

Impact of Risk Management and Benefits Management on Project Success with the Moderating Role of Effective Project Governance

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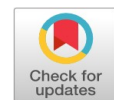
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Abstract: This study explores the influence of Risk Management (RM) and Benefits Management (BM) on Project Success (PS) with the moderating role of Effective Project Governance (EPG). This research has also been aimed to provide appropriate pathways for managers and management by directing on the possible way of focusing on project success. The study was conducted among the project managers and project associates of project-based organizations in Pakistan. Data were collected from 190 respondents working in various organizations and having foremost experience to handle numerous projects. The results of the study indicate that risk management and benefits management have a significant impact on PS. The study shows that the moderating role of effective project governance significantly moderates the relationship between benefits management and PS and has an insignificant impact on the relationship between risk management and PS. The study's conceptual framework is duly overarched by the agency theory with supportive philosophies of stewardship theory and classical management theory simultaneously. This research will provide adequate guidelines to the project managers, leaders, and stakeholders to ascertain the importance of project risk management. Nonetheless, the managers will use this research to chalk out innumerable strategies for their project risks and take care of possible risk occurrences and its circumvention in managing the projects. Benefits management is an indispensable and essential aspect which has been highlighted in this research thoroughly. However, the benefits management has created a strong impact, which is directing towards the success of the project, significantly. In future, managers will also be able to manage their projects for maximizing its edge from benefits management concept, too. EPG, as a moderator, has played a decisive role among BM and PS and insignificantly moderates among risk management and PS. There is positive moderation which implies that managers, leaders and supervisors should be well-aware of effective project governance concept, and it should be implemented. Effective project governance is significantly associated with the success of the project. Managers, engineers and supervisors should be given training on how effective project governance can be implemented, so that maximum benefit for the project may be achieved.

Keywords: RM, BM, EPG, PS

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INTRODUCTION

The role of large infrastructural projects in economic development, particularly in developing countries, characterized by a huge number of socio-economic challenges, cannot be ignored. Complex projects experience substantial cost increase and delays in finishing, and fail to deliver their goals (Chang, Chih, Chew, & Pisarski, 2013). Researchers have found that the challenges of large-scale projects are often related to human capabilities and competence, rather than technical problems (Rezvani, Khosravi, & Ashkanasy, 2018). Human capabilities and skills are essential for monitoring large-scale projects and affect the successful delivery of projects and their success (Rezvani et al., 2016).

Today, the era of projectized businesses has compelled project managers not only to reduce time and cost but to increase PS. Due to the innovative attribute of the projects, they are of complex nature (Laine, Korhonen, & Martinsuo, 2016), thereafter, affecting the performance of the latter in a negative way (Hanisch & Wald, 2014; Tatikonda & Rosenthal, 2000). Different activities have different dependencies on

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each other. However, it is not necessary that all projects end in success. [Papke-Shields and Boyer-Wright \(2017\)](#) state that there are very clear signs for the projects to be improved to get the desired output, but still, a large number of projects get delayed. If the project manager and the EPG are able to find out the answers for the main core questions in the project planning, it will increase the chances for the project to be completed on time. Very less attention has been given to the development of project control factors which help the Project Governance (PG) to achieve the project success ([Aarseth, Ahola, Aaltonen, Økland, & Andersen, 2017](#)).

In the second half of the 20th century, the organizational structure has improved. Many organizations have moved from traditional structures to Project-Based Organizations (PBOs). The deciding factor is the change of work concept from large-scale manufacturing, stable customer demand and progressive development innovation, to the current situation, where the market is becoming more and more radical, and innovation is changing rapidly, according to the development of customer requirements. In this regard, many organizations have been converted to project-based organizations. Projects can be used to centralize assets, compress schedule times, and execute new business processes, much faster than regular tasks. In today's rapidly changing environment, they can easily make products and services continuously ([Wiewiora, Trigunarsyah, & Murphy, n.d.](#)).

The rapid advancement of technology, the complexity of the task and the development of market challenges have made PM essential for the organization ([Avery, 2016; Kafle & Fore, 2018](#)). The achievements of the project are achieved through the implementation and start-up of the PM process, planning, execution, monitoring, control and closure of projects called PM. The fundamental motivation for using a PM system is to enhance organizational value ([Dalcher, 2012; Kongmanus, 2016](#)). The organization can promote from using the PM system to expand the competition by expanding the viability of human activities. Hence, the success of the project is determined by its ability to estimate its applicability to normal outcomes in the medium to long term ([Muller & Jugdev, 2012; Piyachat, 2017](#)). Therefore, the estimation of the project is understandable to meet the needs of customers, to align the results of the project with the organization's systems, and to give an ROI.

PS is one of the most essential topics in PM ([Prabhakar, 2009](#)). [Creasy and Anantamula \(2013\)](#) described the PS as being unpredictable, ambiguous and variable all through the project life cycle, and making adequate success criteria, it is hard to define. PM admitted that the success of each project means different things to different people that mean the meaning of success will be diverse for every project ([Zwikael & Smyrk, 2011](#)). At any phase of a life cycle, a project is plagued with a variety of risks due to the multifaceted and dynamic nature ([Zhao, Seibert, & Lumpkin, 2009](#)).

The risk is inevitable in each economic activity. According to [Channar, Abbasi, and Maheshwari \(2015\)](#), the risk occurs when the result is uncertain. Risk exists as part of a situation in which different companies operate ([Shafiq & Nasr, 2010](#)), so each and every business must face the risk. Without taking risks, business development is like a nightmare ([Abdullah, Khan, & Nazir, 2012; Panti, Gempes, & Gloria, 2018](#)). Risk is considered a major concern for managing projects, especially after the financial emergency that shook the world in 2008 ([de Carvalho & Junior, 2014](#)). According to [Harrington and Niehaus \(2003\)](#), business risks are viewed from the point of view of the firm's future net income, which is the true source of fluctuations in the value of the business. More serious risks usually show more remarkable misfortunes. In the event that the potential risks are not successfully monitored, they could reduce a corporation's ability to achieve its overall objective and diminish the value of investors.

