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From Blueprint to Reality: Empowering Construction Project Performance through Project Manager Competencies, Team Performance, and Stakeholder engagement

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Abstract: The construction sector is under increasing pressure to enhance project performance, particularly through strengthening project manager competencies (PMC). Although the importance of managerial competencies has been widely acknowledged, limited research has examined how PMC influence project performance (PP) through underlying organizational mechanisms. This study addresses this gap by investigating the direct effect of PMC on PP and the mediating roles of team performance (TP) and stakeholder engagement (SE).

A quantitative cross-sectional survey was conducted among 288 project team members in Pakistan's construction sector. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that PMC have a significant positive effect on PP. Furthermore, TP and SE significantly mediate this relationship, highlighting the critical role of effective team dynamics and proactive stakeholder involvement in translating managerial competencies into improved project outcomes.



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This study contributes to the literature by integrating the Resource-Based View and stakeholder theory to explain the mechanisms linking managerial competencies to project performance. The findings provide practical implications for construction firms and policymakers by emphasizing the strategic importance of developing managerial competencies, strengthening team collaboration, and enhancing stakeholder engagement across the project lifecycle.

Keywords: Project manager competencies; Project performance; Team performance; Stakeholder engagement; Resource-Based View; Stakeholder theory; Construction industry.

从蓝图到现实：通过项目经理胜任力、团队绩效与利益相关者参与提升建筑项目绩效

摘要：建筑业正面临日益增长的压力，需要通过提升项目绩效来增强行业竞争力，尤其是在强化项目经理胜任力（PMC）方面。尽管管理者胜任力的重要性已得到广泛认可，但关于项目经理胜任力如何通过组织内部机制影响项目绩效（PP）的研究仍然相对有限。本文通过探讨项目经理胜任力对项目绩效的直接影响，以及团队绩效（TP）和利益相关者参与（SE）的中介作用，弥补了这一研究空白。

本研究采用定量横断面调查方法，对巴基斯坦建筑业288名项目团队成员进行问卷调查，并运用偏最小二乘结构方程模型（PLS-SEM）对数据进行分析。研究表明，项目经理胜任力对项目绩效具有显著正向影响。此外，团队绩效和利益相关者参与在该关系中发挥显著中介作用，凸显了高效团队协作和积极利益相关者参与在将管理胜任力转化为优良项目成果过程中的关键作用。

本研究整合了资源基础观（Resource-Based View）与利益相关者理论（Stakeholder Theory），阐释了管理胜任力与项目绩效之间的作用机制，从而丰富了相关理论研究。研究结果为建筑企业与政策制定者提供了重要启示，即应在项目全生命周期内战略性地提升项目经理胜任力，加强团队协作，并强化利益相关者参与，以实现更优的项目绩效。

关键词：项目经理胜任力；项目绩效；团队绩效；利益相关者参与；资源基础观；利益相关者理论；建筑业

1. Introduction

The construction sector plays a crucial role in the global economy, contributing approximately 13% to global GDP and employing over 7% of the world's workforce [1]. As construction sector faces increasing pressure to improve project performance, particularly regarding the competencies of project managers, the need for effective leadership, coordination, and management has become more critical than ever [2,3]. With construction projects ranging from infrastructure development to large-scale urban construction, the demand for not only technical expertise but also strong leadership skills is growing [4,5]. Despite the importance of construction sector, many projects still face delays, cost overruns, and unmet objectives, raising concerns about what truly drives successful project

performance [6]. Project performance is evaluated based on whether a project meets its goals in terms of scope, timeliness, cost, quality, and stakeholder satisfaction [7]. Key factors influencing project performance include effective scheduling, stakeholder collaboration, and project manager competencies [2,8]. As the construction industry integrates numerous operations and stakeholders, project management has become increasingly vital in today's competitive environment [9]. Moreover, interpersonal competencies such as emotional intelligence and leadership are critical tools for evaluating and enhancing team performance, which directly impacts the success of construction projects [10,11]. Effective project managers with specific skills are in high demand due to the various projects' unique demands and integration challenges. The project manager embodies positive attributes that play a pivotal

role in the success of projects and project organization [12].

Project manager competencies (PMC) are essential for guiding a project to successful completion, encompassing skills such as leadership, decision-making, communication, and problem-solving [13]. These competencies directly influence project performance (PP). However, the impact of PMC on project performance is significantly mediated by team performance (TF) and stakeholder engagement (SE). Strong Team Performance ensures effective collaboration, communication, and problem-solving among team members, which enhances the overall project outcome [14]. Meanwhile, Stakeholder Engagement ensures that the needs and expectations of all involved parties, such as clients, suppliers, and regulatory bodies, are addressed, reducing the risk of delays and conflicts [15]. Together, these factors demonstrate that while project manager competencies are critical, their influence on project success is amplified by effective team dynamics and stakeholder collaboration [16].

Existed literature revealed some gaps in the conducted research on the project manager competencies, project performance, team performance, as well as stakeholder engagement. To begin with, the literature as it now presents the detailed knowledge on the project performance, however, the project manager's competencies in impacting the project performance remained comparatively unexplored [17,18]. The goal of this research is to fill this knowledge gap and eventually reach an expanded understanding of the factors underpinning project performance [19]. Second, while it is true that project manager competencies are essential for effective project management, the particular attaining of the construction sector is recognized to affect how these competencies play a crucial role in project performance [20]. There hasn't been an extensive study on project manager competencies in the construction sector and the resulting impact on the project performance [21,11]. Third, whereas the crucial role of stakeholder management in project performance is widely recognized, its mediating role is not well-defined when it involves the relationship between project manager competencies and project performance. Intending to address this gap, this study investigates how stakeholder engagement plays a mediating role in the relationship between project manager competencies and project performance [22]. Fourth, the role of team performance in enhancing the project performance has been addressed. However, there is not enough research on the relationship between project manager competencies and team performance. Considering a focus on the construction sector, especially, this study aims to shed light on the detailed relationship between project manager competencies and team performance and how they operate effectively to impact project

performance [23]. Lastly, to the greatest extent of the author's expertise, such initiatives provide a more comprehensive framework for assessing project performance within the construction sector by looking at the project manager competencies and mediating effects of team performance and stakeholder engagement that influence project performance [24]. In light of these gaps in the literature, this study aims to investigate the relationship between project manager competencies and project performance with the mediating role of team performance and stakeholder engagement. Thus, the current research's research questions include:

1. Does project manager competencies impact project performance?
2. Does team performance mediate the relationship between project manager competencies and project performance?
3. Does stakeholder engagement mediate the relationship between project manager competencies and project performance?

This study aims to fill this gap by exploring how project manager competencies impact project performance in the construction sector, with a specific focus on the mediating roles of team performance and stakeholder engagement. By examining these relationships, the study will contribute to a more nuanced understanding of success factors in construction sector and offer practical insights for improving project outcomes in one of the most critical sectors of public service. This research investigation expands the existing body of knowledge in several ways. Theoretically, this research utilized the Resource-Based View (RBV). RBV highlighted the role of internal resources and competencies in attaining a competitive edge. RBV argues that a firm's success is dependent upon its distinctive resources, abilities, and competencies, which can lead to extraordinary revenues [25]. Drawing from this theoretical underpinning, we present an extensive framework and mediation mechanisms that explain how PMC impacts project performance. Furthermore, this research explores the complicated mechanisms of project performance, emphasizing the role of the project manager's competencies in impacting project performance, mediated by team performance, stakeholder engagement.

