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IMPACT OF RISK MANAGEMENT ON PROJECT SUCCESS WITH THE MODERATING ROLE OF MANAGERIAL COMPETENCY

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ABSTRACT

The primary purpose of this research is to analyze the influence of causal relationships among risk management and project success and the moderating role of management competence. The study's definite viewpoint is the organization of the IT sector in Pakistan. The study approach was quantitative and deductive, with Sekaran (2003) estimating the sample size. The model was checked with a sample size of 227 respondents, including workers from Pakistan's IT industry organizations. Empirical findings suggest that risk management is positively correlated with project performance. Management expertise also positively moderates the relationship between risk management and project performance in a beneficial direction. This study is helpful for project-based organizations to increase the bar and provide workers with means and ways to achieve their project success.

1. INTRODUCTION

1.1 Background of Study

Projects are now used for other reasons than to address specialized issues. They are also locations for market dominance and transition, including the short and long-term outlook. As these are key goals of modern projects and project management, the mindset of individuals on what they can concentrate on to effectively execute projects is an essential issue (Jessen, 2011). The success of the project and the realization of a particular combination of objective and subjective measures were observed, as seen in the criteria for success and measures towards the end of a project (Müller & Jugdev, 2012).

The need for powerful project management (PM) is growing, taking into account the information technology industry. The IT area has come a long way with a population base of more than 2,000 large organizations and extended its services in many administrative lines, such as system integration, network management, use of software bundles, including item areas and mechanically distributed services (Bhoola, 2015). More emphasis is currently given to applying the appropriate technologies or software to intentionally react correctly to organisations, taking into account the appropriate timetable, properties, efficiency and risk (Schwalbe, 2015).

In modern-day organisations, the challenge faced by projects is due to the severe complexity of the projects. The prudent analysis is needed for the following characteristics, such as learning from past experiences, the compassionate organizational vision of projects, and the willingness to realize opportunities rather than shortcomings from previous projects (Lin, Abdel-Hamid, & Sherif, 1997). Overall, information technology has increased efficiency in the output sector of the economy (Banker, Bardhan, Chang, & Lin, 2006). The wild accompanying wild for its applications is increasing the efficiency of knowledge-intensive jobs, frequently connected to the administration of protests and projects. Successful PM skills are required to deliver information and knowledge work, defined by the development,

coordination, integration, and administration of learning and information within an organization and its extended estimation framework (Conner & Prahalad, 1996).

Project management is called the realization of the project by implementing and integrating the initiation, preparation, execution, tracking, control and closing project management process. Project management logically coordinates these capacities during the project's tenure to meet stakeholders and constituents according to the project's preconditions. People with an immediate interest in the project are considered stakeholders, while the project's constituents are the people likely to be impacted by the effects of the project. If stakeholders and voters communicate their overall achievement as demonstrated by the level of their organizations, there will be clear progress in the projects (Akewushola, Olateju, & Hammed, 2012).

To maximize the chances of a project's success, it is very necessary for the company to thoroughly understand the possible risks, to conduct the risk survey effectively and quantifiably, to envisage achievable outcomes and circumstances, and then to choose acceptable management practices (Mobey & Parker, 2002). The risk protocol must be specifically integrated into the decision-making process to ensure that each future risk is handled effectively. When there are some important risks present. RM is a critical technique for adapting by (1) surveying and assessing the feasibility of the project; (2) managing and evaluating the risks, taking into account the objectives of reducing the chances of any failure (3) mitigating the risks by fair planning; and (4) avoiding unsatisfactory projects and thus cultivating benefit edges (Lam, Wang, Lee, & Tsang, 2007).