The link among RM and the success or failure of the project have been widely considered ([de Bakker, Boonstra, & Wortmann, 2010](#)). These studies present controversial results. Although some studies such as [Zwikael and Globerson \(2006\)](#) have found that RM has little impact on the performance of a project, [de Bakker et al. \(2010\)](#) suggest that a modest level of RM planning is sufficient to diminish the unenthusiastic impact of the risk on the success of the project. RM is the process by which a project manager manages every risk associated with an organization. There may be various risks in the life of the project, from small to large. Each employee should recognize and mitigate these risks. These RM practices are imperative because they represent the real-time activities of the project. PS is closely related to risk management. During the actual life cycle of the project, there are many activities that have been

pre-qualified, booked and planned. These activities are carried out under some time and resources (man, machines, and money). Again, there are risks associated with these activities.

RM capabilities imply management of the risks of organizing various activities. Managers, supervisors and others provide a variety of RM policies and practices to reduce the general risks associated with the organization. Along with these directions, low-risk factors are maintained, and organizational expectations are high. In order to achieve the best organizational goals, if it exists, it is essential to assemble RM capabilities.

BM, also known as Benefits Realization Management (BRM) (Breese, 2012), is characterized by a set of procedures that ensure that projects, tasks, and portfolios meet the needs of business strategy in the usual business, in order to create value in the company with a fruitful and sustainable way (Serra & Kunc, 2012). Ward and Daniel (2012) describe BM as the process of organizing and managing such that the potential benefits generated from the use of information technology are truly realized.

Recent PM research has gradually encouraged companies to focus on meeting project benefits realization (Jenner, 2015). These benefits are the ideal incentive for financing companies (Serra & Kunc, 2012) and honestly support the accomplishment of its investment objective for undertaking the project (Coombs, 2015). Subsequently, the benefits are the decisive deliverables of the project (Bradley, 2010), and the realization of benefits is an essential element of PS (Cooke-Davies, 2002). Recently, some researchers suggested that BM makes the value and deliberate significance of each project clear, enabling increased viability of EPG (Jenner, 2012). More than just governance, “strategic governance” leads companies to work towards the delivery of planned benefits (Gardiner & Lacy, 2005).

PS is the acceptance of specific combinations of targets and subjective measurements showed in the success criteria and estimated towards the completion of a project (Muller & Jugdev, 2012). But the success rates still do not satisfy the desire (Muller & Jugdev, 2012). Similarly, Joslin and Müller (2016) found out that the supplementation, fulfilment and utilization of the kinds of a PM methodology are basic to PS.

Some major projects have failed; it gives the idea that some companies are still trying different things with PG’s ideas to explore different things and their association with project performance. Large projects are complex and risky in terms of quantity and subjectivity (Garland-Thomson, 2009). This understanding suggests that its implementation requires an unconventional governance system. Large infrastructure projects are highly vulnerable, long-lasting, and have a significant number of stakeholders (Miller & Hobbs, 2005). Muller, Zhai, and Wang (2017) portrays PG as a “value system, responsibilities, procedures and policies that allows projects to accomplish organizational targets and encourages the implementation of best interests of all stakeholders, internal and external, and the corporation itself”.

On the other hand, EPG focuses on the project and describes how the PM processes are governed throughout the life of the project (Turner & Keegan, 2001). EPG is one of the most significant aspects of any successful project around the world. It greatly affects the quality of the project and affects the success of any project. Lechler and Dvir (2010) point out that the success of any project around the world is highly dependent on the viability of EPG, where it is considered the most essential determinant of PS. In addition, Stoker (1998) argues that the EPG looks will make the states requested lead and aggregate activity by formalizing the work to a formal representation of the authoritative game plans that encompass. Subsequently, the EPG is the domain or framework for making decisions. It is the body that provides precise control among project plans, outcomes, and project beneficiaries (Abed, 2017).

The fundamental aim of a successful EPG system is to align the objectives of the project with the goals and strategies of the funding company (Biesenthal & Wilden, 2014). Therefore, the EPG system must ensure that the project produces the desired results and outputs that lead to the ideal results identified in their respective business case (Musawir, Serra, Zwikael, & Ali, 2017). In the delivery of large projects, EPG includes coordinating, managing and facilitating asset allocation to achieve agreed goals. Muller and Martinsuo (2015) showed the moderating role of EPG in the association among relational norms, project buyers and suppliers and their project’s success. The qualitative case studies by Bekker and Steyn (2008) indicated an association between governance and PS.

LITERATURE REVIEW

The literature evaluations have been specified in the broad areas of RM, BM, and PS with EPG as the moderator. This chapter discusses a series of RM and BM that significantly affect the PS and how they are overcome through high EPG. The main purpose of the literature review is to obtain enough information to understand the problem and identify several factors that are important to the problem. A literature review also helps define and implement these factors as variables for research. This review presents related terminology and provides a guiding definition of the concept in the theoretical framework. First, the results of previous studies are presented, showing the relationship between RM and PS and BM and PS. Then, it presents EPG to analyze its relationship with PS. Next, it presents the results of previous studies showing EPG as a moderator and relationship with PS.

RM and PS

The lack of RM projects is one of the reasons for project failures, such as failure to meet project deadlines, increased costs and poor-quality performance. The use of RM in environmental projects and its impact on its success are undiscovered (Mhirat & Irtemeh, 2017).

