

THE EFFECT OF PROJECT MANAGER'S SKILLS AND EXPERIENCES ON PROJECT SUCCESS

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Abstract

This paper aims to analyse the effect of project manager's skills and experiences on project success, focusing on the Royal AMT construction company limited. The specific objectives are to examine the effect of project manager's skills (conceptual skills, human skills, political skills and technical skills) and experience on project success measured by cost, measured by schedule and measured by quality. Among 50 project managers, 44 are randomly selected as sample (by calculating with Yamane (1967) formula. Primary data are collected from superiors of these 44 selected project managers. The superiors (directors and senior managers) filled the structured questionnaires: one superior for one project manager separately. From descriptive analysis, most of the project managers have high level of conceptual, human, political and technical skills. They have at least 10 years in construction service. From regression analysis, their political skills and technical skills can generate good cost management. Their political skills support to completion of project within identified time frame, and their technical skills improve the quality of project. However, their human skills will disturb effective cost management.

Keywords: Conceptual Skills, Human Skills, Political Skills, Technical Skills, Project Success

Introduction

In Myanmar, infrastructure development and standard of living by housing in cities largely depends on quality of construction projects including residential projects. The success of such projects will be representative to the image and beauty of cities in the country. The sustainability and success of construction industry depends on the country's development, and the construction companies have the immense power to design the buildings and infrastructure of a country. Moreover, the development of construction industry is a major contribution to the country's economic development: this industry can create job opportunities for citizens, can also support to survival of local suppliers who are marketing construction materials, and eventually to then would supply construction materials government by paying tax.

The success of construction projects will be influenced by various factors such as technology, developer's commitment, compliance to quality standards, and project management maturity of project managers. Among these factors, the most crucial one is the project management of maturity of project managers. In Yangon, recently, many construction companies are struggling from ups and downs in its business environment. Within this turbulent environment, some construction companies can overcome the threats of the environment, even they can cope with the positive changes of environment. It seems that they can develop successful projects due to management skills and experiences of project managers.

Among successful construction companies, Royal AMT has become popular with its growth by number of projects, and its image by completion of undertaken projects within desired

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time frame. Although it is still young – Royal AMT was established in 2020 – it has employed 120 permanent staff, and it has already finished 70 projects successfully. It has 25 ongoing projects, and most of the projects are residential projects. It is now developing the regional project near to Chaung Thar hotel area.

This study examines the effect of project managers' skills and experience on project success by focusing on the case of Royal AMT construction company limited.

Rationale of The Study

Construction companies rely on managing projects in establishing houses, apartments, condominiums, villas, schools, hospitals, bridges, airport, malls, and roads. In handling a project, construction companies need to assign a project manager with relevant skills to ensure project success. Research findings are expected to Point out the significant role of project managers' skills in achieving project success (Hwang & Ng, 2013; Sunindijo, 2015).

Researchers and professionals believe that the project manager is a very essential element to the success of the construction project and have an impact at every stage of the construction project (Ali & Chileshe, 2009). In today's competitive market, the recognition and growth of project manager's skills have become increasingly important (Omidvar, Samad, & Alias, 2012).

No one construction professional can be best suited for project manager's role in construction companies. Only a professional who has a large experience of technical, human and conceptual skills can be relevant for a project manager's post. Project managers must have the experience in finance, communication skills, decision-making skills, quality control, contract procedures, resource control, and so on. They need to act as both specialists and generalists. In some cases, they have to apply their expertise to solve some functionally specific problems. However, for many cases, they have to oversee many areas, with generalized skills.

Project success is typically measure with three criteria: time, cost, and quality. To complete a project within the identified scope (within time and budget, and with desired quality specifications), project manager may face special demands: project manager may need to be scramble and wheedle for acquiring adequate budget, for acquiring the right members, to be able to motivate members to do what project manager wants to do, to be able to deal with unexpected risks, to be able to make proper trade-offs between company and client, and must have the high communication skills to deal with top management, client, and other stakeholders.

Project managers must be capable to take facilitator role: project managers are responsible simultaneously for top management, for team members, and for the success of project. Thus, skills and experience of project managers are crucial for success of the project. This paper analyses the effect of project managers' technical skills, human skills, conceptual skills, political skills and experience (by years of service in construction industry) on success of the projects measured with schedule, cost and quality by focusing on the projects of Royal AMT company limited.

Objectives of The Study

(1) To analyse the effect of project managers' skills and experience on success of the project by cost at Royal AMT company limited.

(2) To analyse the effect of project managers' skills and experience on success of the project by schedule at Royal AMT company limited.

