers, supervisors, and concerned team members were the targeted population for study. Furthermore, it is based on stratified random sampling (Sekaran & Bougie, 2003) with data collection from construction, IT, and education sector. In addition, 750 people were approached for the data collection through email- survey out of 3,000 targeted populations from three sectors. Consequently, 183 responses were received with all completed information hence; these responses were used for analysis. The survey was conducted in two steps; firstly the data was collected through questionnaire from the concerned team members, top level management, and the project managers. Secondly web based data was collected by getting the questionnaire filled in by managers.

5. Results and Discussion

5.1 Respondent's demographics

Following are the respondent's demographics from IT, education and construction sectors with variables of sex, education, designation, PM certification, organization, age and experience.

Table: 1 Respondents Data

Demographic	Categories	Responses	Response	Mean	S.D.
variables		-	rate %		
Gender	Male	136	26%	0.7	.438
	Female	47	74%		
	Bachelors	17	9.2%		
Education	Master	101	54.9%	2.29	.679
	M-Phil	59	32.1%		
	PhD	06	3.3%		
	Manager	24	13%		
	Middle Manager	57	31%		
Designation	Supervisor	28	15%	3.18	1.511
	Director	09	05%		
	Project Manager	65	35%		
PM	No	114	62%	0.378	0.486
Certification	Yes	69	38%		
	IT Sector	29	15.8%		
Organization	Construction	52	28%	2.535	1.170
	Education	45	24.5%		
	Others	57	31%		
	25-35 Years	83	45%	1.57	
Age	36-45 Years	95	51.6%		.548

	46-55 Years	05	2.7%		
	<5 Years	81	44%		
Experience	6-10 Years	79	43%	1.75	.883
	11-15 Years	15	08%		
	16-20 Years	03	1.6%		
	>20 Years	05	2.7%		
Total	183	•	_	•	•

5.2. Reliability of variables

Table 3: Correlation between variables

Variables	Pla Monitor	i Controll	i Evalua	t Projec	Тор	Perfor Succe
	nni ng	ng	ion	t	Managen	n mance ss
	ng			Mana	ent	
				ger		
Planning	1					
Monitoring	.674** 1					
Controlling	.821** .732**	1				
Evaluation	.749** .720**	.500**	1			
Project	.757** .575**	.405**	.935**	1		
Manager						
Top	.428** .464**	.361**	.583**	.583**	1	
Management						
Performance	.698** .824**	.611**	.917**	.809**	.592**	1
Success	.422** .424**	.353*	.623**	.584**	.601**	.635** 1

Significance at p<0.001

5.4. Main model description

Table 4 showed the impact of planning, monitoring, controlling, evaluation and project manager on performance and project success with the moderator (role of top management). The result showed the values of R=0.956 and F(5,177)=373.618 significance at p<0.00. So, **HA1** accepted that performance is strongly influenced by monitoring, controlling, planning, evaluation and project manager.

Table 4: Independent variables and its impact on project performance and success (main model)

					_			
	Perf orm ance	Sig	Succ ess	Sig	-			
	R	\mathbb{R}^2	F	P	R	\mathbb{R}^2	F	P
		Cha nge				Cha nge		
Independent Variables	0.95		406. 902	.000	0.68 0		30.4 35	.000.
Ind. Variables,	9		338. 120		0.71 7		31.1 14	
Top Manageme nt	0.95	0.01	209.	.000	0.80	0.14 0	29.4	.000
Ind. Variables,	9		204		9		80	
Top Manageme nt, Moderator	0.96 5							

Significance at p<0.001, p<0.005

H_{A2} accepted the values of R=0.965 and F (5,177) = 209.204 significance at p<.001 showed that all independent variables have significant impact with moderator variable on performance. Before applying the moderation effect some checks are important to check the suitability of data for moderating variable. Firstly measurement of dependent variables on continuous scale, second needs linear relationship between the variables, thirdly, data should be homoscedasticity between the variables. In homoscedasticity variance error should be same for all the independent and moderator variables. Fourthly there should not be multicollenarity. Multicollenarity also checked as tolerance level of all variables greater than 0.2 and VIF (variance inflation factor) is less than 10. This result showed that there is no multicollenarity in the data. So, the data is acceptable for

moderation effect. **HB1** and **HB2**are also accepted to have a significant impact on project success and the moderator effect of top management. The "R square" change by 14% after the interaction of top management success increased by the 14%. This moderation is significant at the level of p<.001.