The goal of this research is to expand knowledge of the processes via which project manager competencies impact project outcomes as well as how they enhance project performance. Importantly, the present research provides an innovative review of these factors associated with project performance. Furthermore, this research has significance for the construction sector since it highlights how important project manager competencies are to the effectiveness of a project's performance. Considering the impact of project manager

competencies, mediated by team performance and stakeholder engagement, the study enhances knowledge of effective project management in a project-based organization. It emphasizes the significance of governance of projects and the requirement for competent project management processes in the project-based organization. Similar to project-based organizations, project manager's struggle with managing and optimizing resources, concerning the sector's sustainability aims, this research provides insights into management and leadership processes. This study essentially looks at the managerial responsibilities of project managers in a construction sector and their significant impacts on the effectiveness of the industry.

2. Literature review

2.1 Theoretical foundation hypothesis development

The resource-based view (RBV) theory emphasizes the importance of internal resources and competencies within an organization as key drivers of competitive advantage and project success [25]. In the context of construction projects, project manager competencies, such as leadership, decision-making, technical expertise, and communication, are critical organizational resources that directly impact project performance [26,27]. These competencies enable the project manager to navigate complex challenges, optimize resources, and ensure successful project execution [2]. This supports hypothesis (H1), which proposes that project manager competencies positively impact project performance, as these competencies help in achieving project goals in terms of scope, time, cost, and stakeholder satisfaction [12,16]. Furthermore, team performance plays a vital mediating role in the relationship between project manager competencies and project performance. Effective team performance involves collaboration, communication, and coordination among team members, which enhances overall project outcomes [28,16]. According to RBV, teams that are well-coordinated and supported by a skilled project manager perform more efficiently and are better equipped to meet project objectives [29]. This aligns with hypothesis (H2), suggesting that team performance positively mediates the relationship between project manager competencies and project performance. A high-performing team ensures smoother project execution, improves problem-solving, and contributes to achieving both the short-term and long-term goals of the project [30]. In addition to team dynamics, stakeholder engagement is another crucial mediating factor in determining project performance. Stakeholder theory emphasizes the importance of engaging with various stakeholders, including clients, suppliers, contractors, and regulatory bodies, throughout the project lifecycle [31]. By addressing stakeholders' needs and expectations, project managers can reduce

conflicts and mitigate risks, leading to improved project success [32,33]. Effective stakeholder engagement facilitates smoother project execution and helps align the project's goals with stakeholder expectations, which supports H3 by suggesting that stakeholder engagement plays a crucial mediating role between project manager competencies and project performance [33]. By ensuring that stakeholders' needs and concerns are addressed, project managers can enhance collaboration and mitigate risks, ultimately driving improved project outcomes [34,31]. Together, RBV theory and stakeholder theory provide a comprehensive framework for understanding the dynamics between project manager competencies, team performance, stakeholder engagement, and project performance. These theories highlight the critical role of both managerial skills and external relationships in driving the successful completion of construction projects, particularly those focused on achieving project performance and meeting stakeholder expectations [7,35].

2.2 Project Manager Competencies and Project Performance

There is a strong correlation between project manager competencies (PMCs) and project performance (PP) in various industries. Researchers [36] highlighted that 70.9% of project performance is associated with project manager competencies and skills. The project manager's technical competencies contain the particular skills and experience needed for managing projects efficiently. According to [37] core technical competencies of a project manager include planning of a project, risk management of a project, budgeting, and scheduling of a project [38]. Behavioral competencies of project managers also known as soft skills play a crucial role in project performance, these competencies include leadership, communication, teamwork, emotional awareness, and handling conflicts [12]. [39,40] highlight that Contextual awareness of project manager in project management suggesting that project managers who understand the broader context of the projects align their strategies with organizational objectives and stakeholder expectations. Recent studies emphasize the importance of integrative competencies, which involve integrating technical, behavioral, and contextual skills. [41,11] suggests that effective project managers can balance these competencies and adapt their approach based on the specific needs of their projects. Integrative competencies enable project managers to navigate complex project environments and address challenges holistically.

H1: Project Manager Competencies have a positive impact on Project Performance.

2.3 Mediating Role of Team Performance

A team is characterized as two or more people interacting constantly and in connection with one another to achieve a common objective and goal. Each

team member is committed to a set of duties, and the membership of the team is a temporary period [42]. [43] noted that high-quality teamwork, characterized by effective communication and collaboration, leads to improved project team performance. Project team cohesion is essential since their capabilities are typically confined. This collaborative effort greatly raises the performance of the project collectively [44,11]. The project manager assesses the efficacy and performance of the project team. Project team performance is dependent on the project manager's behavior and how they handle and guides his team members to complete a project successfully [45].

According to a study[22] team performance mediates the association between project manager competencies and project performance. The positive effects of project manager competencies on project performance are significantly mediated by team performance. High-performing teams, fostered by effective project managers, are better equipped to meet project objectives and deliver high-quality results [16]. This mediation effect highlights the importance of team dynamics in translating project manager competencies into successful project performance. Project managers who demonstrate strong leadership and communication skills tend to build high-performing teams. Recent research indicates that project managers who excel in these areas contribute to better team outcomes, which subsequently enhance overall project performance [41].

The mediating role of team performance in the relationship between project manager competencies and project performance can be appreciated via the RBV perspective. From the RBV perspective, managerial competencies contribute to the development of project team performance [13]. Ensuring that the project team performs without disruption while making optimal use of the available project resources, can substantially contribute to the project's performance [30]. Therefore, construction sector with project manager competencies are more inclined to promote capabilities of team performance, which ultimately mediate the relationship between project manager competencies and project performance, contributing to profitable achievements for the project-based organization [46]. Considering the preceding discussion this research forms the following hypotheses:

H2: Team Performance positively mediates the relationship between project manager competencies and project performance.

2.4 Mediating Role of Stakeholder Engagement

Stakeholders play an important and active role throughout the whole project life cycle, providing major contributions from the beginning stage of a project to the last phases of project closure to achieving excellent project performance [43]. [47] emphasizes how crucial stakeholder engagement contributes to the smooth running of project management activities. This is

mandatory to build a long-lasting relationship with prospective stakeholders and make sure that all engagement activities correspond to the fundamental principles of sustainability. [48]emphasized the significance of active stakeholder engagement by highlighting its importance, it serves to record stakeholders' significant inputs during the project development phases. Considering that perspective, developing an approach to managing stakeholders is fundamental to the accomplishment of a project successfully. By making sure that stakeholders' opinions are taken into consideration at every stage of the project life cycle, the strategic approach acknowledges the many roles that stakeholders play and actively incorporates them into project decision-making processes [16].

The existing literature has continuously highlighted the complicated relationship between stakeholder engagement, project manager competencies, and project performance. In this context, researchers [49]encourage higher degrees of stakeholder commitment, cooperation, and adaptation by understanding that these components are essential for project performance. [43]provide evidence to support this argument that shows a strong correlation between stakeholder management and project performance. They emphasized consistency coordination, open exchange of knowledge, and proactively handling the key project stakeholders' concerns about project performance. This encompassing and broad approach promotes successful project performance and aligns with the project manager's competencies for the acceptance of the project. Expanding upon these considerations, we propose the following hypothesis.

H3: Stakeholder engagement mediates the relationship between project manager competencies and project performance.