The link among RM and PS or failure has been extensively studied, especially in the field of IT (de Bakker et al., 2010). These studies have produced controversial findings. Although some studies (Zwikael & Globerson, 2006) have found that RM has little influence on PP, de Bakker et al. (2010) argue that even moderate levels of RM planning are sufficient to reduce the adverse influence of risk on the project. Pimchangthong and Boonjing (2017) studied the effects of organizational variables affecting IT-PS and RM practices affecting IT-PS. The outcomes showed that differences in hierarchical types affect IT-PS in all viewpoints, while differences in authoritative sizes affect IT-PS in part of item performance and aggregate perspectives. Risk identification and risk response planning can affect the performance of the procedure and its aggregated components PS. Risk identification has the greatest influence on PP, followed by risk response, and risk analysis has an adverse influence on product performance.

Mhirat and Irtemeh (2017) recognize RM and its influence on the success of the Jordan Ministry of the Environment project. The population of this dissertation was the Ministry of the Environment project in northern, central and southern Jordan, with a total of 62 projects. The dissertation produced a number of essential outcomes, the most essential of which was the significant positive correlation among the components of RM in achieving PS. Gitau (2015) studied the scope of RM practices in the planning phase and the influence of these practices on project cost and schedule performance. The dissertation targeted architects, engineers, project managers, quantitative surveys, contractors and regulators in Rwanda as well as major clients investing heavily in the construction industry. The project showed that RM practices in the planning phase have an influence on PP. The project showed that most of Rwanda's projects have received some input from qualified engineers and architects. However, most of the respondents did not support the dissertation for RM. Although the dissertation showed that RM is in 92% of the widespread practice, the process was essentially informal. The RM process was inadequate, and no measures were taken to reduce the risk. Different members of the project team had different chances to manage different risks with the customers having the best chance to manage more risks during the planning phase by including skilled professionals in decision-making.

Didraga (2013) developed a model to examine the association among RM and IT-PS and the composite model of four categories of RM; risk identification, risk analysis, risk response planning and risk monitoring. The outcomes of the dissertation indicated that risk identification and risk planning do not affect subjective PP in terms of reliability, convenience, flexibility, satisfaction and quality. In terms of cost, schedule and effort, there was no method of RM that affects the objective performance of IT projects. Crader (2013) explained that each project is risky, for example, resources leave the corporations, leadership changes, and budgets got cut, etc. There are many factors that cannot be controlled. However, through some ongoing review and management, many risks of the project can be mitigated or even eliminated (as described by Pimchangthong and Boonjing (2017)).

Al-Shibly, Louzi, and Hiassat (2013) studied the influence of RM on the success of construction projects. The outcomes of the current dissertation indicated that there is an influence that exists among

risk identification and risk evaluation on PS, planning time, program budget, and the ability to meet technical specifications. There is no difference in risk evaluation and avoidance of litigation or claims. The dissertation also showed that risk response measures have an influence on the implementation of PS, scope of work, scheduled time, and achieving the quality standards.

Didraga (2013) emphasized the role of RM and its contribution to PS. The methods used are based on a review of literature studies and an analysis of the concepts used in the literature. The dissertation analyzed the literature published by leading IT PM journals and publications from 1978 to 2012. The result is that RM is a very essential part of the PM process and should be beneficial to PS. The dissertation also quantifies how the RM process affects the subjective and objective performance of IT projects in Romanian IT corporations.

de Bakker et al. (2010) argue that RM activities contribute to PS through four different influences: action, perception, expectation and association. The influence of actions is critical to the ability of stakeholders to trigger and motivate effective action. Perceived and expected effects include the ability of stakeholders to create consensus on expected end outcomes and motivate their behavior during project execution to address objective and subjective differences. The researchers concluded that in addition to the instrumental effects of RM, communication effects play a key role in creating a shared vision of project ambiguity and the expectations for its success (de Carvalho & Junior, 2014). Therefore, study first hypothesis is;

H1: *RM has a significant influence on PS.*

BM and PS

The PS is divided into two phases on a regular basis: pre-assessment called assessment and ex post-assessment called evaluation (Serrador, 2014). As indicated by names, the assessment is completed before the project and evaluated at the end of the project. The evaluation phase sets expectations and analyzes business cases to support project approval or rejection (Serra & Kunc, 2012). Managers typically select projects based on criteria such as strategic fit, probability of success, resource availability, and market and project objectives (Englund & Graham, 1999). It is critical that approved projects have a clear scope; otherwise, the expectations of the definition may become unclear (Milis & Mercken, 2002). Based on established success criteria, the evaluation phase determines whether the project was a success or a failure (Serra & Kunc, 2012) mentioned by (Syrjakari, 2018).

Ward and Daniel (2012) define BM as “the process of organization and management in order to actually realize the potential benefit of using IS/IT”. Based on previous and Ward & Daniel definitions, current research defines project BM as “initiating, planning, organizing, executing, controlling, transforming, and supporting organizational changes and their consequences as incurred by PM mechanisms to realize predefined project benefits”. BM sometimes referred to as BRM, is a framework previously used to enhance the success of IT projects (Breese, 2012; Serra & Kunc, 2012). However, it has now expanded to other industries (Chih & Zwikael, 2015). Most research on BM either discussed at the implementation level (Coombs, 2015) or implementation and development of BM methods in case studies (Fukami & McCubbrey, 2011). However, some papers used general evidence to test the success or level of effectiveness of benefits management (Serra & Kunc, 2012) cited by Badewi, Shehab, and Peppard (2013).

The benefit that can be seen as an improvement is to increase business value not only from a shareholder perspective but also from the perspective of customers, suppliers and even society (Zwikael & Smyrk, 2011). PM procedures and techniques are often used to achieve revenue. Therefore, creating value for business through the successful execution of a business strategy depends to a large extent on the plans and projects delivering the expected benefits (Serra & Kunc, 2012).