5.5. Influence of Planning on Performance & Success with Moderator: (H1a, H1b, H1c, H1d)

Table 5: Impact of planning on Performance and success

	Perfo	rmance		S	Success			
	R	R ² Chan ge	F	P	R	R ² Chan ge	F	P
Planning	0.69 8		171.9 5	.000	0.42 2		39.31 9	.00
Planning, Top Management	0.77 0		131.0 3	.000	0.62 8		58.61 4	.00
Planning, Top Management, Moderator	0.80 2	0.051	25.47 4	.000	0.69 1	0.082	28.22 0	.00

Significance at p<0.001, p<0.005

Table 5 showed the impact of planning on performance and success with the moderator (role of top management). **H1a** accepted that planning has positively impact on project performance. The result was significant at [F (1,181) =171.95, p<0.001] with R=0.698. **H1c** also accepted that top management positively moderate the relationship of project performance and planning at [F (2,179) =25.474, p<0.001]. The value of R=0.770 change to R= 0.802 showed that 5.1% increase in performance after the involvement of top management.**H1b** accepted that role of planning has positively impact on project success. The value of [F (1,181) =39.319, p<0.001] with R=0.422. **H1d** also accepted at [F (2,179) =28.220, p<0.001] that top management moderate the relation of project success and planning and it's positively

impact on project success. The value of R=0.628 change to R=0.691 showed 8.2% positively impact of moderation on project success.

5.6. Influence of Monitoring on Performance & Success with moderator: (H2a, H2b, H2c, H2d)

Table 6: Impact of monitoring on Performance and success

	Perf	Performance			Succe	Success			
	R	R ² Cha nge	F	P	R	R ² Cha nge	F	P	
Monitorin g	0.8 24		382.3 85	.00	0.4 24		39.7 56	.00	
Monitorin g, Top Managem ent	0.8 57		249.5 62	.00	0.6 23		57.0 44	.00	
Monitorin g, Top Managem ent, Moderato r	0.8 59	0.003	167.7 62	.17 7	0.6 86	0.083	53.0 50	.00	

Significance at p<0.001, p<0.005

Table 6 showed the impact of monitoring on performance and success with the moderator (top management).**H2a** accepted that monitoring has positively impact on project performance. The result was significant at [F (1,181=382.385, p<0.001] with R=0.824. **H2c** rejected that top management has not moderate the relationship of project performance and monitoring at [F (2,179) =167.762, p>0.001].**H2b** accepted that role of monitoring has positively impact on project success. The value of [F (1,181) =39.756, p<0.001] with R=0.424. **H2d** also accepted at [F (2,179) =53.050,p<0.001] that top management moderate the relation of project success while monitoring.

The value of R=0.623 change to R=0.686 showed 8.3% positively impact of moderation on project success.

5.7. Influence of Controlling on Performance & Success with moderator: (H3a, H3b, H3c, H3d)

Table 7: Impact of Controlling on Performance and Success

	R	R ² Chang e	F	P	R	R ² Chang e	F	P
Controlling	0.61 1		108.10 3	.00	0.35 3		25.77 7	.00
Controlling, Top Manageme nt	0.73		102.64 1	.00	0.61 8		55.70 2	.00
Controlling, Top Manageme nt, Moderator	0.76 1	0.046	81.932	.00	0.73 8	0.162	71.10 3	.00

Significance at p<0.001, p<.005

Table 7 showed the impact of controlling on performance and success with the moderator (role of top management). **H3a** accepted that controlling has positively impact on project performance. The result was significant at [F (1,181=108.103, p<0.001] with R=0.611. **H3c** also accepted that top management positively moderate the relationship of project performance and controlling at [F (2,179) =81.932, p<0.001]. The value of R=0.730 change to R= 0.761 showed that 4.6% increase in performance after the involvement of top management. **H3b** accepted that role of controlling has positively impact on project success. The value of [F (1,181) =25.77, p<0.001] with R=0.353. **H3d** also accepted at [F (2,179) =57.499, p<0.001] that

top management moderate the relation of project success and role of project manager and it's positively impact on project success. The value of R=0.666 change to R=0.701 showed 4.7% positively impact of moderation on project success.