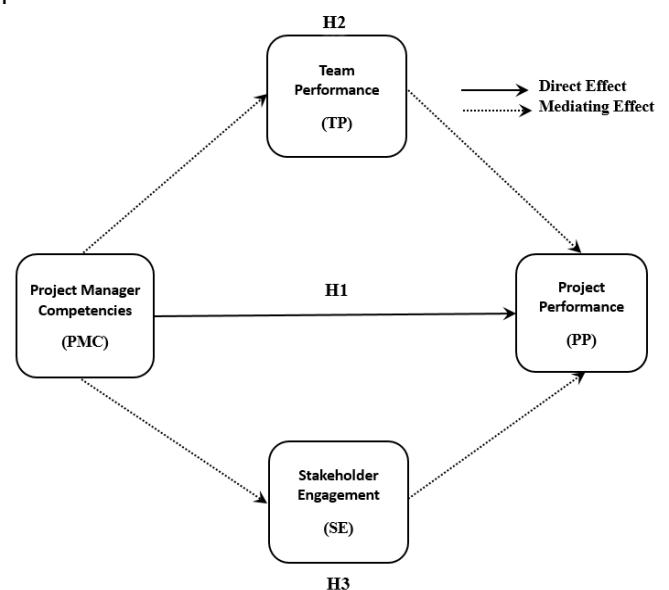


Figure 1. Conceptual Framework.

Source: Author's constructed

3. Research Methodology

3.1 Sample and procedure

This study employs a quantitative design to investigate the relationships among project manager competencies (PMC), team performance (TP), stakeholder engagement (SE), and project performance (PP). The two main quantitative research approaches that scholars have typically used are survey and experiment-based[50]. To collect primary data, the survey method is widely recognized as both effective and appropriate. The construction sector in Pakistan presents a compelling context for empirical investigation due to its critical societal importance, operational complexity, and urgent need for performance enhancement. As a developing nation with a rapidly expanding population, Pakistan continues to face systemic challenges in delivering accessible, equitable, and sustainable infrastructure [51,52]. These challenges are exacerbated by chronic resource limitations, infrastructural deficits, and a reliance on project-based interventions driven by both public institutions and private actors. Within this landscape, the competencies of project managers emerge as a decisive factor in determining project success, particularly given the sector's reliance on time-bound, resource-constrained initiatives. Moreover, the Pakistani construction industry is characterized by high levels of stakeholder diversity and interdependent teamwork, conditions that amplify the importance of leadership, coordination, and effective engagement. This environment offers a unique opportunity to examine the extent to which project manager competencies influence project outcomes, both directly and through the mediating mechanisms of team performance and stakeholder involvement. Such an inquiry holds practical significance for enhancing project delivery in Pakistan while simultaneously contributing to broader theoretical debates on project management in complex, resource-constrained settings. By situating the study within this context, the research advances knowledge on how managerial competencies translate into improved project and sectoral performance under pressing developmental constraints.

Data collection involved selecting project managers, project team members, and project stakeholders. The convenient sampling technique was considered to be appropriate for ensuring the collection of different aspects that are important for examining the relationship between the project manager's competencies and project performance as influenced by team performance, and stakeholder engagement, as mentioned in [5]. This indicated that the participants were highly qualified and had relevant expertise for the study's goals [53,54]. This study employed a correlational research design to assess the impact of project manager competencies on project performance, with team performance and stakeholder engagement as mediating variables. Primary

data were collected from project managers and team members in Pakistan's construction sector using a convenience sampling strategy, chosen for its practicality and accessibility. Structured survey questionnaires were administered through online forms and, where necessary, in-person distribution. All respondents provided informed consent and were briefed on the study's purpose to ensure transparency. Data collection was conducted within a defined timeframe to enhance consistency and reliability. Participants in this survey were asked to provide some basic demographic data. The demographic information of the participants is shown in Table 1.

Table 1. Demographics Profiling of Respondents

Demographic Variable	Type	Frequency	Percentage
Gender	Male	208	96.20
	Female	80	3.80
	Total	288	100.0
	Matric	1	0.50
	Intermediate	34	16.20
Qualification	Bachelor	141	67.10
	MS/MPhil	29	13.80
	PhD	5	2.40
	Total	288	100.0
	5 and less	132	62.90
Experience	6-10	41	19.50
	11-15	18	8.60
	16-20	10	4.80
	21 and above	9	4.30
	Total	288	100.0

3.2 Measurement of Scales

A Likert scale with five points ranging from strongly disagree to strongly agree was adopted. Regarding the sample size, out of 382 completed questionnaires, 288 were considered acceptable for further analysis after the elimination of the responses that lacked the required details. This made it feasible to obtain a respectable 75.34% response rate. This sample size is acceptable for

quantitative research to ensure sufficient statistical power and reliability in verifying the existence of correlations between the variables [55]. The items in the questionnaire were adapted from past research is shown in Table 2.

Table 2. Variable summary

Sr.No	Variable	Scale	Items
1	Project Manager Competencies	[56]	5
2	project performance	[57]	6
3	Team Performance	[58]	5
4	Stakeholder Engagement	[59]	5

3.3 Analysis Techniques

The initial screening and data entry were carried out with IBM SPSS. This stage involves identifying and addressing incomplete data, and issues with data quality. The model evaluation was done using the Smart PLS-4 software. Partial least squares structural equation modeling, or PLS-SEM, was utilized to examine the information gathered from research participants. The approach to select was PLS-SEM because of its ability to examine complex interactions and latent variables. Typically, the PLS-SEM procedure comprises two distinct components: the assessment of measurement and the structural bases of the model, [60]. Before proceeding with further analysis, the measuring model assesses the discriminant and convergent validity, Cronbach's alpha, and construct outer loading. Furthermore, the structural model determines path coefficients and examines the degree of significance. Furthermore, the PLS-SEM technique has become widely accepted in the management research field for use in data analysis and the generalization of results [61,16,51].

4. Analysis and Result

4.1 Measurement Model

We look at the measurement model in five different ways: loadings, composite reliability, Cronbach's alpha, and convergence and discriminant validity. According to [62], the typical threshold range for loadings is greater than 0.50 The allowable limit for the outside loading of all objects is met. The composite reliability normal range is .70. The data indicated that there was a much higher composite reliability across each factor. The typical range of a variable is.70, as indicated by Cronbach's alpha [63]. The results confirm the use of Cronbach's alpha to verify data reliability. To determine the convergent validity, we adopt the Average Variance Extracted (AVE) method, where the permitted range is .50 [63].