Söderlund and Maylor (2012) share their views by noting that, taking into account the project management literature, the RM area is being thoroughly considered. Also, reference books on project management affiliations and institutes hypothesize the risk to be the main areas to focus on. Nonetheless, few authors talk about the RM processes that are rarely linked to the day-to-day schedule of projects, even broad and complex ones, thus identifying a void in the field (Zwikael & Globerson, 2006; Zwikael & Sadeh, 2007). The risk protocol should be unambiguously incorporated into the decision-making process to ensure effective control of all prospective risks. Their irregular risk condition is one of the real qualities of the ventures. This means that an excessive number of adverse events will lead to delays, serious spending, inappropriate project outcomes, or even utter disappointment (Dvir, Raz, & Shenhar, 2003).

RM plays a vital role in the progress of a project (de Landa Farias, Travassos, & Rocha, 2003). Zou, Zhang, and Wang (2007) stated that a clear connection exists between the achievement of the project and productive RM. "RM is the process of identifying, classifying, analyzing, and assessing inherent risks in a project, according to Zou et al. (2007)." There is always a risk and it can not be eliminated, but the risk can be handled efficiently for the project to be successful. Kimbrough and Componation (2009) lead to insights into the importance of an organization's community to RM. For instance, in important decisions to be modified in the organization, authority styles, vocabulary used in the organization, and how quickly the organization can effectively react and adapt to market changes assume a serious role. For a project, project execution, and project progress, managerial skills such as planning are important. During the project, it is a constant procedure (G. Idoro, 2009). Several research studies of project management performance factors indicated planning, a true supporter of project success (Aronson & Lechler, 2009; Slevin & Pinto, 1987).

All project supervisors must establish a strong project plan and follow this plan for success (Dvir et al., 2003). As indicated by Zwikael and Ahn (2011) many difficulties make the planning project fail: lack of project management skills, projects not related to authoritarian objectives, loss of control due to deficiency of details in the project plan, the conflict between project teams due to ineffective communication. The organizations follow regularly after a thorough procedure to plan and transmit projects ideally given the limits of assets and budget. Nevertheless, vulnerabilities and imperatives increase the unpredictability of the planning process and contribute to increased costs, deferrals, and asset problems (Morrow Jr, Mood, Disch, & Kang, 2015). Planning involves an essential part of the authoritative decision-making process, from vital to the operational level, by organizing information and activities.

The task of planning is to establish a coherent and methodical decision-making process that results from the best activities, according to Litman (2013). Project planning is the way to select the right techniques, method, and correct period for project tasks, and the tools necessary to help complete a successful project. The feasibility of extending planning can be abstracted as how well a project meets its set goals (Galvin, Gibbs, Sullivan, & Williams, 2014). The future results of a project may be influenced by decisions made during the planning (Arditi, 1985). Project preparation may be used to develop new goods, companies, tasks, or different tactics (Nutt, 1983).

Due to the complicated nature of the assets, systems, successes and parties included, the preparation required is crucial in the success of the project and its execution (G. I. Idoro, 2012). Naoum, Fong, and Walker (2004) present the

planning stage as several of the main instruments used by stakeholders to ensure the progress of construction projects. Planning of a project is done to successfully achieve the objectives of a project. Plan preparation is undertaken to accomplish the goals of a project effectively. This is not only limited to the project delivery time, project cost and project efficiency, as well as the main proportions of the project implementation, the statements of Faniran, Oluwoye, and Lenard (1994), are correct.

The proportions of the feasibility of a project's preparation and the success metrics of the project itself are the same, we may claim. In this context, it is possible to regard the organization of an effective project as viable, while that of an ineffective project can be deemed insufficient (G. I. Idoro, 2012). The goal of this study is to analyze the effect of RM on project performance, with the moderating position of managerial competence in IT sector organizations of Pakistan.