5.7. Influence of Evaluation on Performance & Success with moderator: (H4a, H4b, H4c, H4d)

Table 8: Impact of Evaluation on Performance and Success

	R	R ² Cha nge	F	P	R	R ² Cha nge	F	P
Evaluation	0.917		952.7 76	.0 00	0.6 23		114.8 92	.0 00
Evaluation, Top Management	0.919		492.3 81	.0 00	0.6 88		81.03 0	.0 00
Evaluation, Top Management, Moderator	0.933	0.02 5	401.9 02	.0	0.7 18	0.04 2	63.65 6	.0 00

Significance at p<0.001, p<.005

Table 8 showed the impact of evaluation on performance and success with the moderator (role of top management). **H4a** accepted that evaluation has positively impact on project performance. The result was significant at [F (1,181=952.776, p<0.001] with R=0.917. **H4c** also accepted that top management positively moderate the relationship of project performance and evaluation at [F (1,179) =492.381, p<0.001]. The value of R=0.919 change to R= 0.933. **H4b** accepted that evaluation has positively impact on project success. The result was significant at [F (1,181) =114.892, p<0.001] with R=0.623. **H4d** also accepted that top management moderate the relation of evaluation and project success at [F (2,179) =63.656, p<0.001]. The value of R=0.688 change to R= 0.718 showed the 4.2% increase in success after the involvement of top management.

5.8. Influence of Project Manager on Performance & Success with moderator: - (H5a, H5b, H5c, H5d)

Table 9:Role of Project Manager & its Impact on Performance

	R	R ² Chang e	F	P	R	R ² Chang e	F	P
Role of Project Manager	0.80 9		343.80 2	.00	0.58 4		93.73 4	.00
Project Manager, Top Manageme nt	0.82		188.71 1	.00	0.66 6		71.80 0	.00
Project Manager, Top Manageme nt, Moderator	0.85 7	0.058	165.44 9	.00	0.70 1	0.047	57.49 9	.00

Significance at p<0.001

Table 9 showed the impact of role of project manager on performance and success with the moderator (role of top management). H5a accepted that role of project manager has positively impact on project performance. The result was significance at [F (1,181) =343.802, p<0.001] with R=0.809. H5c also accepted that top management moderate the relation of project performance and role of project manager and it's positively impact on project performance. The value of [F (2,179) = 165.449, p<0.001]. The value of R=0.823 change to R= **0.857** showed the **5.8%** positively moderate the relationship by the involvement of top management. H5b accepted that role of project manager has positively impact on project success. The value of [F (1,181) = 93.734, p<0.001] with R=0.584. H5d also accepted at [F (1,179) =57.499, p<0.001] that top management moderate the relation of project success and role of project manager and it's positively impact on project success. The value of R=0.666 change to R=0.701 showed 4.7% positively moderate the relationship by the involvement of top management.

5.9. Coordination between project manager, top management, planning, monitoring, controlling, evaluation, performance and success (Ha, Hb, Hc, Hd, He, Hf, Hg, Hh):-

For all paths Ordinary Least Square has been calculated. $Y = \alpha + \beta X$ represents the OLS equation. The purpose of OLS is to check the relationship between dependent and independent variables.

Table 10: Coordination and their impact between all variables

Linear Regression	R	F	P
a. Project Manager, Planning	0.757	242.838	.000
b. Monitoring , Project Manager	0.575	89.509	.000
c. Project Manager, Evaluation	0.935	1260.656	.000
d. Top Management, Evaluation	0.583	93.137	.000
e. Performance ,monitoring, project	0.920	497.985	.000
manager	0.618	55.702	.000
f. Success , controlling , top management	0.361	27.091	.000
g. Controlling, top management	0.635	122.386	.000
h. Performance, success			

Significance at p<0.001 & p<0.005

Discussions

TOP Management has commitment of communication with shareholders and stakeholders in setting regulatory requirements. Hence, from the perspective of project policy, it must ensure the objectives, reviews conducted for management the events, and ensuring the available resources. Top management also ensures customer requirements, determination to meet requirements, and intention to increase satisfaction with policies of the project whether that the purpose of the project is applicable or not. During planning top management also ensure that objectives are determined and reliable with quality policy. Top management also ensures about the planning,

support of project management system, meet the requirements given in the project objectives and the reliability of the project management system.