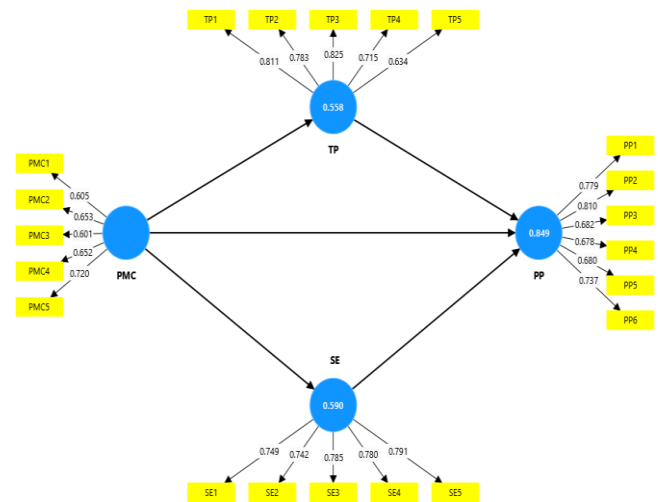


Figure 2. Confirmatory factor analysis. Source: Author's constructed

Table 3. Measurement Model

Variable	Loading	Alpha	CR	AVE
Project Manager Competencies		0.783	0.783	0.520
PMC-1	0.605			
PMC -2	0.653			
PMC -3	0.601			
PMC -4	0.652			
PMC -5	0.720			
Project Performance		0.872	0.872	0.532
PP-1	0.779			
PP-2	0.810			
PP-3	0.682			
PP-4	0.678			
PP-5	0.680			
PP-6	0.737			
Team Performance		0.879	0.879	0.593
TP-1	0.811			
TP-2	0.783			
TP-3	0.825			
TP-4	0.715			
TP-5	0.634			
Stakeholder Engagement		0.868	0.869	0.573
SE-1	0.749			
SE-2	0.742			
SE-3	0.785			
SE-4	0.780			
SE-5	0.791			

Note: *CR stands for composite reliability. AVE stands for "average variance extracted."

4.2 Discriminate Validity

We utilized the HTMT ratio to investigate discriminant validity. An acceptable HTMT ratio is defined as less than .90 with a confidence interval of 1, employing the criteria established by [64]. It finds out that each variable's HTMT and confidence interval values are smaller than 90 and 1, correspondingly. This implies the existence of convergent validity. Further, [65] recommends that the square root of the average variance extracted (AVE) of a construct be greater than the correlations with the other constructs. Provided that this measure is more precise. The results shown in Table 4 show that this study satisfies the Fornell and Larcker criterion.

Table 4. Discriminate Validity

Variable	Project Manager Competencies	Project Performance	Team performance	Stakeholder Engagement
Fornell-Larcker criteria				
Project Manager Competencies	0.895			
Project Performance	0.738	0.772		
Team performance	0.803	0.899	0.701	
Discriminant validity				
–				
(HTMT)				
Project Manager Competencies	0.709			
Project Performance	0.766	0.785		
Team performance	0.805	0.794	0.768	
Stakeholder Engagement	0.728	0.765	0.773	0.762

4.3 Structural Model

The Structural Equation Model (SEM) in the present study was evaluated using the standard criteria provided by [66]. First, the predictive relevance metric (Q2) and the coefficient of determination (R2) were determined. The results, which are presented in Table 5, indicate an 84.0% change in the project performance (R2 = .84), a 55.0% variance in team performance (R2 = .55) as a result of the project manager competencies, and a 59.0% variance in stakeholder engagement (R2 = .59) as a result of the project manager competencies, indicating that the model has sufficient predictive accuracy [66]. Furthermore, we conducted the blindfolded test of Q2. Q2 values greater than zero indicate robust predictive power; project performance, team performance, and stakeholder engagement all had values of .52, .42, and .31, respectively.

Table 5. Coefficient of Determination

Variables	R ²	Q ²
TP	0.648	0.42
SE	0.530	0.31
ProP	0.711	0.52

4.4 Hypotheses Testing

Using PLS-SEM, we evaluate theories by looking at how they have a direct and mediating impact. H1 investigated whether project performance is improved by project manager competencies. Table 5 shows that project manager competencies positively impact project performance ($\beta = .18, t = 2.71, p > .007$), supporting the study's hypothesis (H1).

Table 6. Hypothesis Result

Relationship	B	STDV	T Statistics	P Values
H1: PMC -> PP	0.18	0.115	2.71	0.007

4.5 Mediation Analysis

We compared the predictor variable project manager competencies, and the criterion variable project performance, using the mediator variable team performance, or assessed the mediation analysis. (H2). We utilized Smart PLS-4 bootstrapping to determine the mediation outcome. The indirect influence of project manager competencies on project performance is demonstrated in Table 6 as a result of team performance (H2: $t = 2.80, p < .005$). There was a significant overall impact of project manager competencies on project performance ($t = 16.36, p < .000$). Even after accounting

for the mediator, project manager competencies had a substantial effect on Project performance ($t = 9.16$, $p < .000$). This indicated complimentary partial mediation, which substantiated the investigation's hypothesis H2. A mediation study was also conducted between the predictor variable, project manager competencies, and the criterion variable, project performance, with the mediator variable, team performance. The study also shows the impact of project manager competencies on project performance through stakeholder engagement (H3: $t = 5.83$, $p < .000$). project manager competencies had a substantial effect on project performance ($t = 15.70$, $p < .000$). Even after accounting for the mediator, project manager competencies had a substantial effect on project performance ($t = 9.16$, $p < .000$). This illustrated complimentary partial mediation, which substantiated the investigation's claim H3.

Table 7. Mediation Analysis

Total Effect		Direct Effect		Indirect Effect		
t	p-value	t	p-value	Relationship	t	p-value
				PMC ->	9.1	0.0
		16.36		TP-> PP	6	00
0.000	2.80	0.000		PMC ->	2.7	0.0
				SE-> PP	80	06

5. Discussion

This research aims to examine the connection between project manager competencies, team performance, stakeholder engagement, and overall project performance, utilizing the Resource-Based View (RBV) and Stakeholder theories. The findings support the proposed hypotheses, demonstrating that project manager competencies significantly and positively influence project performance. These results align with existing literature, including studies by [17,67,68]. In this context, [69] primarily investigate the effects of project manager competencies on project performance, revealing a strong correlation between the two. Our findings also resonate with those of [67], which empirically support the notion that a project manager's leadership, behavioral, and interpersonal competencies significantly contribute to project success. Additionally, [70] enhance the existing literature by emphasizing the interplay between team performance and project manager competencies' influence on project performance. These outcomes underscore the diverse skill sets required of project managers, which are vital for a broader range of project success. Furthermore, a project manager's communication skills are crucial for project performance, enabling them to effectively share objectives, opportunities, and updates with team

members and other stakeholders involved in project execution [5].

The present research indicates that team performance and stakeholder engagement significantly and positively impact project performance. The assumed correlation was validated by the findings. The outcomes also align with the body of current research, which highlights the importance of team performance and stakeholder engagement [22,30,16]. According to several studies, team performance and stakeholder engagement play a crucial role in project-based organizations. [71] identified key characteristics of team performance that impact project performance. According to [72], team performance in the workplace has a favorable effect on employees' dedication and efforts to carry out the project efficiently. They also demonstrate that the project team plays a major role in a project's performance by creating an environment that motivates the team to meet project goals [73].

The results of our study explain that stakeholder engagement act as a mediating factor in the relationship between project manager competencies and project performance, but addresses the subsequent research question. A review of the existing literature has identified several explanations regarding stakeholder engagement. The arguments presented by [74] provide relevant background and the importance of stakeholder engagement. According to [75] By identifying and engaging stakeholders early in the project, potential risks related to stakeholder interests and concerns can be identified and mitigated. [5] highlight that inadequate resources can lead to insufficient communication and engagement, which might result in stakeholder dissatisfaction and project delays. [16] emphasize that projects with proactive stakeholder engagement are more likely to meet their scope, time, cost, and quality objectives. Involving stakeholders early and continuously helps in identifying potential issues and addressing them promptly, thus enhancing project performance.