(3) To analyse the effect of project managers' skills and experience on success of the project by quality at Royal AMT company limited.

Scope and Method of The Study

This study mainly focuses on the skills and experience of project managers, and success of the projects undertaken by Royal AMT construction company limited. There are 50 top level managers who are taking responsibility as project managers in this company. By using (Yamane, 1967) formula, the sample size is 44, with 5% margin of error. Simple random sampling method is applied to select the sample from population (44 from 50). To collect the primary data, supervisor's rating method is applied to fill in the structured questionnaires. For each and every sampled managers, their respective top management executives (BOD and MD) rated their level of skills and their experiences, and the success of respective projects they have completed. For data analysis, both descriptive and regression methods are applied. Secondary data are collected from main source of Royal AMT's staff records and its website.

Theoretical Background

Although some management authors presented various skills of managers, the necessary skills of managers including project managers are technical skills, human skills, and conceptual skills (Daft, 2022). Technical skills consist of expertise in methods and techniques in specific areas such as engineering, architecture, or finance; also include competencies to use equipment and tools, analytical ability to solve the problems within discipline, and specialized knowledge in the specific field, human skills are the abilities of managers to work with and through people and to effectively participate in the team, human skills are necessary when managers build relationships with team members (to motivate, to facilitate, to coordinate, to lead, to communicate with them), also it is important when solving conflicts among team members, and conceptual skills are the ability to see the company as a whole and to understand the links between its parts or sections, and the ability to take a broad, long-term view (Daft, 2022).

Construction project managers have to combine technical knowledge and expertise with skills that can assure effective coordination and communication of many different stakeholders (Dainty, Cheng, & Moore, 2003). The skill of motivation (human skills) is an ability to enable a person to achieve their goals. However, motivation is a skill that a project manager can apply to ensure that the project team achieves the project's goals in time and on budget (Schmid & Adams, 2008). In the early phase of a construction project, a project manager needs to motivate the project team in order to achieve goals. However, the lack of such motivation often leads to conflict, strikes, low productivity, stress, and the failure of the project (Zulch, 2014). The conceptual skills are related to overall planning of the project. Planning and goal setting skills involve an ability to plan a process and to achieve the desired goals (Glavinish, 2008).

In addition to the three typical skills {technical, human, and conceptual}, the political skills are also important for project managers to manage the project effectively. To achieve the perfect teamwork, the project manager has to understand his team's mind and how to deal with team, also to understand everyone he deals with to get to a point which leads the project to

success. Mainiero (1994) suggested that well-developed political skill is an important contributor that distinguishes superior performers. Sunindijo & Zou (2012) also found that political skill can be used to develop safety climate in construction projects.

By using the three skills mentioned above, managers including project managers are playing at the ten roles in daily basis: informational role (as the monitor, disseminator, and spokesperson), interpersonal role (as the figurehead, leader, and liaison), and decisional role as the entrepreneur, disturbance handler, resource allocator, and negotiator (Mintzberg, 1973).

Project managers play at the monitor role to seek and receive information, assess periodicals and reports, and retain personal contacts; as the disseminator role, project managers forward information to other organization members, send memos and reports and make phone calls; as the spokesperson, project managers will transmit information to outsiders through speeches, reports, and memos.

Project managers play at the figurehead role to perform ceremonial and symbolic duties such as greeting visitors and signing legal documents; as the leader, project managers direct and motivate members, train, counsel and communicate with them; as the liaison, project managers maintain information links both inside and outside organization, use emails, phone calls and meetings.

Sometimes, project managers have to be entrepreneurs to initiate improvement projects, identify new ideas, delegate responsibility to others; project managers also act as disturbance handlers to take corrective action during conflicts or crises, resolve disputes among team members; project managers are sometimes resource allocators to decide who should receive resources, set the schedule, budget and set priorities; project managers are also negotiators to represent team or department's interests, to represent the team during negotiation of budgets.

In the construction industry, to complete the projects successfully, project managers' management skills are very important. To complete the project within the time frame, to be compliance with all specifications, not to be budget overrun, project managers must have various skills to play at various roles. Moreover, their experience (years of service) is very supportive to the project success.

Empirical Study

The closely related previous paper is based to develop the conceptual framework for the study. The conceptual model of this previous paper is shown in Figure (1).