6. Conclusions

It was concluded that during the project life cycle (PLC), project managers as well as top management are not only the aesthetic words in project executions but they also increase the competence and credentials of project executions. With the strategies of planning, monitoring, controlling, evaluation, responsibility of project manager and authority of top management project become successful with all its good enactment. Therefore, after collecting and analyzing data, the result showed that planning, monitoring, controlling, and evaluation have strong impact on project performance and project success with the role of project manager and also moderator role of top management. It gas also observed that during performance of project, top management has not any moderate effect in monitoring phase but it has also expressed moderation in project success. Hence it is concluded that, in monitoring phase project manager has a leading role in running and monitoring the project for better performance and his/her reporting helps in getting the project success and also by authority of the top management.

It was also concluded that top management also ensures the changes which are sustained when there are any changes in the Project Management System, planning, and execution. Top management determined the authorities and responsibilities to managers for communication and collaboration with the team. In the same way, structural chart is approved by the top management for activities and gives responsibility to project manager to explain the duties to the team members and relationship between activities to accomplish a task. In addition, top management has hired or selected the project managers for the specific project who are responsible for the performance and success of the project.

Limitations

Initiating, planning, monitoring, controlling, and closing are the main phases of project life cycle. In this study planning, monitoring, controlling and evaluation are discussed with reference to the role project manager and top management. As initiation and closing are also main phases of the project life cycle but in this study both phases are not discussed. In this study the role of middle management is also not discussed hence, future researchers can study project initiation and closing stage of the project.

Conflict of Interest	None				
Supplementary Martial	No supplementary material is associated with the article				
Funding	This research received no external funding				
Acknowledgment	No additional support is provided				

References

- Abeid, J., Allouche, E., Arditi, D., & Hayman, M. (2003). PHOTO-NET II: a computer-based monitoring system applied to project management. *Automation in Construction*, *12*(5), 603-616. https://doi.org/10.1016/S0926-5805(03)00042-6
- Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2015). *An introduction to management science:* quantitative approaches to decision making. Cengage learning.
- Archibald, R. D., Di Filippo, I., & Di Filippo, D. (2012). The six-phase comprehensive project life cycle model including the project incubation/feasibility phase and the post-project evaluation phase. *PM World Journal*, *1*(5), 1-40.
- Attarzadeh, I., & Ow, S. H. (2008). Project management practices: the criteria for success or failure. *Communications of the IBIMA*, *1*, 234-241.
- Bannerman, P. L. (2008). Risk and risk management in software projects: A reassessment. *Journal of Systems and Software*, 81(12), 2118-2133. https://doi.org/10.1016/j.jss.2008.03.059

- Belout, A., & Gauvreau, C. (2004). Factors influencing project success: the impact of human resource management. *International Journal of Project Management*, 22(1), 1-11. https://doi.org/10.1016/S0263-7863(03)00003-6
- Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (2014). *At risk: Natural hazards, people's vulnerability and disasters*. Routledge.
- Bonner, J. M., Ruekert, R. W., & Walker, O. C. (2002). Upper management control of new product development projects and project performance. *Journal of Product Innovation Management*, 19(3), 233-245. https://doi.org/10.1111/1540-5885.1930233
- Callon, M., & Blackwell, O. (2007). Actor-Network Theory. *The Politics of Interventions, Oslo Academic Press, Unipub, Oslo,* 1, 273-286.
- Cheung, S. O., Suen, H. C., & Cheung, K. K. (2004). PPMS: a web-based construction project performance monitoring system. *Automation in Construction*, 13(3), 361-376. https://doi.org/10.1016/j.autcon.2003.12.001
- Colin, J., & Vanhoucke, M. (2015). Developing a framework for statistical process control approaches in project management. *International Journal of Project Management*, *33*(6), 1289-1300. https://doi.org/10.1016/j.ijproman.2015.03.014
- Liang, H., Saraf, N., Hu, Q., & Xue, Y. (2007). Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management. *MIS quarterly*, *31*(1), 59-87. https://doi.org/10.2307/25148781
- Mahaney, R. C., & Lederer, A. L. (2010). The role of monitoring and shirking in information systems project management. *International Journal of Project Management*, 28(1), 14-25. https://doi.org/10.1016/j.ijproman.2009.03.001
- Mintzberg, H. (2000). *The rise and fall of strategic planning*. Pearson Education.
- Morris, P. W., Jamieson, A., & Shepherd, M. M. (2006). Research updating the APM body of knowledge 4th edition.