Syrjakari (2018) conducted a dissertation to learn how to get business benefits in IT service plans and what the essential practices are for benefits realization. This article followed the constructive research approach. First of all, there is a theoretical basis for the thesis. Later, through interviews with key stakeholders of the project, nine projects for delivering products to IT customers were discussed. The results showed that all stakeholders have common benefits, while suppliers and customers have specific role benefits.

Musawir et al. (2017) analyzed the effective relationship among PG, BM and PS. A scale for effective PG assessment was developed and researched based on the opinions of 21 PG experts, and then 333 international projects were used to verify the proposed relationship. The outcomes showed that effective PG helps to improve PS, both directly and through improved BM processes. There are also more effective PG and BM guides for improving PS, such as developing and researching a high-quality project business case. Similarly, Badewi et al. (2013) found that BM practice has a significant and positive impact on the success of an investment project.

The UK was supported BM, representing early supporters in the field, providing the means to protect the PS and has been recognized by the government. The UK Government Trade Office documents the process for supporting this process (Jenner, 2012). Project BM Implementation refers to the process of managing the processes required to ensure the delivery of plans, projects and portfolios, and incorporating the actual actions of the business into all the requirements of the established business strategy, with the result of sustainable value (Jenner, 2012; Serrador, 2014).

Davenport, Harris, and Cantrell (2004) were among the first to consider the principles of ERP BM vital for achieving successful benefits in the post-implementation phase. They discussed ERP BM and advocated the idea of prioritizing and quantifying benefits, and should develop action plans to achieve these benefits. Other researchers define (Shang & Seddon, 2000), quantify (Shang & Seddon, 2000) and develop a link among ERP benefits. In addition, if there is no intentional and active management of the organization's attitude toward ERP, the corporation will fall into the ERP death spiral (Badewi et al., 2013). Active BM strategies (Remenyi & Sherwood-Smith, 1998) also mean modifying predefined benefits. Experience has shown that the benefits of ERP are based on quality (Nicolaou, 2004), nature (Nicolaou, 2004), timeline (Nicolaou & Bhattacharya, 2006) and post-review decisions (Nicolaou & Bhattacharya, 2006) and were all found to be critical because there is sufficient evidence that all these factors, in the long run, affect the related financial performance of ERP (Serra & Kunc, 2012). Therefore, this study's second hypothesis is:

H2: *BM has a significant influence on PS.*

EPG as a moderator

Muller (2017) defines PG as a value system, responsibility, process and policy that enables the project to achieve organizational targets and facilitate implementation, in the best interests of all internal and external stakeholders and the company itself. Better corporate governance is associated with better company performance. Project-related governance is based on and aligned with corporate governance, but focuses on the governance of individual projects. The Project Management Institute (PMI) defines PG as "an oversight function consistent with the organization's governance model, including the project life cycle and through definition and documentation provide sustainable project control and assurance methods" (Project Management Institute, 2016). Although, PG focuses on individual PG, however, PG focuses on a set of projects, such as a program or a project portfolio and therefore has a broader perspective (?). PG, as one of the most effective means to realize PS, has received increasing attention (Ahola, Ruuska, Artto, & Kujala, 2014). It is divided into two basic categories: formal and informal (Luo & Peng, 2013).

Ekung, Siriwardena, and Adeniran (2013) evaluated PG for two large projects and quantified the influence of performance-related practices. Use structured questionnaires and examination of project archives for data collection. Analyze research data to determine compliance with the nature of PG and long-term influence on PP. The outcomes indicated that the governance structure of the project needs to be improved and that this improvement will improve the performance of large projects. To improve PG in large-scale projects, research suggests that stakeholders need to use established industry principles and demand-based priorities to ensure effective implementation and selection of PG structures.

Abed (2017) analyzed the influence of PG on the success of projects implemented by 13 UN corporations operating in the Gaza Strip. The dissertation followed a quantitative analysis approach and used questionnaires as a data collection tool. The data was collected from a random population of 200 workers working in the project-related location in the target corporation. The research outcomes showed a positive association among PG and PS. Second, contract governance is the most essential type

of governance, and among other criteria, the standard has the highest weight. Third, project-oriented governance is a very positive standard that affects the success of any project. Fourth, other types of government; PM governance and association governance have a moderate influence on PG, and their influence is relatively low, respectively lower than the previous governance types (weights 66.79 and 67.07, respectively). Finally, the findings indicated that compliance with the project budget by the United Nations is considered to be the most critical success factor, which has greatly affected the success of any United Nations project.

Joslin and Müller (2016) studied the association among PG and PS from the perspective of agency theory and management theory. The outcomes showed that PS related to the increasing stakeholder orientation of the parent corporation, and the type of control mechanism are not correlated with PS. The outcomes demonstrated the importance of management methods in successful projects. Muller and Martinsuo (2015) demonstrated the moderating role of PG in the association among project buyer and supplier association norms and PS. A qualitative case study by (Bekker & Steyn, 2008) indicate an antecedent association among governance and PS. Joslin and Müller (2016) asserted that the organization's governance direction might influence the selection and implementation of PM methods and moderate its influence on PS. de Carvalho, Patah, and de Souza Bido (2015) studied the influence of PM on PS under planning, cost and profitability parameters. The dissertation used an emerging approach that assesses the complexity of a project through four categories (industry sector and countries). The methodology involves longitudinal field studies in three countries (Argentina, Brazil, and Chile), involving 10 different industry sectors in three countries, and a total of 1387 projects were analyzed over a three-year period. Structural equation models were used to test research hypotheses. The outcomes showed a positive association among schedule with PM supporters and PM efforts in training and capabilities development. The complexity of the project has an essential influence on both aspects of the PS: margin and progress. Both cross-country and cross-industry analysis have shown significant explanatory effects.