6. Conclusion and Implication

6.1 Conclusion

The research has highlighted important and innovative concepts, especially project manager competencies, team performance, and stakeholder engagement as integral aspects that contributed to project performance. The present research is one of the earliest studies to create a framework that involves linking project manager competencies with project performance, employing team performance and stakeholder engagement to act as mediators. The findings highlight the impact of project manager competencies on project performance in a project-based organization, highlighting the mediating role of team performance and stakeholder engagement in this relationship. Thus, the study concluded that project

manager competencies have a major impact on project performance in a project-based organization. This further highlighted that in a project-based organization, stakeholders make responsible decisions for the project. To implement project manager competencies in an integrated way, the research study indicates that leaders develop plans of action and create an interactive work environment for effective project completion.

6.2 Implication

The implications of this paper are theoretical as well as practical. In the beginning, our findings supported the Resource-Based View by highlighting the significance of including project management competencies to improve project performance. Particularly, the present research addressed a research gap in empirical findings related to this particular issue and offered strong evidence in support of the critical role that Project manager competencies played in project management. The results also highlight the practical implication that project managers should prioritize and promote competencies for successful project execution, emphasizing the importance of observing these abilities as a foundational aspect throughout the project life cycle. Furthermore, our research extends the theory of stakeholders by highlighting the team performance and stakeholder engagement role in effective project management. Particularly, we observed that team performance and stakeholder engagement had a favorable impact and acted as mediators between project manager competencies and project performance. Furthermore, our results highlight the importance of team performance and stakeholder engagement in a variety of industries and cultural circumstances, contrasting with the findings of earlier researchers who recognized it as a possible indicator of project performance. Third, implementing project manager competencies in practice in the construction sector greatly enhances overall project performance. This highlights how project manager competencies are significant for team performance to create team building in a positive work environment. By paying close attention to these factors, construction sector may put themselves in a better position to engage stakeholders and assess the project manager's competencies efficiently can ultimately lead to project performance. The mediating role of team performance highlights how important teamwork and coordination play effectively in the project-based organization. Construction sector should focus on team performance by providing team facilitates and an environment that boosts their performance. The involvement of the project team in project-related aspects such as decision-making activities, can enhance the team performance as well as project performance in the project-based organization. Fifth, the results highlight the fact that the relationship between project manager competencies and project

performance is significantly mediated by stakeholder engagement. Stakeholder engagement is an essential aspect of project management, and project managers need to understand that successful communication is required to engage the stakeholders and achieve the project performance. Construction sector must adopt an extensive approach to engaging stakeholders, encompassing stakeholder analysis, engagement planning, and management of relationships to ensure the substantial involvement of stakeholders throughout the whole project. Understanding and addressing these aspects allows the construction sector to develop teamwork and enhance project performance.

7. Future Research Direction

The study recognizes some shortcomings which provide opportunities for further investigation in the future. Initially, the data was gathered from a construction sector in Pakistan. Expanding the contexts for the investigation to different industries and improving the generalizability of our research model. Second, cross-sectional data collection was used in the study, longitudinal data collection approach should be used in future research. This change in technique could indicate a future route for action for a deeper investigation of the recognized variables throughout time. Third, considering team performance and stakeholder engagement as mediating factors, the current study examined the relationship between project manager competencies and project performance. Researchers could examine other mediators and moderator, especially team-related variables. Fourth, future research studies should focus on the impact of project team competencies on sustainable project performance. Incorporating organizational culture as a mediating variable in particular could offer important insights into how organizational culture plays a mediating role in project team competencies and sustainable project performance.

Declarations

Author Contributions

Awais Dastgeer: Writing – original draft, Visualization, Validation. **Shakir Iqbal:** Writing, – review & editing, Software, Methodology, Formal analysis. **Muhammad Javid Nawaz:** Project administration, Writing – review & editing. **Arshid Ali:** Resources, Data curation, Investigation. **Esam Usman:** review, Conceptualization.

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The data presented in this study are available on request from the corresponding author.

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The author declares that there is no conflict of interests regarding the publication of this manuscript.

References

- [1] John Annor, Francois Jacobs, Ahmed Abdelaty, Theodore Haupt. Economic Contributions of the Construction Sector: A Comparative Analysis of Workforce and Financing Factors Across Regions. , : 643–631. <https://doi.org/10.29007/j1j9>
- [2] Jeferson Carvalho Alvarenga, Robson Rosa Branco, André Luis Azevedo Guedes, Carlos Alberto Pereira Soares, Wainer Da Silveira E Silva. The project manager core competencies to project success. *International Journal of Managing Projects in Business*, 2019, 13(2): 277–292. <https://doi.org/10.1108/IJMPB-12-2018-0274>
- [3] Ashok Rehan, David Thorpe, Amirhossein Heravi. Project success factors for leadership practices and communication: challenges in the construction sector. *International Journal of Managing Projects in Business*, 2024, 17(3): 562–590. <https://doi.org/10.1108/IJMPB-12-2023-0279>
- [4] Adnan Mohammad Al-Naghi, Wael Alaghabari, Tarik Barakat. Impact of leadership skills on the success of large and medium construction projects management in Yemen. *International Journal of Construction Management*, 2025, 25(11): 1346–1356. <https://doi.org/10.1080/15623599.2024.2417340>
- [5] Aqeel Siddiqui, Bushra Qureshi, Muhammad Shaukat. Project Manager's Competencies as Catalysts for Project Success: The Mediating Role of Functional Manager Involvement and Stakeholder Engagement. *International Journal of Organizational Leadership*, 2024, 13(First Special Issue 2024): 53–78. <https://doi.org/10.33844/ijol.2024.603416>
- [6] Ahmed Mohammed Abdelalim, Maram Salem, Mohamed Salem, Manal Al-Adwani, Mohamed Tantawy. An Analysis of Factors Contributing to Cost Overruns in the Global Construction Industry. *Buildings*, 2024, 15(1): 18. <https://doi.org/10.3390/buildings15010018>
- [7] Maryam Abolghasemi, M.K.S. Al-Mhdawi, Farzad Rahimian, Abroon Qazi. Exploring the nexus of stakeholder management, project performance and stakeholder satisfaction in Malaysian residential building projects: a PLS-SEM approach. *Engineering, Construction and Architectural Management*, 2024, : . <https://doi.org/10.1108/ECAM-03-2024-0367>
- [8] Hong Xue, Shoujian Zhang, Yikun Su, Zezhou Wu, Rebecca Jing Yang. Effect of stakeholder collaborative management on off-site construction cost performance. *Journal of Cleaner Production*, 2018, 184: 490–502. <https://doi.org/10.1016/j.jclepro.2018.02.258>
- [9] Masoud Aghajani, Gesa Ruge, Kam Jugdev. An Integrative Review of Project Portfolio Management Literature: Thematic Findings on Sustainability Mindset, Assessment, and Integration. *Project Management Journal*, 2023, 54(6): 629–650. <https://doi.org/10.1177/87569728231172668>
- [10] M. Jayaweera, B. A. K. S. Perera, T. N. Liyanawatta. Use of Emotional Intelligence to Enhance the Leadership Skills of Project Managers in Construction: A Qualitative Delphi Study. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 2025, 17(3): 04525011. <https://doi.org/10.1061/JLADAH.LADR-1246>
- [11] Woramol Chaowarat Watanabe, Muhammad Shafiq, M. Javid Nawaz, Irfan Saleem, Sonia Nazeer. The impact of emotional intelligence on project success: Mediating role of team cohesiveness and moderating role of organizational culture. *International Journal of Engineering Business Management*, 2024, 16: 18479790241232508. <https://doi.org/10.1177/18479790241232508>
- [12] Lincoln Sposito, Isabel Cristina Scafuto, Fernando Ribeiro Serra, Manuel Portugal Ferreira. Influence of the project managers' expertise and experience in the success of projects: the moderating effect of emotional intelligence. *International Journal of Managing Projects in Business*, 2024, 17(1): 1–26. <https://doi.org/10.1108/IJMPB-06-2023-0129>
- [13] Sina Moradi, Kalle Kähkönen, Kirsi Aaltonen. Comparison of research and industry views on project managers' competencies. *International Journal of Managing Projects in Business*, 2020, 13(3): 543–572. <https://doi.org/10.1108/IJMPB-04-2019-0085>
- [14] Ignacio Pavez, Hugo Gómez, Canlong Liu, Vicente A. González. Measuring project team performance: A review and conceptualization. *International Journal of Project Management*, 2022, 40(8): 951–971. <https://doi.org/10.1016/j.ijproman.2022.11.001>
- [15] Francesca Iandolo, Antonio La Sala, Lorenzo Turriziani, Francesco Caputo. Stakeholder engagement in managing systemic risk management. *Business Ethics, the Environment & Responsibility*, 2025, 34(4): 1069–1085. <https://doi.org/10.1111/beer.12694>
- [16] Mohammad Bilal Shaukat, Khawaja Fawad Latif, Aymen Sajjad, Gabriel Eweje. Revisiting the relationship between sustainable project management and project success: The moderating role of stakeholder engagement and team building. *Sustainable Development*, 2022, 30(1): 58–75. <https://doi.org/10.1002/sd.2228>
- [17] Faisal Alshammari, Khairulzan Yahya, Zaiton Haron. A conceptual approach in developing a project manager's skills framework (PMSF) for improving the performance of complex projects in Kuwait construction industry. *IOP Conference Series: Materials Science and Engineering*, 2020, 849(1): 012007. <https://doi.org/10.1088/1757-899X/849/1/012007>

