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Project Success Factors and Project Management: Empirical Evidence from Pakistan

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Project Success, Project Management, Schedule Management, Tasks Management, Planning Activities

ABSTRACT

To ensure the success of projects, project manager must have the requisite knowledge of project management. Factors including tasks management, schedule management, planning activities and managing human resource were identified by Ramesh, Ramesh and Ramchandar (2018) as factors of the project management. While there remains a gap in the literature with respect to understanding the impact of factors of project management on project success. In order to fill this gap, the current study investigates the impact of the project management on project success in Pakistan. Descriptive research was used where a sample of 58 individuals were chosen from the 5 major construction companies in Pakistan. The results of the study revealed that all the factors of project management were having significant impact on project success, while planning activities were having more contribution on project success. the current study recommends that the managers should considered the management of the project in a proper way. Similarly, not only the management of the accounts and costs etc. should be management but the managers are recommended to consider the management of the human resource, planning activities and schedule.

INTRODUCTION

In the developing countries like many other fields and industries the management of a project is also gaining popularity, and it is beneficial in achieving not only the objectives of the

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business but also in the economic development. There are several initiatives underway in developing countries, particularly those linked to the international aid that the development partners receive, including the creation of new products, real estate, infrastructure, and even event organizing (Conboy, Carroll, 2019). The project management is basically the art of organizing, planning, staffing, management of the resource and coordination likewise in bringing about the completion of the project specific goals and objectives (Gill, Henderson-Sellers, Niazi, 2018).

A project can be said to have a complex, unique connected activities which work together in achieving one purpose or goal which must be finished within a specific time, within a proposed budget and as per the specifications which are provided to the managers of the project. This is in contrary to the set of activities or operations carried out daily which intend to be the continual process but without any planned end (Bick, Spohrer, Hoda, Scheerer&Heinzl, 2017). There are also general attributes which characterize the projects which include the life cycle, purpose, uniqueness, conflicts as well as interdependencies which define a project as a unique investment which is resourceful and have a specific set of objectives which include the production of services or goods in making profit or providing specific community service (Lechler& Yang, 2017).

Lifecycles of projects are irreversible when they begin and end at certain points in time, and they may be described as such. The manager of the project, a major player who defines the project's characteristics, plays a vital role. The project manager is often referred to as the project's heart and soul, yet the project manager is nothing without the team's efforts and the way the project manager motivates them (Papadakis & Tsironis, 2018). To put things in perspective, the project manager's hard effort is not enough to ensure a project's success. If the project is to succeed, its manager must be well-versed in all parts of project management: planning, organizing, monitoring, and controlling the project's progress. The project manager has a critical role to play in ensuring that the project's goals are met safely, on schedule, and at a cost that is reasonable. The project manager must also apply the skills, methods, knowledge, and tools to the project's operations if it is to accomplish its objectives. The management of the project makes use of the many people's skills to bring them all together and help them achieve the project's objectives, so assuring its success. Traditional measurements of success include timeliness, safety, and cost, as well as measures such as customer happiness, management leadership, staff participation, training, collaboration, and responsiveness. These are just a few examples. Conventional project quality and contemporary project quality are two systems for measuring the quality of a project, both of

which include rating systems (Pinkerston, 2003). In today's project quality, the evaluation of the project team members and customers is qualitative and encompasses qualitative assessment of the project problems, such as the communication of the project values and objectives, peer review, customer expectations, quality rewards, and partnerships. Conventional project quality, on the other hand, focuses on the needs of the client in terms of schedule, specs, and money. Building and engineering projects use an equivalent approach to evaluate the quality of the finished product throughout the design and construction phases (Schmitz, Mahapatra & Nerur, 2019).

The definition of project success and, subsequently, the assessment of the project's performance are two additional challenges that must be overcome in order to fully grasp project management. It is widely believed that a project's success may be measured after its technical objectives have been met. At no point can project scope vary from the three parameters: usefulness, cost, or time. The project's beneficiaries and sponsors can only evaluate the project's usefulness and effectiveness. Once a project has been finished, it is possible to determine if it was a success or failure. Efforts of the project's leaders are reflected in the evidence that they seek. That is why it is vital that there be a positive correlation between the project performance organization's efforts to enhance project management and the successful completion of projects from this viewpoint(Conboy, Carroll, 2019).A gap is visible in the literature with respect to understanding the relationship amongst the success of the project and the management of the project. In order to fill this gap, the current study investigates the impact of the factors of the project management on project success in Pakistan. The factors of the project management that were identified by Ramesh, Ramesh and Ramchandar (2018) were used in this study. These factors include tasks management, schedule management, planning activities and managing human resource.