Effective governance is also essential for public-private infrastructure development projects (Reside and Mendoza, 2010). As a result, the failure of such large capital projects highlights the consequences of ineffective governance (Flyvbjerg, Bruzelius, & Rothengatter, 2003). In addition, Guo, Chang-Richards, Wilkinson, and Li (2014) pointed out that in infrastructure projects, complexity and uncertainty are very frequent, and the uniqueness and uniqueness of infrastructure projects arise from their distinctive social and environmental requirements. Infrastructure needs are critical to the monetary development of developing countries. In order to attain this goal, effective governance of infrastructure development projects has become an absolute need and a major challenge, which determines the success of these projects. In short, governance is the ability to develop strategies, monitor needs and targets, make project decisions, and track overall organizational performance. On the basis of discussion third and fourth hypothesis are:

H3: *Effective project governance significantly moderates among RM and PS.*

H4: *Effective project governance significantly moderates among BM and PS.*

Conceptual framework

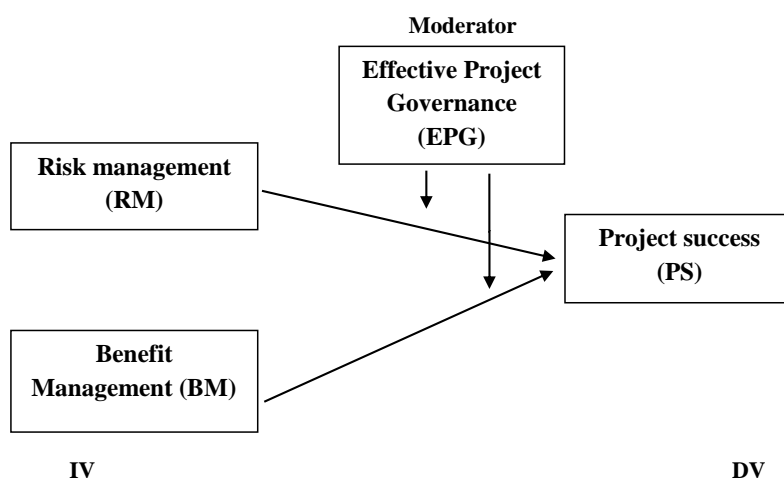


Figure 1. Theoretical framework

Conceptual Framework with Supportive Theory

- i. The agency theory is closely linked and supported the argument, whereas EPG is an enormous tool that ensures the efficacious delivery of PS.
- ii. However, lacking the governance structure means, higher the risk of conflicts and irregularities between PS and bottom most profitability (BM).
- iii. Effective mechanism of PG also supported, nonetheless, by the stewardship theory. Consequently, the applicability of both theories means effective RM and BM measures that ultimately maximize the PS.
- iv. Circumstantial pieces of evidence of PS link strong association between EPG and BM. Having said that, PS ratio heavily depends upon good governance that relies on the proper implication of RM and decision-making.
- v. However, the conceptual framework is also supported by with the classical management theory, where authority encounter with dissimilar employees behavior, and overall addressing the governances attitudes and their competence towards PS.
- vi. So, to conclude that the conceptual framework is perfectly fit on model and can become the bases for explaining our results. Theories will help us find direction in the research to reach our objective to find the result of the research undertaken.
- vii. According to [Rad and Levin \(2002\)](#), PS factors are divided into two categories; i) those who deal with people, ii) those who deal with things.

Research hypotheses

- H1: RM has a significant impact on PS.
H2: BM has a significant impact on PS.
H3: EPG significantly moderates among RM and PS.
H4: EPG significantly moderates among BM and PS.

RESEARCH METHODOLOGY

Research design

Research design is an outline of the research plan of the act. Zikmund, Carr, and Griffin (2013) describes research design is the plan of the researcher that stipulates the process and technique for collecting and analyzing essential data. In research, design included time horizon, types of setting and element of analysis which are conversed beneath. A quantitative approach was used in the study to conclude the association amongst different variables and estimations of their effect on each other through a questionnaire. Moreover, the utilization of a questionnaire for data collection was worthy in terms of cost and time, and it is easy to enter and analyze the data.

Nature of study

This study was conducted as a field study and participants, i.e., members of the project team from different project-based organizations were asked to fill out the questionnaires at their workplace in their natural work environment. The targeted to measure the impact of risk management and benefits management on PS in the presence of the moderating role of EPG among RM and PS; BM and PS. However, nowadays, many organizations are playing focus towards its project success by the deployment of EPG, with appropriate and foremost important its implementation of policies which covers the BM and associated operations in broader prospects. Therefore, it is the need of the current time, where an entrepreneur is looking after the competent and skilled individual, those are very equipped with the contemporary skills of the modern era. Also, it is required to assess and identify the all associated risks well in time to mitigate with appropriate established guidelines and procedures thereon.

Study setting & time horizon

Data was collected from the people who are working on numerous projects from public and private organizations, which are based at Islamabad and Rawalpindi. The data collected from people by means of a questionnaire. The targeted community was, those who are working on projects as managers or their associates. Also, the targeted organizations were national and international development sector such as the United Nations, USAID and various other organizations. The questionnaire of this study was printed in hard form and was distributed among the respondents, during their working hours in their natural work environment and settings. All the study variables are self-rated. The data were collected within three months (June 2019 to August 2019). The data were collected at one time only therefore the study is cross-sectional in its nature.

Research interference

There can be minimal, moderate or excessive interference of the researcher depending upon the type of study and its objectives. In the present study, the researcher introduced no changes or external modifications in natural work settings (organizations) from where the data was gathered from the respondents (employees) employing a survey questionnaire representing that the researchers interference was minimal. Therefore, the researcher gained first-hand information from study respondents in natural work settings.