- [18] Munther Al-Nimer, Muhammad Sualeh Khattak, Qiang Wu, Rizwan Ullah. Unlocking sustainable project management: The role of project managers' competencies in resource bricolage from a stakeholder engagement perspective. *Business Strategy & Development*, 2024, 7(3): e408. <https://doi.org/10.1002/bsd2.408>
- [19] Widhi Setya Wahyudhi, Lim Sanny, Boto Simatupang, Asnan Furinto. The role of asset management on project performance moderated by environmental dynamism on Indonesia's mining project. *Uncertain Supply Chain Management*, 2024, 12(4): 2123–2136. <https://doi.org/10.5267/j.uscm.2024.7.003>
- [20] André Barcaui, André Monat. Who is better in project planning? Generative artificial intelligence or project managers?. *Project Leadership and Society*, 2023, 4: 100101. <https://doi.org/10.1016/j.plas.2023.100101>
- [21] Van Luy Tong, Truong Van Luu. Utilising the European foundation for quality management model to assess the impact of project implementation enablers on construction project performance. *Journal of Asian Architecture and Building Engineering*, 2025, : 1–17. <https://doi.org/10.1080/13467581.2025.2493094>
- [22] Qi Zhang, Shengyue Hao. Construction Project Manager's Emotional Intelligence and Team Effectiveness: The Mediating Role of Team Cohesion and the Moderating Effect of Time. *Frontiers in Psychology*, 2022, 13: 845791. <https://doi.org/10.3389/fpsyg.2022.845791>
- [23] Nelsen A. Rahul. Strategic Alignment of Emotional Intelligence with Project Management: A Framework for Enhancing Project Success and Team Performance. *American Journal of Industrial and Business Management*, 2024, 14(04): 553–577. <https://doi.org/10.4236/ajibm.2024.144028>
- [24] Kaiyang Wang, Fangyu Guo, Cheng Zhang, Dirk Schaefer. From Industry 4.0 to Construction 4.0: barriers to the digital transformation of engineering and construction sectors. *Engineering, Construction and Architectural Management*, 2024, 31(1): 136–158. <https://doi.org/10.1108/ECAM-05-2022-0383>
- [25] Jay Barney. Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 1991, 17(1): 99–120. <https://doi.org/10.1177/014920639101700108>
- [26] Riazulhaq Fazly, Nafla Raees, Muhammad Qaiser Shafi, Shakir Iqbal, Muhammad Javid Nawaz. Impact of project planning and project risk management on project success: moderating role of project managers' competencies in the construction sector in Afghanistan. *Journal of Humanities, Social and Management Sciences (JHSMS)*, 2024, 5(2): 1–20. <https://doi.org/10.47264/idea.jhsms/5.2.1>
- [27] Denise R. Simmons, Cassandra McCall, Nicholas A. Clegorne. Leadership Competencies for Construction Professionals as Identified by Construction Industry Executives. *Journal of Construction Engineering and Management*, 2020, 146(9): 04020109. [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001903](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001903)
- [28] Mehwish Majeed, Muhammad Irshad, Ikram Khan, Imran Saeed. The Impact of Team Mindfulness on Project Team Performance: The Moderating Role of Effective Team Leadership. *Project Management Journal*, 2023, 54(2): 162–178. <https://doi.org/10.1177/87569728221140807>
- [29] SHRIHARSHA, Jagadeesha B Pai, Sumukh S Hungund. Enhancing decision-making in construction projects – The mediating role of adaptability and response strategy in supply chain and coordination dynamics. *Results in Engineering*, 2025, 27: 106193. <https://doi.org/10.1016/j.rineng.2025.106193>
- [30] Dominic D. Ahiaga-Dagbui, Olubukola Tokede, John Morrison, Anthony Chirnside. Building high-performing and integrated project teams. *Engineering, Construction and Architectural Management*, 2020, 27(10): 3341–3361. <https://doi.org/10.1108/ECAM-04-2019-0186>
- [31] R. Edward Freeman, Prem Sagar Menghwar, Yael Grushka-Cockayne. A stakeholder theory perspective for project management. *International Journal of Project Management*, 2025, 43(7): 102764. <https://doi.org/10.1016/j.ijproman.2025.102764>
- [32] Amir Bahadorestani, Jan Terje Karlsen, Nasser Motahari Farimani. Novel Approach to Satisfying Stakeholders in Megaprojects: Balancing Mutual Values. *Journal of Management in Engineering*, 2020, 36(2): 04019047. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000734](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000734)
- [33] Jere Lehtinen, Kirsi Aaltonen. Organizing external stakeholder engagement in inter-organizational projects: Opening the black box. *International Journal of Project Management*, 2020, 38(2): 85–98. <https://doi.org/10.1016/j.ijproman.2019.12.001>
- [34] R. Edward Freeman, Sergiy D. Dmytriyev, Robert A. Phillips. Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management*, 2021, 47(7): 1757–1770. <https://doi.org/10.1177/0149206321993576>
- [35] Cui Yong, Saba Fazal Firdousi, Ayesha Afzal, Viktorija Florjančič, Minahil Awais. The Influence of Internal and External Stakeholder Mechanisms on Entrepreneurial Success: The Moderating Role of Digital Technology Adoption. *Frontiers in Psychology*, 2022, 12: 821725. <https://doi.org/10.3389/fpsyg.2021.821725>
- [36] Rebecca Kassa, Ibilola Ogundare, Brian Lines, Jake B. Smithwick, Nancy J. Kepple, Kenneth T. Sullivan. Developing a construct to measure contractor project manager performance competencies. *Engineering, Construction and Architectural Management*, 2025, 32(3): 2003–2021. <https://doi.org/10.1108/ECAM-12-2022-1122>
- [37] Marcelle Cury Rodrigues, Luísa Domingues, João Pedro Oliveira. Tailoring: a case study on the application of the seventh principle of PMBOK 7 in a public institution.. *Procedia Computer Science*, 2023, 219: 1735–1743. <https://doi.org/10.1016/j.procs.2023.01.468>
- [38] Shakir Iqbal, Muhammad Javid Nawaz, Arshad Ali, Esam Osman, Ameer Hamza. Investigating the Impact of Project Planning on Construction Project Success through the Mediating Role of Risk Management and Safety Climate. *International Journal of Organizational Leadership*, 2024,