Study Objectives

The current study has below objectives

- To investigate impact of tasks management on success of the project
- To examine impact of managing human resource on success of the project
- To analyze impact of schedule management on project success
- To investigate impact of planning activities on success of the project.

Literature Review

Project and Project Management

There are many definitions of the project and its management. As per the Project Management Institute, the project is temporary in nature as it has a defined end and a specific time period. It is unique as it doesn't possess operations in routine, rather it has specific set of operations which are designed in accomplishing a desired goal. According to the Project Management Institute (PMI), project management is defined as the management methods that aim to complete the intended project while reducing costs and meeting the customer's expectations.(Chin, Spowage, 2010). The objectives and goals defined for the project, though seem attainable and approachable, yet the project itself can run overdue, fail to fulfill the challenges or worse exceed the given budget. The contemporary management of the project was brought in the project of Manhattan in the early 50's. In 1916 Henry Gantt evolved the bar chart which is being used nowadays. Literature review showed that a comparable tool was used in 1912 by Hermann Schuerch who was a Swiss engineer. He developed and efficiently utilized the bar chart as a scheduling tool on the project of a bridge. The contemporary project management has been set up many years in advance before it was broadly perceive (Gemino, Reich & Sauer, 2015). The management of a project is a new concept and thus the literature is extremely young as it lacks the theoretical and conceptual basis.

Project success

Project management has been heavily influenced by the success of the project. According to conventional wisdom, a project's success is closely related to its ability to meet its set budget, timeline, and quality goals. For measuring the performance of the project, the financial criteria is used and it also includes the economic return, cost analyses and its profits. The analyzing margins of the ongoing company project is also another way to evaluate the benefits of the project management. The commonly used metrics of the project performance include the ones which are related to the attainment of the planned schedule by the end of the project, when there is a financial issue involvement. Nonetheless, there have been investigated new dimensions in the success of the project. Various people have their own take of the perception of the success of the project. Five success criteria have been defined by Samset (2015), which includes the effectiveness, efficiency which is related with the iron triangle, impact of the project on the society, priorities and relevance to the needs in the society and lastly sustainability which is related with the effects of the project in the future. Dvir and Shenhar (2017) proposed similar but slightly different dimensions of the success

which include the efficiency of the project, project impact on the customer, impact on the project team members, direct success and business success and future preparations. As per Carvalho and Junior (2015), there is a dimension related to sustainability where it related to the project impact on the environmental and social aspect which is aligned with the least layer of literature. Several authors have emphasized the success of the project with that of the product or the service which they are providing, and it is considered extremely important.

Project management and project success

The management skills seemed to highlight certain practices over many others as per the investigation led by Besner and Hobbs (2012). During the life cycle of a project it is extremely important to study the highlights of the hard skills, need for recording and measurement of the control of the project. Nonetheless the soft skills were highlighted by Carvalho (2014) which highlighted the importance of the soft skills in the management of the project which are related to the communication as well as other management skills. The relationship amongst the management of the project as well as the capability based on the resource based was highlighted by (Lechler& Yang, 2017). In the project management as per sage et al.(2014) the failure of a project is because of the failure in competent leadership. Thus as per him, all the problems can be overcome by better management. It is important for the success of the project that both the soft and hard skills should be utilized, both are important in practical implementation. Efforts in the management of the project maturity are very essential and thus these can be combined with an understanding of the team members and manager of the project. In any project the manager of the project is considered extremely important and is a critical success factor (CSF), who provides with directive goals, assistance in the resolving of the organizational issues and interpersonal matters. In a project management the training and education issues are key factors. As per Plaza and Rolf (2008), the choice of strategy training has an important impact on the cost performance. On the other hand Hong, (2011) emphasized the learning impact as well as sharing and knowledge on the performance of the project. The training is supported by methodology of project management as per (Wysocki, 2019). As per the studies of Czuchry and Yasin (2003) there is influence of effective executive on the three modes of the life cycle of project which includes the technical, decisional and critical skills. Even while the numerous parts of a project's management practices have an influence on its performance, not all the equipment and tactics associated to project management are connected to its success.

Study Hypotheses

Based on above discussion, below hypotheses are developed

H1: To investigate impact of tasks management on project success.