1.2 Research Gap

Unfortunately, due to mismanagement and lack of necessary expertise, lack of preparation, and awareness of project managers leading to the nation's miseries, most of the projects collapse. Therefore, there is a desperate need to undertake examinations to see the roots of project defects and cover all areas/gaps that enable project-based organizations to deal with mega projects in an improved manner. Zwikael, Pathak, Singh, and Ahmed (2014) stated that the study was limited to the project planning stage and that the results reflected projects in the government sector of a single country, with data gathered in a cross-sectional design. In particular, in the area of project management, the Fujian Government is relatively inexperienced, and comprehensive training and staff mentoring are required in this area. Zwikael et al. (2014) proposed future studies could be undertaken in other nations and industries to further generalize the results of the report, evaluating other possible variables of moderation.

2. REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

2.1 Risk Management and Project Success

The number of studies investigating the amount and nature of risks in IT projects stretches to more than 3 centuries. RM researchers have focused on investigating mechanisms that include remedies for RM, also involving differences in risk recognition, risk assessment, risk response preparation, and risk monitoring (Taylor, Artman, & Woelfer, 2012).

Four classifications of the Didraga (2013) RM model; risk recognition, risk analysis, risk response planning, risk monitoring and risk control. In terms of expense, commitment and timing, no strategy for RM influenced the project's target performance. In this way, the result could not be extended to an unsatisfactory error margin because of the limited sample size. Crader (2015) clarified that each project has risk like; assets left the company, change in leadership and the budget cut and so forth. Several factors can not be controlled. Under these conditions, risks can be reduced with the aid of appropriate risk and management preparation. RM activities concerning its successful ventures were investigated by Pimchangthong and Boonjing (2017). With the assistance of a questionnaire, data were obtained from 200 project managers and analyzed.

The findings showed that the differences in hierarchical styles affected their successful projects in all respects, while the differences in organizational sizes affected their successful projects in terms of product efficiency as well as overall aspects. Jovanović, Milijić, Dimitrova, and Mihajlović (2016) investigated the effects on the achievement of project destinations of the fundamental components of the critical project management mechanism in southeast Europe. RM procedures were also analyzed in this report, and the impact of several project components on risk management was also addressed. Data from 311 investment projects from different countries were collected and analyzed with the assistance of Structural Equation Modeling. In organizations across various business sectors, the main projects were examined in such a way that results were obtained representing a benchmark of the value of risk factors as suggested by project colleagues and managers.

Carvalho and Rabechini Junior (2015) investigated the connection between management of risk success of the projects, considering the unexpected impact of project difficulty. This tactic additionally consolidates features of hard and soft aptitudes. This procedural methodology includes a literature review that supports the conceptual framework and an overview for exact approval, utilizing SEM. The hypothesis was tested because of a field study in which about eight industries were selected and 263 projects were delivered among them. The work done in the field included

meetings with the managers of the project and people linked with the department of RM and also there was an analysis of inside organization about the performance of the project.

As per Teller, Kock, and Gemünden (2014) the enhanced awareness and comprehension of the risks is identified with financial, time, quality, and monetary goals of the projects. By applying similar methods and tools in overseeing project risks, it can be comprehended that the RM and knowledge sharing between project managers are shared. Standard procedures make the individual risk exposure risk clearer, which serves as a basis for risk-adjusting portfolio (Teller et al., 2014).

From the applied perspective, focusing on vulnerabilities amid the project, implementation of the utilization of the RM procedures and profoundly comprehend the business condition are serious factors for success, demanding consideration of managers. They likewise demonstrated a constructive effect from the existence of a manager who is going to manage risk on the success of the project. Moreover, it validated the significance of RM.

The effect of RM on the progress of projects in Syria was studied by Ewer and Mustafa (2008). The conclusion of this analysis indicates that a significant number of companies in Syria do not have a structured risk plan and the use of RM would improve the project's success rate. De Bakker, Boonstra, and Wortmann (2010) in their article "Does risk contribute to the success of the project?" The causes of project failure have been well established in recent years, and there is still very little evidence from practice that this knowledge is truly used in IT project risk monitoring programs. This analysis is decided by showing new ties in the relation between RM and project achievements for research. Mudau and Pretorius (2009) published an analysis of project management and RM for project performance.