Sampling

Data from the entire population cannot be collected due to resource constraints and other time constraints; sampling is the commonly used data collection procedure. A specific group of individuals who are the true representatives of the whole population is chosen for this purpose. Generally, only those organizations were approached who have project-based teams at work. Respondents needed to participate fully in their teamwork for the sample. The selected research sample, therefore, represents all the elements necessary to achieve the required outcomes and is the true representative of the entire population.

Research instrument

Project Success

PS was measured by 4 items developed by [Aga \(2016\)](#). The rating scale ranged from 1 (Strongly disagree) to 5 (Strongly Agree). The items are The project was completed on time.

Risk management

RM was measured by 5 items at 5-Likert scale from [Raz, Shenhar, and Dvir \(2002\)](#). One sample item is "A risk manager is appointed for managing risks".

Benefit management

The BM scale was measured by 12 items adapted from [Serra and Kunc \(2012\)](#). Sample items include "Target outcomes were clearly defined" and "The strategic objectives that project outcomes were expected to support the achievement of were clearly defined".

Effective project governance

EPG was measured by 9 items developed by [Musawir et al. \(2017\)](#). One sample item is "The management board had overall responsibility for project governance".

Data analysis

Collected data were entered in relevant software, i.e., SPSS and further analyzed and interpreted to apply the procedure, such as only completely filled questionnaires were considered, and separate code was allocated for every separate item and questionnaire. However, complete record along with allocated codes were entered in particular software SPSS, and after completely punching the collected data, frequency distribution was computed for all the demographic variables of the study. The characteristics of the sample measured in this study are; such as respondents age, gender, qualification and experience in project-based organizations, and secondly, ANOVA was conducted to check whether demographic variables are extensively associated with PS or not. Furthermore, in the next step, descriptive statistics were computed for all the variables of the study. The reliability analysis was conducted through Cronbach alpha; it tells about the data reliability. Value of alpha above 0.7 is considered to be reliable, and below 0.7 is considered to be less reliable, and correlation analysis was applied to establish the connotation as well as the degree of relationship among the variables. It also reveals the significance of connection amid the variables. The coefficient value lies among +1.00 to -1.00. Zero indicates that there is no association between the variables. A + sign indicates that both variables are moving in the same direction. A negative sign points out that the variable has the opposite directions. Pearson's calibration analysis is used to calculate the correlation coefficient. In addition to that, the regression examination was applied to discover the amount of the change in the DV clarified by the IV. Regression analyses demonstrate the strength of the association among various variables. Regression analysis revealed the result regarding cause and effect association. It expresses how much variation in DV is covered by IV as well as how much change occurs in DV due to the one unit change in IV, and for checking moderation, the Hayes process method was adopted.

Descriptive analysis

The PS mean value is 3.8, and the value of *SD* is 1.02. The benefits management mean value is 4.02 and value of *SD* is .507. The risk management average value is 3.96, and the value of standard deviation is .740. The effective project governance mean value is 4.05 and the value of standard deviation is .622.

Table 1: Descriptive statistics

	<i>N</i>	Min	Max	Mean	<i>SD</i>
PS_Mean	190	1.00	5.00	3.8632	1.02596
BM_Mean	190	1.00	5.00	4.0281	.50760
RM_Mean	190	1.00	5.00	3.9642	.74007
EPG_Mean	190	1.00	5.00	4.0591	.62297

Reliability analysis

Reliability analysis was conducted through Cronbach alpha; it tells about the data reliability. Value of alpha above 0.7 is considered to be reliable, and below 0.7 is considered to be less reliable. Table shows that the Alpha for PS was 0.885, the value of Alpha for risk management was 0.788, the value of Alpha for benefits management was 0.867, the value of Alpha for effective project governance was 0.867.

Table 2: Reliability analysis

Variables	Items	Alpha value
PS	4	.885
RM	5	.788
BM	12	.785
EPG	9	.867

Correlation analysis

Correlation value lies among +1.00 to -1.00. Zero points out that there is no connection between the variables. A + sign indicates that both variables are moving in the same direction. A negative sign points out that the variable has the opposite directions. Pearson’s calibration analysis is used to calculate the correlation coefficient. The analysis shows the association between two variables and the direction of the association.

Table 3: Correlation analysis

Factors	Mean	<i>SD</i>	PS	BM	RM	EPG
PS	3.86	1.02	1			
BM	4.02	.570	.354**	1		
RM	3.96	.740	.246**	.364**	1	
EPG	4.05	.622	.311**	.086	.239**	1

Table shows that risk management significantly correlated with PS, where $r = .246^{**}$, $p = 0.000$. Benefit management is significantly correlated with PS ($r = .354^{**}$, $p = 0.000$). Outcomes also shows that effective project governance significantly correlated with PS ($r = .311^{**}$).

HYPOTHESIS TESTING

The outcomes of regression analyses demonstrate the strength of the association among various variables. Regression analysis revealed the result regarding cause and effect association. It expresses how much variation in DV is covered by IV as well as how much change occurs in DV due to the one unit change in IV.

Moderating role of EPG among RM and PS

Outcomes shows insignificant association among Interaction Terms (RM x EPG) and PS ($\beta = -.0786$ $t = 0.156$, $p = .615$). Outcomes pointed out that effective project governance insignificantly moderates the association among RM and PS as bootstrapped 95% confidence interval around the interection_1 effect include zero (-.386, .2294). Hence, H3 (effective project governance moderates the association between RM and PS) is rejected.