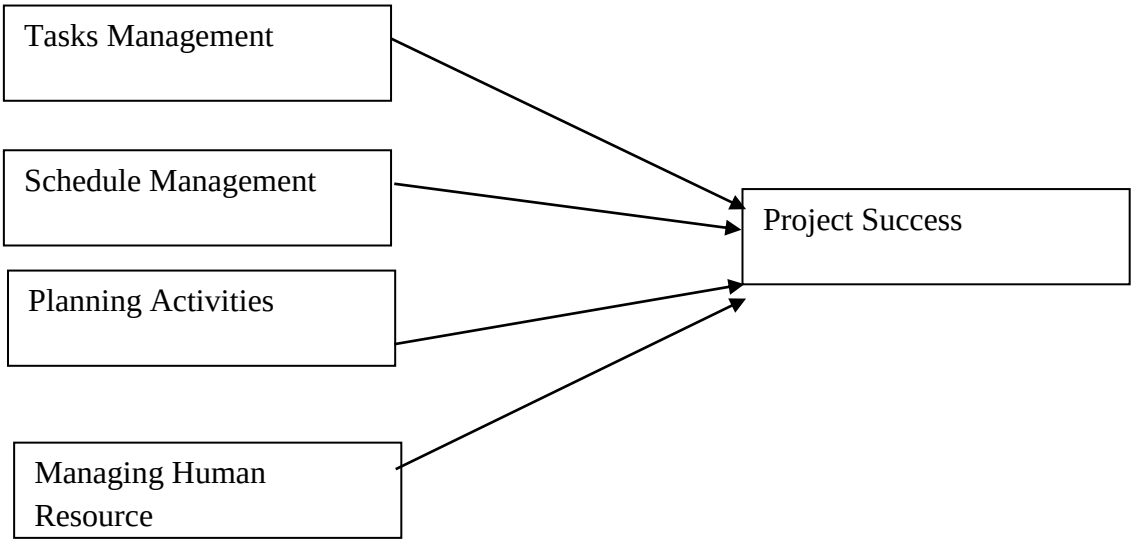
H2: To analyze impact of schedule management on project success.

H3: To investigate impact of planning activities on project success.

H4: To examine impact of managing human resource on project success.

Conceptual Framework

Independent variable Dependent Variable



RESEARCH METHODOLOGY

Design of Research

Descriptive research design, while quantitative research type is chosen to achieve the objectives of the current study. The reason to choose the quantitative research was due to the reason that impact of project management on project success is investigated through statistical tools while as the study selects a population and data is collected from a sample to achieve the study objectives, there for descriptive research design is chosen in the current study.

Study Population and Sampling

The research population refers to the huge group of people who are selected for the study's investigation. In the current study, for achieving the research objectives, construction sector located in the Pakistan was chosen as the population of the current study. 5 major companies of the construction industry were chosen in the current study, and a sample of managerial level staff was chosen from those companies. A sample of 58 individuals was taken through the convenient sampling technique.

Research Instrument

The instruments for measuring the project management and project success were adopted from the literature. The measurement scale developed by Monteiro, Alves and Souza (2015), was used to measure the four determinants i.e. tasks management, schedule management, planning activities and managing human resource having 5 items for measuring each factor of the project management. While the scale developed by Ghimire and Biswakarma (2017), having 14 items was used to measure the project success. The reliability of the scales was determined through the Cronbach Alpha, while results of the reliability analysis are presented in the below table;

S.no	Variable Name	Variable Type	No of items	Cronbach Alpha value
1	Project Success	Dependent	14	0.62
2	Tasks Management	Independent	5	0.67
3	Planning Activities	Independent	5	0.64
4	Managing Human Resource	Independent	5	0.66
5	Schedule Management	Independent	5	0.61

The above table is showing the values of the Cronbach alpha for dependent and independent variables of the study. As depicted in above table, value of the Cronbach alpha for each scale was higher than required value of 0.6 as stated by Brains et.al (2006), thus the variables were considered as reliable in the current study.

Data collection

The Likert scale instrument was used to collect the primary data for the current study. The self-administered questionnaire was distributed among the study respondents while descriptive and inferential statistics were used to analyze the data.

ANALYSIS

Descriptive Statistics

Descriptive statistics examines the normality of the data and dispersion in the data. The data that is normally distributed is required for analysis (Zikmund, Carr, & Griffin,2013). In this study mean and the standard deviation were used to measure the normality and the dispersion in the data. The results of mean and standard deviation are shown below;

S.no	Variable Name	Mean	SD
1	Project Success	3.51	0.672
2	Tasks Management	3.31	0.683
3	Planning Activities	4.20	0.691
4	Managing Human Resource	3.14	0.624
5	Schedule Management	3.01	0.683

Value of Mean value of standard deviation is shown for variables of the study in the above table. The table is showing that mean values for project success, tasks management, planning activities, managing human resource and schedule management are 3.51, 3.31, 4.20, 3.14 and 3.01 respectively. While value of standard deviation for these variables are 0.672, 0.683, 0.691, 0.624 and 0.683 respectively. As stated by (Zikmund, Carr, & Griffin, 2013), when value of the standard deviation is higher than 0.6 then it shows the normal distribution of the data.