The impact of efficient RM processes on project performance was investigated by Kishk and Ukaga (2008). To evaluate the effects of their RM processes on the project outcome, these two qualitative reviews of completed projects were reflected. Project 'a' did not have an obvious RM mechanism that subsequently revised all the risks found during the execution of the project at the description stage. Due to the absence of consistency in the RM, Project 'b' had some RM procedure realized and the project still overran schedule.

The main risk in China's development projects was explored (Zou et al., 2007), given the ultimate objective of designing policies to control them. In terms of time, cost, well-being and natural sustainability, the investigator classifies the risk rendering to the significance of the distinctive target of the project and then analyses it for the stakeholders. The analyst achieved his goal and, through survey synthesis, composed knowledge. Twenty-five main risks were found in total. And after that, to locate one of the risks in development projects in China, the authors equated these risks with a similar overview of the development projects in Australia. The scientist concluded that consumers, suppliers, and the state must take action to address their risks and facing the potential risk over a period, with minimal risk in infrastructure projects, and that unskilled workers and suppliers with in-depth knowledge of development and management have transferred healthy, productive and extremely durable. Therefore, our first statement is:

H1: Risk management has a significant impact on project success.

2.2 Managerial Competence effect towards Project success and as a Moderator between Risk Management and Project Success

Many studies indicate that Planning's managerial competence for any project is the most significant contributor to the project's performance, taking the dimension of planning as a key contributor to a literature review of Managerial Competency. Together with knowledge sharing as a mediator and organizational effectiveness as a moderator, Mubarak (2017) researched to examine the effects of execution preparation on the performance of the agile project. This study was carried out in the software industry to investigate the preparation of mechanisms. Data was gathered from 287 workers working on software projects, which revealed that implementation planning plays an important role in the progress of agile projects and mediates the exchange of knowledge, and the efficiency of the company moderates the relationship.

The link between the progress of the project and project planning was studied by (Tesfaye, Lemma, Berhan, & Beshah, 2017). For their study, data was collected from the various construction industries in which various projects were carried out. To verify the effect of project planning on project performance, Confirmatory Factor Analysis was applied. The study results indicate that the planning phase is the induction of human factors.

In addition to this (Cost, Time, and Risk), the only three mechanisms of project planning that have a positive effect on the performance of the project are There are too many complicated projects that have failed in the past due to the rise in project costs and also due to the interruption in the execution of the project due to insufficient project planning, such as the overall cost of the FIFA World Cup 2014 increasing from its original cost (Rezvani et al., 2016).

Several types of management skills are really necessary and vital for a job, such as technical skills, motivations, positive attitude, communication skills, problem-solving skills, customer-focused skills, teamwork abilities and project planning (Je Czaja, 2017). Competency or expertise in a modern system is characterized as a performance management system in which staff members are measured with clear criteria and technical work function specifications (Chen & Bliese, 2002).

Complaining about the project leaders and their skills in a project-based work Kalinova (2008) claimed that it is a very demanding job to manage and make a plan for building construction, regardless of whether it is a big building or simple object. The system point of view has always been very relevant because different parties with different objectives have joined the process. Their mutual correspondence sets exclusive criteria for the division of powers, the development of individual decision-making skills and responsibilities.

An exploration of preparation and project progress was performed by Serrador (2013). Results showed a substantial impact as compared to the revealed presumed 20-33 per cent suggested planning effort. Wang and Gibson Jr (2010) researched to see the relationship between project progress and pre-planning. Information on pre-project planning obtained from 78 construction projects, along with 62 modern projects, spoke of approximately $5 billion in overall construction costs, it concluded that pre-project preparation has a huge effect on the time-based and cost-efficient progress of a project. The discovery results in a lucrative wellspring of data for market experts that indicates that in the initial stage of the project life process, better planning has a beneficial effect on the final project outcome.

The encouraging correlation between project preparation and project success was announced by Dvir et al. (2003). Their findings found that there is a strong correlation between preparation activities and overall project progress. Although their reports have considered several elements that influence project outcomes, planning has been described as a critical factor.