Table 4: Moderating effect of EPG

	β	SE	t	p
RM → PS	.7775	.6417	1.2116	.2272
EPG → PS	.7816	.6373	1.2264	.2216
Int_1 → RM×EPG	-.0786	.1561	-.5032	.6154
Bootstrap Outcomes for int_1 effect		LL 95% CI		UL95%CI
		-.3866		.2294

Moderating role of EPG among BM and PS

Table 5: Moderating effect of EPG

	β	SE	T	p
BM → PS	-1.492	.4081	-3.657	.000
EPG → PS	-1.415	.3997	-3.542	.000
Int_1 → BM×EPG	.5185	.1074	4.826	.000
Bootstrap Outcomes for int_1 effect		LL 95% CI		UL95%CI
		.3067		.7303

Outcomes shows significant association among Interaction Terms (BM x EPG) and PS ($\beta = .5185$ $t = 4.82$, $p = .000$). Outcomes pointed out that effective project governance significantly moderates the association among BM and PS as bootstrapped 95% confidence interval around the interection_1 effect did not include zero (.3067, .7303). Hence, H4 (effective project governance significantly moderates the association between BM and PS) is accepted.

Hypothesis summary

Table 6: Moderating effect of EPG

Hypothesis	Statement	Results
H1	RM significantly associated with PS.	Supported
H2	BM significantly associated with PS.	Supported
H3	The connection among RM and PS becomes stronger with increasing EPG.	Not supported
H4	The association among BM and PS becomes stronger with increasing EPG.	Supported

Main findings

The reason for the study was to demonstrate the impact of RM and BM on PS with the moderating role of EPG. The outcomes show that there is a significant association between RM with PS. Whereas, BM also having significant association with PS. The EPG significantly moderates among RM and PS. Nonetheless, the EPG significantly moderates among the BM and PS.

H1: RM significantly associated with PS

In correlation analysis, the result shows a positive association among RM and PS, where $r = .246^{**}$ at $p = 0.01$. Table shows that the reliability value for PS was 0.885, the value of Alpha for RM was 0.788. In regression analysis, Outcomes shows RM has a positive association with PS ($B = .491^{**}$, $T = 5.198$, R square = .126, $F = 27.01$, Sig = .000), which shows the positive association among RM and PS. Therefore, H1 (RM significantly associated with PS) is accepted. Recent literature supports the outcomes: Mhirat and Irtemeh (2017) distinguished RM and its impact on PS. The study found a positive association among the components of RM in achieving PS. Gitau (2015) explored the extent of RM practices at the planning stage and the impact of these practices on project cost and schedule performance.

H2: BM significantly associated with PS

In correlation analysis, BM is significantly correlated with PS ($r = .354^{**}$ at $p < 0.01$). Table shows that the value of reliability for BM was 0.867. In regression analysis, Outcomes shows that BM has a positive association with PS ($B = .4917^{**}$, $T = 3.479$, $R \text{ square}=.06$, $F = 12.10$, $\text{Sig}=.001$), which shows the positive association among BM and PS. Therefore, H2 (BM significantly associated with PS) is accepted. Recent literature supports the outcomes: [Syrjakari \(2018\)](#) conducted a study to recognize how and when business profits are perceived in an IT customer delivery projects and what the key benefits realization practices are. The outcomes showed that all stakeholders have common benefits, while suppliers and customers have particular benefits. Benefit perception practices differ; typically, the benefits of a project can occur before, during and afterwards.

H3: EPG significantly moderates among RM and PS

In correlation analysis, outcomes show a positive association among EPG and PS ($r = .311^{**}$ at $p < 0.01$). The value of Alpha for effective project governance was 0.867. [Ekung et al. \(2013\)](#) evaluated EPG in two large projects and quantified the impact of associated practices on performance. Data were collected using structured questionnaires. Study data were analyzed to determine the level of adherence to EPG essentials and the extended implications on PS.

H4: EPG significantly moderates among BM and PS

Outcomes shows significant association among Interaction Terms (BM x EPG) and PS ($\beta = .5185$ $t = 4.82$, $p = .000$). Outcomes pointed out that EPG significantly moderates the association among BM and PS as bootstrapped 95% confidence interval around the interection-1 effect did not include zero (.3067, .7303). Therefore, H4 (EPG significantly moderates the association between BM and PS) is accepted. Literature supports the outcomes; [Muller and Martinsuo \(2015\)](#) demonstrated the moderating role of EPG in the association among relational norms among project buyers and suppliers and PS. A qualitative case study by [Bekker and Steyn \(2008\)](#) showed a link between governance and PS.

DISCUSSION

The lack of RM is one of the reasons for project failure, such as failure to meet project deadlines, raising costs and poor-quality performance. The use of RM in environmental projects and its impact on their success is undiscovered ([Mhirat & Irtemeh, 2017](#)). RM is the process by which a project manager manages every risk associated with an organization. There may be various risks in the life of the project, from small to large. Each employee should recognize and mitigate these risks. These RM practices are imperative because they represent the real-time activities of the project.

Nonetheless, the PS is closely related to RM. During the actual life cycle of the project, there are many activities that have been pre-qualified, booked and planned. These activities are carried out under some time and resources (man, machines, and money). Again, there are risks associated with these activities. At some point, these risks are particularly relevant and, to some extent, related in an indirect way. It is said that managers who develop RM plan within the organization are viable managers, and their RM capabilities reinforce efforts to put the project on a successful track. Their RM ability prepares them to score and complete the set destinations given by the organization. RM capabilities imply management of the risks of organizing various activities. Managers, associates, supervisor and others provide a variety of RM policies and practices to reduce the general risks associated with the organization. Along with these directions, low-risk factors are duly maintained, and organizational expectations are high. In order to achieve the best organizational goals, if it exists, it is essential to assemble RM capabilities and fill vacancies.