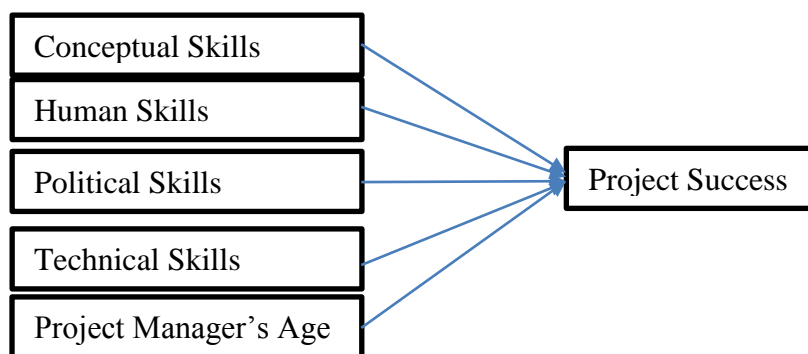


Figure (1) Previous Conceptual Model

Source: Elmezain, Baduruzzaman & Khoiry (2021)

The previous research was conducted by collecting data from 400 project managers who are working at five well-known construction companies in Cairo, Egypt. According to researchers (Elmezain, Baduruzzaman, & Khoiry, 2021), project manager's conceptual skills, human skills, political skills and technical skills have significant positive effect on success of projects in Egypt. However, the project manager's age has no association with project success.

Conceptual Framework of The Study

By considering the previous researcher's model and findings, the conceptual framework (as shown in Figure 2) is developed.

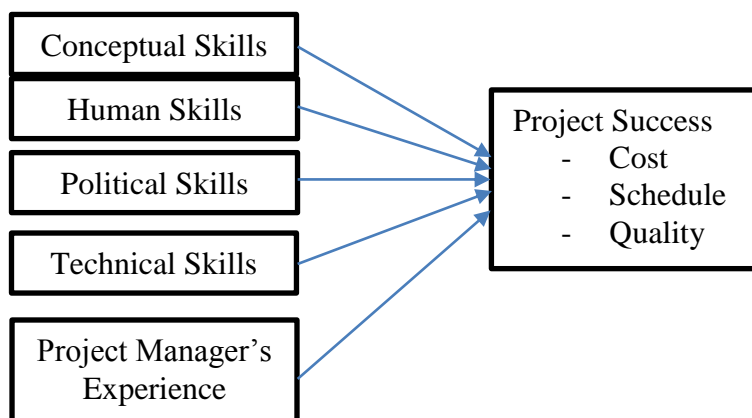


Figure (2) Conceptual Framework

Source: Developed for this Study by Adapting to Model of Elmezain, Baduruzzaman & Khoiry (2021)

In this study, the factors influencing the project success are assumed as technical skills, conceptual skills, political skills, conceptual skills, and the project manager's experience. Although the previous researchers assumed that the project manager's age as a factor, in this study, the project manager's age is replaced with project manager's experience. Moreover, in analysis, instead of measuring the project success by combining all criteria, in this study, the project success is measured with three criteria (cost, schedule and quality) specifically and separately.

Questionnaire Development

The structured questionnaire is developed with close type questions (with five Likert scales). To measure the conceptual skills, 3 items; for human skills, 3 items; for political skills, 4 items, and for technical skills, 6 items are developed. The question items for project manager's skills are based on the items developed by Sunindijo (2015). The project success is measured with three variables (cost, schedule and quality). The cost is measured with 5 items, the schedule

is measured with 5 items and the quality is measured with 4 items. The question items for project success are based on the items developed by (Khan et al. 2013).

Reliability Test

Primary data are collected from all sampled managers (44 respondents). The data reliability for all the variables are tested and the results are shown in Table (1).

Table (1) Reliability Results

Sr. No.	Variables	Number of Question Items	Cronobach Alpha
1	Conceptual Skills	3	
2	Human Skills	3	
3	Political Skills	4	
4	Technical Skills	6	
5	Cost (Measure of Project Success)	5	
6	Schedule (Measure of Project Success)	5	
7	Quality (Measure of Project Success)	4	

Source: Survey Data, 2023

According to the reliability test results, the Cronobach alpha scales are above 0.7. According to (Cronbach, 1951), coefficient alpha values of 0.7 and above are entitled to represent acceptable reliability, those above 0.80 represent good reliability, and those above 0.90 represent excellent reliability. Therefore, the employed question items maintain good reliability.

The primary data are analysed with descriptive analysis by calculating the mean values for each of the variables, and their respective question items. The descriptive analysis results for project manager's skills are shown in Table (2).