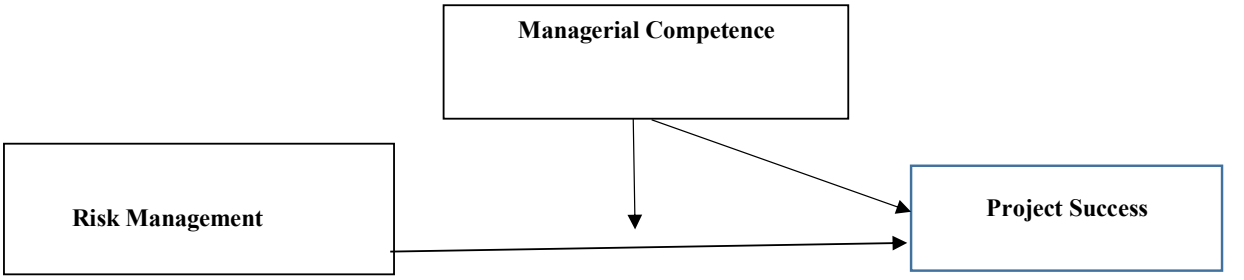
Bad project preparation is the major factor for a project's failure, and organisations need to accomplish the work with the specified budget and time. For getting this it is important that the end product target is always clear and must be established in the ahead (Dvir et al., 2003). The findings of Morris (1998) show the more time spent on preparing the tasks of a project would reduce the risk of the project and increase the probability of success.

Poor analysis and insufficient project planning can raise the likelihood of project failure (Morris, 1998). Similarly, Stefik (1981) sheds light on the element that the performance of the projects would take into account the implementation of the plans. Some research suggests that preparation has been very effective in achieving results (Poister & Streib, 2005). Our second hypothesis and third hypothesis, therefore, are;

H2: Managerial Competence has a positive significant impact on project success.

H3: Managerial competence positively moderates the relationship between RM and project success.

2.3 Theoretical Framework



3. RESEARCH METHODOLOGY

3.1 Research Strategy

The research strategy was quantitative and deductive. To, check the case and effect relationship among variables.

3.2 Study Setting

The study was carried out in non-contrived settings which means that it was taken in the natural environment of organizations where work is undertaken. IT sector in Pakistan was chosen for this study.

3.3 Unit of Analysis

Individuals, staff and project managers from the IT field are the study unit of current research.

3.4 Sampling Techniques

Convenience sampling technique has been used to collect the data because researchers do not have the target population sample frame. The convenience sampling method is an affordable, simple and convenient way of collecting information. For most studies, the sample size was determined using sekaran (2003), the thumb rule for sample size is larger than 30 and smaller than 500, as needed, and a minimum size of 30 is expected for each stratum. For this analysis, the complete data obtained on the questionnaires was 227. The total number of 300 questionnaires was distributed to various organizations in twin towns. The response rate was 76%.

3.5 Instruments

3.5.1 Managerial Competence

Managerial Competence was measured as planning using 10 items adopted from (Valencia, 2007).

3.5.2 Risk Management

Five items were assessed by risk management using the 5-point Likert scale from (Raz, Shenhar, & Dvir, 2002).

3.5.3 Project Success

The project success was assessed by using nine items from (Belout & Gauvreau, 2004).

4. DATA ANALYSIS

Table 1. Reliability Analysis

Variable	Cronbach's Alpha
Project success	0.856
Risk management	0.708
Managerial competence	0.876

The results of the reliability analysis in 4.1 table show that the alpha values of Cronbach for all the variables presented, separately and greater than 0.7, which means that the data collected through survey questionnaires for this study is accurate.