Pakistan is a country that demonstrates new and current HR practices in her organization. It is worth seeing that there are plenty of opportunities in the market, and the biggest capital may be captured. Organizations doing business in this market are doing their best to provide other organizations with a significant competitive advantage. Project managers, project associates and project governance are working hard to draft individual employees who may limit risk. For Pakistan's standards organizations, the adoption of such resources is reliably promoted, and these resources do not provide RM practices, in

addition to future events identified by project activities. The RM plan is a record taken by the manager. It contains a unique risk evaluation system related to project activities. The report is refreshed throughout the project lifecycle. It is observed that the risk is controlled, and when the risk becomes smaller, the risk is reduced, which is exempt.

RM gives resources the ability to perform tasks with distinct letters and souls without unfortunate. Strive to maintain a strategic distance among misfortune, threats and danger to project. The project RM is a very essential factor as far as the risk is concerned. Without risk, it is not possible to fulfil the RM plan. In addition to that, without risk identification, other risk-related strategies are not workable. In the project initiation phase, risk manager meets with the technical experts and ascertain the risk associated with the project. Different participants from diverse background give opinions to the risk manager regarding the risk associated with the particular project. RM has a positive impact on the PS. However, the RM remains throughout the project life cycle. This practice is very essential as it adds and removes risks from the risk register. After careful monitoring and control, the risk register is either updated with new risks or deleted with obsolete and zero risks. Project monitoring and control practice has a positive impact on the PS. PS increases as risk monitoring and control increases. So, in order to have more PS, it is necessary to increase risk monitoring and control practices during the project lifecycle. The association between RM and PS or failure has been studied broadly, mainly in the field of IT ([de Bakker et al., 2010](#)). These studies have led to controversy. Although some surveys ([Zwikael & Globerson, 2006](#)) have found that RM has a low impact on the performance of projects, [de Bakker et al. \(2010\)](#) recommended that even modest levels of RM planning suffice to decrease the harmful effects of risk on PS.

BRM is a feature of a PM that has received an increasing concentration in the past few years. The literature on the topic is developing quickly ([Ashurst & Hodges, 2010](#); [Bradley, 2010](#)). Valuable BM shows why projects should be initiated and managed in a cost-effective manner. Achieving these benefits shows that the project has been valuable, and the investment of time, money and assets have an encouraging impact on stakeholders.

Consequently, the PS should be considered not only by providing time, cost and quality outcomes but also by the affirmative, assessable improvement they provide to stakeholders. BM identifies, defines, tracks delivers, and optimizes benefits. BM runs through the lifecycle of the project and is carried out in operations as usual, not just in the investment decision-making process. However, benefits identification must be done prior to project initiation and provided by specific issues, strategies or policies. These benefits are then developed during the life of the project and are typically measured during project submission and after project completion. Benefit management follows the entire process of the project life cycle (before, during, and after the project). Hence, BM is more successful when considering this approach. Consider the benefits before implementing the project and consider starting from the bottom line to ensure that the most appropriate and appropriate solution is developed.

Considering the impact of the on the benefits of the project life cycle, ensure that the project remains viable and valuable. Planning for benefit activities to continue after the project ends means collecting valuable information about benefits realization, performance management, assumptions and lessons learned. In this research impact of project RM and benefits management has been studied on the PS with the moderating role of EPG. Project RM has a positive impact on PS. [de Carvalho and Junior \(2014\)](#) studied the association between RM and PS, considering the contingent effect of project complexity. The hypothesis was based on a field study involving 263 projects distributed across eight industries. The RM Soft Side appeared most significant and explained 10.7% of the PS. In addition, the soft side supports a hard side, as the study found a significant correlation of 25.3% of the effect on the hard side. On the basis of outcomes, BM significantly associated with PS. Similarly, [Badewi et al. \(2013\)](#) found that BM practices significantly associated with project investment success. Furthermore, the [Project Management Institute \(2016\)](#) recommends that the development of BM practices optimistically related to the performance of PM and project investment performance. Further has been observed that EPG significantly moderates among RM, BM and PS.

CONCLUSION

This study examined the association among RM, BM and PS with the moderating role of EPG. A quantitative approach was used to examine different project-based organizations. The research study was causal in nature, targeted to measure the impact of RM and BM on PS in the presence of the moderating role of EPG among RM and PS, and with BM and PS. This was a field study as the questionnaires were got filled by the managers and employees of different project-based organizations which are located in Rawalpindi and Islamabad; however, the data were collected during the working hours in their natural work environment and settings. All the study variables are self-rated.

The data has been collected within three months (June 2019 to August 2019). In the present study, the researcher introduced no changes or external modifications in natural work settings (organizations) from where the data was gathered from the respondents (employees) employing a survey questionnaire representing that the researchers interference was minimal. Therefore, the researcher gained first-hand information from study respondents in natural work settings. A quantitative approach was used to examine different project-based organizations. Deductive method has followed in this research.

Firstly, the author finds the gap from the previous studies and make conceptual research framework as well as purposed relationships on the basis of the past studies and further examined with the help of data to check that either study finding are similar to the past studies or contradict previous literature. In this dissertation, quantitative research method has been used in order to gather data about purposed variables for empirically test the purposed research hypothesis. Convenient sampling technique was used to follow the study due to certain limitations. The 300 respondents were contacted and requested to complete the questionnaires. However, the 210 respondents out of 300 returned the questionnaires. Out of 210 questionnaires, 20 were excluded due to extensive missing data and the remaining 190 questionnaires were included in the analysis.

This research has been concluded that project RM is significantly associated with PS. Secondly, this study concluded that BM significantly associated with the PS. The PS may be increased as the factor of BM increases. EPG is significantly moderated among BM and PS and EPG insignificantly moderates among RM and PS.

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