Table (2) Project Managers' Skills

Sr. No.	Items (Conceptual Skills)	Mean
1	Determine and coordinate project elements and resources	3.79
2	Identify exactly what needs to be involved in a project	3.91
3	Maintain a Grandview of a project and its relationships to company, environment, community and industry.	4.00
General Mean		4.03
Sr. No.	Items (Human Skills)	Mean

1	Motivates and inspires subordinates to effectively perform their tasks	3.98
2	Effectively communicate with a variety of people	3.86
3	Recognize the feelings of his/her own and subordinates' feelings to maintain self-motivation and managing others' emotions	4.14
General Mean		4.04
Sr. No.	Items (Political Skills)	Mean
1	Advocate high levels of integrity, sincerity and authenticity, to inspires confidence and trust in others	3.68
2	Create and employ various social networks to achieve organizational and personal goals	3.89
3	Permit followers to adapt their behavior to diverse situations to stimulate the desired responses	3.93
4	Recognize interpersonal interactions and social situations that occur in social settings	3.91
General Mean		3.93
Sr. No.	Items (Technical Skills)	Mean
1	Identify resources (human and financial) required to implement project activities such as setting and controlling project budget	4.14
2	Understand construction contracts' standard procedures and take responsibility of document management system	4.00
3	Determine quality standards, methods to meet the standards, monitor compliance and eliminate inadequate performance	4.07
4	Decide on which tasks need to be performed, which tasks are due and which activities drive other activities	3.93
5	Effectively manage processes related to achieving goals, services and results required from external parties	4.02
6	Conduct risk management such a identify, analyze and mitigate risks	4.07
General Mean		4.02

Source: Survey Data, 2023

As shown in Table (2), most of the project managers at Royal AMT construction company limited have high level of conceptual skills, human skills, political skills and technical skills. They also have the reliable experience in construction field (all managers have at least 10-year experience in construction industry).

The descriptive analysis results for project success with three criteria are shown in Table (3).

Table (3) Project Success

Sr. No.	Items (Cost)	Mean
1	Net profit targets were met	3.98
2	Overall project cost performance was met based on baseline goals, targets, or expectations.	4.14

3	Budget contingencies were well managed.	4.02
4	Rework costs were well managed.	4.05
5	Market competition was well understood.	4.14
General Mean		4.13
Sr. No.	Items (Schedule)	Mean
1	Labor availability was well managed.	4.11
2	Overall project schedule performance was met based on baseline goals, targets, or expectations.	4.05
3	Equipment availability was well managed.	3.95
4	Schedule float management was optimized	3.86
5	Material availability was well managed.	4.00
General Mean		3.99
Sr. No.	Items (Quality)	Mean
1	Customer satisfaction was evidenced by direct feedback.	4.11
2	Overall project quality objectives were met based on baseline goals, targets, or expectations.	4.14
3	Customer satisfaction was evidenced by the opportunity for follow-on work.	4.00
4	The customer's true goals and expectations were properly reflected in contract performance incentives.	4.14
General Mean		4.11

Source: Survey Data, 2023

According to the survey results, Royal AMT construction company limited accomplished most of the projects within the time frame, within the desired budget and met the quality standard.

Findings From Regression Analysis

To reach the research objectives, the effect of project manager's skills and experience on project success by cost, the effect of project manager's skills and experience on project success by schedule, and the effect of project manager's skills and experience on project success by quality are analysed with multiple linear regression analysis. The regression results for the objective (1): the effect of project manager's skills and experience on project cost are shown in Table (4).

Table (4) Effect of Project Manager's Skills and Experience on Project Cost

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig	VIF
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	B	Std.Error	Beta			
Constant	1.619	0.849		1.907	.069	
Conceptual Skills	0.046	0.123	0.058	0.370	.713	1.360
Human Skills	-0.288*	0.150	-0.338	-1.923	.062	1.684
Political Skills	0.427***	0.154	0.452	2.780	.008	1.448
Technical Skills	0.292*	0.166	0.276	1.757	.087	1.349
Experiences (Years)	0.059	0.066	0.139	0.894	.377	1.314
R						0.552
R Square						0.305
Adjusted R Square						0.213
F Value						3.328**

Source: Survey Data, 2023

* Significant at 10%, ** Significant at 5%, *** Significant at 1%

According to the regression analysis results, project manager's conceptual skills have no effect on project cost. Project manager's human skills have negative effect on project cost: their social skills will be adversely affecting on cost management because of the nature of construction work for which most of the site employees and sub-contractors will take advantage over project manager's kindness, friendliness, social dealings and mindfulness. Their political skills (understanding about team members' strengths and weaknesses) and technical skills (expertise in specific field and skillful in using tool and methods and technology) have positive effect on project cost (effective cost management).

The regression results for the objective (2): the effect of project manager's skills and experience on project schedule are shown in Table (5).