4.2 Correlation Analysis

Predictors	Mean	SD	1	2	3	4	5	6
1. PS	3.98	.5645	1					
2. RM	4.40	.6125	.292**	1				
3.MC	3.46	.6098	.302**	.310**	1			

**. Correlation is significant at the 0.01 level (2-tailed).

It was found from the correlation findings that risk management was positively correlated with project performance (r = .292**, p 0.01), which confirmed the first hypothesis that RM was positively related to PS. Also, it was found that the moderator, managerial competence, was significantly linked to project output (r = .302**, p 0.01), which supported the second hypothesis that managerial competence is positively linked to the success of the project has been accepted.

4.3 Regression Analysis

Coefficients						
Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. Error	Beta		
1	(constant)	2.809	.262		10.736	.000
	Rm	.267	.059	.290	4.542	.000

A. Dependent variable: PS

Direct results have also shown that first theory, i.e. risk management has a positive impact on project success, was supported, as shown by the regression analysis for the direct relationship. A positive relationship between risk management and **project** performance has been shown to have beta significance, i.e. (β = 0.267**) and a one-unit increase in risk management would result in a 26.7 per cent increase in computational success. The value of r2, i.e.

(r2= 0.086), showed that risk management compensated for the uncertainty of 8.6 per cent in project results. The p-value, which was (p=0.000), supported the argument for the first hypothesis.

Coefficients						
Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. Error	Beta		
1	(constant)	3.017	.207		14.558	.000
	Mc	.279	.059	.302	4.748	.000

A. Dependent variable: PS

Direct experiments have shown that the second hypothesis, i.e. management expertise has a positive impact on project efficiency, was supported, as shown by the regression analysis for the direct relationship. The beta value (β = 0.279**) showed that the relationship between management skills and the success of the project was positive. This result indicates that if management skills are improved, there will be a definite improvement in project efficiency, as a one-unit increase in managerial skills would result in a 27.9 per cent increase in project success. The r-square value (r2=0.091) showed that the 9.1 per cent gap in the efficiency of the transparency of the project is the responsibility of managerial competence. The significance value (p=0.000) ensured that the second hypothesis.

4.4 Results of Main Effects and Moderation Analysis

	PS	
	β	r^2
Step 1		
Job Position	.149	
Step 2		
RM	.251**	
MC	.188**	.148**
Step 3		
RMXMC	.313**	.166**

Note. N = 227.

** p < 0.05; ** p < 0.01; *** p < 0.001*

Findings in the high proportion of moderation. The relation between risk and project performance management is moderated by the third principle, which is managerial competence. The results of the following study for the interaction effect with β= .313**; δr2= .166 and p= 0.000 support the hypothesis. The findings published demonstrated that the relationship between risk management and project success is positively moderated by managerial competence.

5. Conclusion

For project-based organizations, there are many considerations in the literature to implement and improve risk management and managerial skill for project performance. Via RM, it has been found that many folds improve the organization's efficiency. The organization's project progress is the key concern of the organization, and managers make efforts day and night to increase staff efficiency. Many forms can contribute to project success, but they are either unique to the situation but not generic. Project-based companies are working to increase the bar and provide workers with means and ways to achieve their project performance. In this study, how RM affects the progress of the project has been kept under consideration. The effect of RM on project performance has been studied with the moderating role of retaining project management competence with IT sector organizations in mind. Holding competence in mind for organizations in the IT field. The role of managerial competence in project performance was

also analyzed, taking into account organizations in the IT field. The findings were derived from data obtained from Rawalpindi and Islamabad organizations in the IT sector. Also, the moderating impact of managerial competence on RM and project performance of IT sector organizations was verified in this report. It is necessary to remember that so far the above relationship has not been studied.

5.1 Future Direction

There is a certain constraint that should be considered by prospective researchers. Initially, the RM's timely reactions and impact on the project progress of the Rawalpindi and Islamabad IT sector organizations with a moderating position of managerial competence were provided by workers of IT sector organizations with almost no information on these terms. This can contribute to a typical biased technique. Similarly, future research should concentrate on various organizations in different parts of the world.

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