Correlation Analysis

Value of correlation coefficient shows relation between the independent and the dependent variables. The values of correlation of coefficient between factors of project management and project success are presented in the below table;

Table: Correlation Analysis

Variables	Project Success	Tasks Management	Planning Activities	Managing Human Resource	Schedule Management
Project Success	1				
Tasks Management	0.31*	1			
Planning Activities	0.42*	0.33**	1		
Managing Human Resource	0.41**	0.51*	0.21**	1	
Schedule Management	0.26*	0.13*	0.25**	0.11*	1

*p< .05 **p< .01

The table shows values of correlation coefficient between independent and dependent variables of the study. The tables shows that value of the correlation between project success and task management is 0.31 that a shows a moderate positive relationship, value of the correlation between project success and planning activities is 0.42showing a strong positive relationship, value of the correlation between project success and managing human resource is 0.41showing astrong positive relationship while lastly the value of the correlation between project success and schedule management is 0.26 that shows a weak positive relationship. The p value shows that all these values are significant. Thus, the correlation analysis concludes that all the factors of the project management are having a positive relationship with project success, while the correlation coefficient values also show that planning activities and managing human resource are having strong relationship with project success among other factors of the project success.

Regression Analysis

Results of regression analysis are presented in the below tables

Table: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	0.681	0.469	0.448	0.46677	1.883

Model summary shows the values of R, R square and Adj R square. These values show the extent of the impact of independent variable on the dependent variable. As shown in the above table value of the ajd R square is 0.44, showing that the independent variable i.e., project management predicts 44 percent of the variation in that of dependent variable i.e., project success. The value of Durbin-Watson i.e., 1.88 shows that there is no auto correlation in the data.

Table: ANOVA

Model	Sum of the Squares	Df	Mean Square	F	Sig.
Regression	17.770	5	3.746	17.155	.003
Residual	21.578	93	0.219		
Total	39.338	98			

a: Predictors: project success, tasks management, planning activities, managing human resource and schedule management

b: Dependent Variable: Project Success

The ANOVA table is showing the good fitness of the model of study, as seen in the table that the value of regression is lower than value of residual as the given value of f=17.155 and t=.003.

Table: Coefficient

	Unstandardized Coefficients		**Standardized Coefficient**		
Model	B	**Std. Error**	**Beta**	T	Sig.
(constant)	1.171	.417		2.152	0.04
Tasks Management	.281	.046	0.260	2.030	0.040
Planning Activities	.341	.074	0.324	3.011	0.018
Managing Human Resource	.313	.057	0.294	2.191	0.034
Schedule Management	.200	.041	0.189	1.855	0.049

a. Dependent Variable: Project Success

The above table is showing values of the beta coefficients for the variables of the study. The grater beta values at relevant value of t and level of significance shows that the variable is contributing more towards the dependent variable. So, as shown in table, the highest value of beta is 0.34 for planning activities (t=3.011, p=0.018), showing that planning activities has more contribution towards the project success. Likewise, value of beta for task management is 0.260 (t=2.030, p=0.040), for managing human resource is 2.19 (t=2.19, p=0.034) and value of beta for schedule management is 0.18 (t=1.855, p=0.049). All these values are significant, showing that the factors of the project management are having a significant impact on the project success. Thus, H1, H2, H3 and H4 of the study are accepted.

Conclusion

The performance of the project's management seems to have an influence on the project's success, whereas the adoption of management techniques has been shown to have a significant impact. According to this theory, when a company uses project management principles, its projects grow more mature in their capabilities and hence more capable of providing value. The current research was in accordance with the other researches which says that the project management practices affect the success of the project. Nonetheless, this research had a different perspective when it looked at the project management practices through different angle which includes taking the factors like tasks management, planning activities, managing human resource and schedule management as factors of project management, where it was identified that the planning activities contributed more in the success of the projects. The current research supports the findings of Serrador and Turner (2015) which argues that the project's success is largely dependent on how well it is planned. This, in turn, has a variety of consequences. Firstly, that the organizations which succeed in the implementation of the project are already mature as well as established in their management of change. When a project is delivered on time, it demonstrates that the project's goals and objectives are well understood by all stakeholders, and therefore there are minimal revisions required to complete the project life cycle.

Recommendations

The study explores that there is a positive correlation and a significant impact of project management on the project success, therefore the current study recommends that the managers should considered the management of the project in a proper way. Similarly, not only the management of the accounts and costs etc. should be management but the managers are recommended to consider the management of the human resource, planning activities and schedule etc. also. Likewise, the current study recommends that further studies should also considered the other factors of the project management. Thus, it can be said that the practices of the project management are widely used in the successful projects and thus the project success influences the project management.

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