Table (5) Effect of Project Manager's Skills and Experience on Project Schedule

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Std.Error	Beta			
Constant	0.453	1.091		0.415	.680	
Conceptual Skills	0.187	0.158	0.182	1.179	0.246	1.360

Human Skills	0.003	0.193	0.002	0.013	0.990	1.684
Political Skills	0.442**	0.197	0.357	2.238	0.031	1.448
Technical Skills	0.291	0.213	0.210	1.363	0.181	1.349
Experiences (Years)	-0.012	0.085	-.021	-0.139	0.890	1.314
R						0.577
R Square						0.332
Adjusted R Square						0.245
F Value						3.784***

Source: Survey Data, 2023

* Significant at 10%, ** Significant at 5%, *** Significant at 1%

It is found that the political skills of project managers can support to time management: the political skills of project managers will be necessary to complete the projects without delay.

The regression results for the objective (3): the effect of project manager's skills and experience on project quality are shown in Table (6).

Table (6) Effect of Project Manager's Skills and Experience on Project Quality

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Std. Error	Beta			
Constant	3.844	1.080		3.560	0.001	
Conceptual Skills	0.003	0.157	0.004	0.021	0.984	1.360
Human Skills	-0.051	0.191	-0.052	-0.267	0.791	1.684
Political Skills	-0.091	0.195	-0.083	-0.464	0.645	1.448
Technical Skills	0.477**	0.211	0.390	2.258	0.030	1.349
Experiences (Years)	-0.101	0.084	-0.205	-1.204	0.236	1.314
R						0.398
R Square						0.158
Adjusted R Square						0.048
F Value						1.429*

Source: Survey Data, 2023

* Significant at 10%, ** Significant at 5%, *** Significant at 1%

The project managers' technical skills will increase the project quality. To meet the specifications and quality standards, project managers must have specialized skills in respective areas.

Conclusion

Royal AMT construction company limited was founded by four young entrepreneurs, About 10 years ago, it has accomplished 70 projects. It has been receiving good reputation in the market with success of its projects. The hidden factors of this success are partially the project managers' skills, particularly technical and political skills. For long term success, they should try

to improve their technical skills continuously to keep abreast of the continuously changing technology and project methods. Moreover, they also need to retain their integrity, sincerity and authenticity, and need to inspire confidence and trust in others. They also have to emphasize on building social networks, and to value the diverse views of people from various backgrounds.

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References

- Ali, A. M., & Chileshe, N. (2009). *The influence of the project manager on the success of the construction projects*. Jeju, Korea: International Conference on Construction Engineering and Management (ICCEM).
- Cronbach, J. L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 297-334.
- Daft, R. L. (2022). *Management, 14th Edition*. Boston, MA, USA: Cengage .
- Dainty, N. A., Cheng, I. M., & Moore, R. D. (2003). Redefining performance measures for construction project managers: an empirical evaluation. *Construction Management and Economics*, 209-18.
- Elmezain, M., Baduruzzaman, W. H., & Khoiry, M. A. (2021). The impact of project manager's skills and age on project success. *Brazillian Journal of Operations and Production Management*, 1-16.
- Glavinish, E. T. (2008). *Contractor's guide to green building construction*. New Jersey: John Wiley & Sons.
- Hwang, B., & Ng, W. (2013). Project management knowledge and skills for green construction: Overcoming challenges. *International Journal of Project Management*, 272-84.
- Khan, K., Turner, R. J., & Maqsood, T. (2013). Factors that influence the success of public sector projects in Pakistan. *Proceedings of IRNOP 2013 Conference*. Oslo, Norwa: BI Norwegian Business School.
- Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row
- Mainiero, A. L. (1994). On breaking the glass ceiling: The political seasoning of powerful women executives. *Organizational Dynamics*, 5-20.
- Omidvar, G., Samad, Z., & Alias, A. (2012). Project management competency elements valued by project managers in construction industry. *International Journal of Research in Management and Technology*, 593-602.
- Sunindijo, Y. R. (2015). Project manager skills for improving project performance. *International Journal of Business Performance Management*.

- Schmid, B., & Adams, J. (2008). Motivation in project management: the project manager's perspective. *Project Management Journal*, 60-71.
- Sunindijo, Y. R., & Zou, W. P. (2012). Political skill for developing construction safety climate. *Journal of Construction Engineering and Management*, 605-12.
- Yamane, T. (1967). *Statistics: An introductory analysis*. New York: Harper & Row.
- Zulch, G. B. (2014). Communication skills impact on sustainable and green project management. *Proceedings of the World Sustainable Building Conference* (pp. 676-82). Barcelona, Spain: SB14.