- [13] (First Special Issue 2024): 119–139. <https://doi.org/10.33844/ijol.2024.60426>
- [39] Feiyang Wei, Bon-Gang Hwang, Hanjing Zhu, Jasmine Ngo. Project management for sustainable development: Critical determinants of technological competency for project managers with smart technologies. *Sustainable Development*, 2024, 32(4): 3654–3677. <https://doi.org/10.1002/sd.2869>
- [40] Samrakshya Karki, Bonaventura Hadikusumo. Machine learning for the identification of competent project managers for construction projects in Nepal. *Construction Innovation*, 2023, 23(1): 1–18. <https://doi.org/10.1108/CI-08-2020-0139>
- [41] Muhammad Irfan, Raja Abubakar Khalid, Syeed Sami Ul Haq Kaka Khel, Ahsen Maqsoom, Imran Khan Sherani. Impact of work–life balance with the role of organizational support and job burnout on project performance. *Engineering, Construction and Architectural Management*, 2023, 30(1): 154–171. <https://doi.org/10.1108/ECAM-04-2021-0316>
- [42] Jennjou Chen, Tsui-Fang Lin. Gender composition and team performance: evidence from a randomized experiment. *Applied Economics Letters*, 2025, 32(15): 2121–2125. <https://doi.org/10.1080/13504851.2024.2332545>
- [43] Hong Min Zhang, Heap-Yih Chong, Yu Zeng, Wei Zhang. The effective mediating role of stakeholder management in the relationship between BIM implementation and project performance. *Engineering, Construction and Architectural Management*, 2023, 30(6): 2503–2522. <https://doi.org/10.1108/ECAM-04-2020-0225>
- [44] Ram Shankar Uraon, Anshu Chauhan, Rashmi Bharati, Kritika Sahu. Do agile work practices impact team performance through project commitment? Evidence from the information technology industry. *International Journal of Productivity and Performance Management*, 2024, 73(4): 1212–1234. <https://doi.org/10.1108/IJPPM-03-2023-0114>
- [45] Taghi Javdani Gandomani, Zeinab Tavakoli, Hazura Zulzalil, Hadi Khosravi Farsani. The Role of Project Manager in Agile Software Teams: A Systematic Literature Review. *IEEE Access*, 2020, 8: 117109–117121. <https://doi.org/10.1109/ACCESS.2020.3004450>
- [46] Ayman Mashali, Emad Elbeltagi, Ibrahim Motawa, Mohamed Elshikh. Stakeholder management challenges in mega construction projects: critical success factors. *Journal of Engineering, Design and Technology*, 2023, 21(2): 358–375. <https://doi.org/10.1108/JEDT-09-2021-0483>
- [47] Tommi Pauna, Jere Lehtinen, Jaakko Kujala, Kirsi Aaltonen. The role of governmental stakeholder engagement in the sustainability of industrial engineering projects. *International Journal of Managing Projects in Business*, 2023, 16(8): 77–99. <https://doi.org/10.1108/IJMPB-09-2022-0197>
- [48] Gisele Blak Bernat, Eduardo Linhares Qualharini, Marcela Souto Castro, André Baptista Barcaui, Raquel Reis Soares. Sustainability in Project Management and Project Success with Virtual Teams: A Quantitative Analysis Considering Stakeholder Engagement and Knowledge Management. *Sustainability*, 2023, 15(12): 9834. <https://doi.org/10.3390/su15129834>
- [49] Najib AL-Fadhali. An AMOS-SEM approach to evaluating stakeholders' influence on construction project delivery performance. *Engineering, Construction and Architectural Management*, 2024, 31(2): 638–661. <https://doi.org/10.1108/ECAM-09-2021-0780>
- [50] John W. Creswell. Reflections on the MMIRA *The Future of Mixed Methods* Task Force Report. *Journal of Mixed Methods Research*, 2016, 10(3): 215–219. <https://doi.org/10.1177/1558689816650298>
- [51] Muhammad Javid Nawaz, Aymen Sajjad, Abdul Haseeb Tahir, Muhammad Adnan, Muhammad Umer, Huaming Song. Towards greening smart cities: Navigating net zero carbon in construction by 2050 through sustainable practices, innovation climate, and management support. *Sustainable Cities and Society*, 2025, 133: 106878. <https://doi.org/10.1016/j.scs.2025.106878>
- [52] Aqeel Siddiqui, Shakir Iqbal, Muhammad Shaukat, Khawaja Latif. From Coaching Leadership Style to Construction Industry Project Success: Modelling the Mediating Role of Team Building and Goal Clarity. *International Journal of Organizational Leadership*, 2023, 12(First Special Issue 2023): 142–164. <https://doi.org/10.33844/ijol.2023.60377>
- [53] Gwennan Hâf Barton. *Designing and Conducting Mixed Methods Research* (3rd Edition; International Student Edition) by John W. Creswell & Vicki L. Plano Clark. *The Cognitive Psychology Bulletin*, 2020, 1(5): 88–89. <https://doi.org/10.53841/bpsocg.2020.1.5.88>
- [54] Shakir Iqbal, Muhammad Nawaz, Sohail Aslam, Arshad Ali, Muhammad Rehman, Sana Rehman. Impact of Sustainable Leadership on Construction Project Success: Mediating Role of Green Innovation and Organizational Learning. *International Journal of Organizational Leadership*, 2024, 0(0): 610–631. <https://doi.org/10.33844/ijol.2024.60433>
- [55] Ned Kock. Minimum Sample Size Estimation in PLS-SEM: An Application in Tourism and Hospitality Research. *Applying Partial Least Squares in Tourism and Hospitality Research*, 2018, : 1–16. <https://doi.org/10.1108/978-1-78756-699-620181001>
- [56] Huong Thanh Nguyen, Bonaventura H.W. Hadikusumo. Human resource related factors and engineering, procurement, and construction (EPC) project success. *Journal of Financial Management of Property and Construction*, 2018, 23(1): 24–39. <https://doi.org/10.1108/JFMPC-05-2016-0023>
- [57] Ronald L. Thompson, H. Jeff Smith, Charalambos L. Iacovou. The linkage between reporting quality and performance in IS projects. *Information & Management*, 2007, 44(2): 196–205. <https://doi.org/10.1016/j.im.2006.12.004>
- [58] Jun He, Brian S. Butler, William R. King. Team Cognition: Development and Evolution in Software Project Teams. *Journal of Management Information Systems*, 2007, 24(2): 261–292. <https://doi.org/10.2753/MIS0742-1222240210>