- International Journal of Project Management, 24(6), 461-473. https://doi.org/10.1016/j.ijproman.2006.02.002
- Packendorff, J. (1995). Inquiring into the temporary organization: new directions for project management research. *Scandinavian Journal of Management*, 11(4), 319-333.
- Petro, Y., & Gardiner, P. (2015). An investigation of the influence of organizational design on project portfolio success, effectiveness and business efficiency for project-based organizations. *International Journal of Project Management*, *33*(8), 1717-1729. https://doi.org/10.1016/j.ijproman.2015.08.004
- Pinto, J. K., & Prescott, J. E. (1988). Variations in critical success factors over the stages in the project life cycle. *Journal of Management*, 14(1), 5-18. https://doi.org/10.1177/014920638801400102
- Raymond, L., & Bergeron, F. (2008). Project management information systems: An empirical study of their impact on project managers and project success. *International Journal of Project Management*, 26(2), 213-220. https://doi.org/10.1016/j.ijproman.2007.06.002
- Ruiz-Martin, C., & Poza, D. J. (2015). Project configuration by means of network theory. *International Journal of Project Management*, 33(8), 1755-1767. https://doi.org/10.1016/j.ijproman.2015.07.010
- Schwalbe, K. (2015). *Information technology project management*. Cengage Learning.
- Sekaran, U., & Bougie, R. (2003). Research methodology for business. John Wiley & Sons, Inc.
- Shenhar, A. J., & Dvir, D. (2007). Reinventing project management: the diamond approach to successful growth and innovation: Harvard Business Review Press.
- Shenhar, A. J., Dvir, D., & Levy, O. (1997, July). Project success: a multidimensional, strategic concept. In *Innovation in Technology Management*. The Key to Global Leadership. *PICMET'97* (p. 391). IEEE.

- Solga, J., Witzki, A., & Blickle, G. (2015). Power and interpersonal influence in successful project management. In *Applied Psychology for Project Managers* (pp. 129-146). Springer, Berlin, Heidelberg.
- Sommerville, J., Craig, N., & Hendry, J. (2010). The role of the project manager: All things to all people? *Structural Survey*, 28(2), 132-141. https://doi.org/10.1108/02630801011044235
- Souffront, L. (2011). Project Risk Management Practices: How can the current Project Risk Management practices surrounding medium construction projects be optimized? University of Technology. http://resolver.tudelft.nl/uuid:de8519a2-0f49-471f-9b0f-e10f7df0132b
- Thomas, M., Jacques, P. H., Adams, J. R., & Kihneman-Wooten, J. (2008). Developing an effective project: Planning and team building combined. *Project Management Journal*, *39*(4), 105-113. https://doi.org/10.1002/pmj.20079
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. *Social Identity: Context, Commitment, Content*, *3*(1), 6-34.
- Wastian, M., Rosenstiel, L., West, M. A., & Braumandl, I. (2014). *Applied Psychology for Project Managers*. Springer.
- Williams, P., Ashill, N. J., Naumann, E., & Jackson, E. (2015). Relationship quality and satisfaction: Customer-perceived success factors for on-time projects. *International Journal of Project Management*, 33(8), 1836-1850. https://doi.org/10.1016/j.ijproman.2015.07.009
- Zidane, Y. J.-T., Johansen, A., & Ekambaram, A. (2013). Megaprojects-Challenges and lessons learned. *Procedia-Social and Behavioral Sciences*, 74, 349-357. https://doi.org/10.1016/j.sbspro.2013.03.041
- Zwikael, O., & Unger-Aviram, E. (2010). HRM in project groups: The effect of project duration on team development effectiveness. *International Journal of Project Management*, 28(5), 413-421. https://doi.org/10.1016/j.ijproman.2009.09.005

Citation: Ahmad, M., & Habib, R. (2021). The Role of Top Management as a Moderator on Project Success during Project Life Cycle. *Journal of Quantitative Methods*, *5*(1), 111-135.



https://doi.org/10.29145/2021/jqm/050105