- [59] Gilberto Francisco De Oliveira, Roque Rabechini Jr. Stakeholder management influence on trust in a project: A quantitative study. *International Journal of Project Management*, 2019, 37(1): 131–144. <https://doi.org/10.1016/j.ijproman.2018.11.001>
- [60] Christian M. Ringle, Marko Sarstedt, Rebecca Mitchell, Siegfried P. Gudergan. Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 2020, 31(12): 1617–1643. <https://doi.org/10.1080/09585192.2017.1416655>
- [61] D.A. Aga, N. Noorderhaven, B. Vallejo. Transformational leadership and project success: The mediating role of team-building. *International Journal of Project Management*, 2016, 34(5): 806–818. <https://doi.org/10.1016/j.ijproman.2016.02.012>
- [62] David Gefen, Detmar Straub. A Practical Guide To Factorial Validity Using PLS-Graph: Tutorial And Annotated Example. *Communications of the Association for Information Systems*, 2005, 16: . <https://doi.org/10.17705/1CAIS.01605>
- [63] Gordon W. Cheung, Helena D. Cooper-Thomas, Rebecca S. Lau, Linda C. Wang. Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management*, 2024, 41(2): 745–783. <https://doi.org/10.1007/s10490-023-09871-y>
- [64] Jörg Henseler, Christian M. Ringle, Marko Sarstedt. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 2015, 43(1): 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- [65] Claes Fornell, David F. Larcker. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 1981, 18(1): 39–50. <https://doi.org/10.1177/002224378101800104>
- [66] Joseph F. Hair, Jeffrey J. Risher, Marko Sarstedt, Christian M. Ringle. When to use and how to report the results of PLS-SEM. *European Business Review*, 2019, 31(1): 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- [67] Marzena Podgórska, Magdalena Pichlak. Analysis of project managers' leadership competencies: Project success relation: what are the competencies of polish project leaders?. *International Journal of Managing Projects in Business*, 2019, 12(4): 869–887. <https://doi.org/10.1108/IJMPB-08-2018-0149>
- [68] Maryam Elmezain, Wan Hamidon Wan Baduruzzaman, Muhamad Azry Khoiry. The Impact of Project Manager's Skills and Age on Project Success. *Brazilian Journal of Operations & Production Management*, 2021, 18(4): 1–16. <https://doi.org/10.14488/BJOPM.2021.017>
- [69] Paola Ochoa Pacheco, David Coello-Montecel, Michelle Tello, Virginia Lasio, Alfredo Armijos. How do project managers' competencies impact project success? A systematic literature review. *PLOS ONE*, 2023, 18(12): e0295417. <https://doi.org/10.1371/journal.pone.0295417>
- [70] Riaz Ahmed, Simon P. Philbin, Osman Sadiq Paracha. Investigating the Impact of Task-Oriented, Relationship-Oriented, and Innovation-Oriented Leadership Competencies on Project Success in Pakistan: A Moderated Model of Multi-Dimensional Senior Management Support. *Engineering Management Journal*, 2024, 36(1): 42–65. <https://doi.org/10.1080/10429247.2023.2186681>
- [71] Madison H. Munro, Ross J. Gore, Christopher J. Lynch, Yvette D. Hastings, Ann Marie Reinhold. Enhancing risk and crisis communication with computational methods: A systematic literature review. *Risk Analysis*, 2025, 45(7): 1683–1697. <https://doi.org/10.1111/risa.17690>
- [72] Ernest Kissi, Kofi Agyekum, Theophilus Adjei-Kumi, Debrah Caleb, Ekow Donkor Micheal. Exploring the influence of religious elements on performance factors in developing countries: a case of the Ghanaian construction industry. *International Journal of Productivity and Performance Management*, 2021, 70(7): 1889–1906. <https://doi.org/10.1108/IJPPM-11-2019-0546>
- [73] Shazia Nauman, Sabeen Hussain Bhatti, Hassan Imam, Mohammad Saud Khan. How Servant Leadership Drives Project Team Performance Through Collaborative Culture and Knowledge Sharing. *Project Management Journal*, 2022, 53(1): 17–32. <https://doi.org/10.1177/87569728211037777>
- [74] Hanna Lee. Green ambidexterity and environmental performance: the role of CEO attention to stakeholders as a microfoundation of dynamic capabilities. *Journal of Business & Industrial Marketing*, 2025, 40(12): 2225–2244. <https://doi.org/10.1108/JBIM-01-2024-0018>
- [75] Andrew Ebekozi, Clinton Ohis Aigbavboa, Mantoa Ramotshela. A qualitative approach to investigate stakeholders' engagement in construction projects. *Benchmarking: An International Journal*, 2024, 31(3): 866–883. <https://doi.org/10.1108/BIJ-11-2021-0663>

参考文献:

- [1] John Annor, Francois Jacobs, Ahmed Abdelaty, Theodore Haupt. 建筑行业的经济贡献：跨区域劳动力与融资因素的比较分析。 , , : 643–631. <https://doi.org/10.29007/j1j9>
- [2] Jeferson Carvalho Alvarenga, Robson Rosa Branco, André Luis Azevedo Guedes, Carlos Alberto Pereira Soares, Wainer Da Silveira E Silva. 项目经理核心胜任力对项目成功的影响。《International Journal of Managing Projects in Business》, 2019, 13(2): 277–292. <https://doi.org/10.1108/IJMPB-12-2018-0274>
- [3] Ashok Rehan, David Thorpe, Amirhossein Heravi. 领导实践与沟通的项目成功因素：建筑行业面临的挑战。《International Journal of Managing Projects in Business》, 2024, 17(3): 562–590. <https://doi.org/10.1108/IJMPB-12-2023-0279>

- [4] Adnan Mohammad Al-Naghi, Wael Alaghbari, Tarik Barakat. 领导技能对也门大中型建筑项目管理成功的影响。《International Journal of Construction Management》, 2025, 25(11): 1346–1356. <https://doi.org/10.1080/15623599.2024.2417340>
- [5] Aqeel Siddiqui, Bushra Qureshi, Muhammad Shaukat. 项目经理胜任力作为项目成功的催化剂：职能经理参与与利益相关者参与的中介作用。《International Journal of Organizational Leadership》, 2024, 13(2024年第一期特刊): 53–78. <https://doi.org/10.33844/ijol.2024.603416>
- [6] Ahmed Mohammed Abdelalim, Maram Salem, Mohamed Salem, Manal Al-Adwani, Mohamed Tantawy. 全球建筑行业成本超支因素分析。《Buildings》, 2024, 15(1): 18. <https://doi.org/10.3390/buildings15010018>
- [7] Maryam Abolghasemi, M.K.S. Al-Mhdawi, Farzad Rahimian, Abroon Qazi. 马来西亚住宅建筑项目中利益相关者管理、项目绩效与利益相关者满意度关系研究：基于PLS-SEM方法。《Engineering, Construction and Architectural Management》, 2024. <https://doi.org/10.1108/ECAM-03-2024-0367>
- [8] Hong Xue, Shoujian Zhang, Yikun Su, Zezhou Wu, Rebecca Jing Yang. 利益相关者协同管理对装配式建筑成本绩效的影响。《Journal of Cleaner Production》, 2018, 184: 490–502. <https://doi.org/10.1016/j.jclepro.2018.02.258>
- [9] Masoud Aghajani, Gesa Ruge, Kam Jugdev. 项目组合管理文献的综合综述：可持续发展思维、评估与整合的主题发现。《Project Management Journal》, 2023, 54(6): 629–650. <https://doi.org/10.1177/87569728231172668>
- [10] M. Jayaweera, B. A. K. S. Perera, T. N. Liyanawatta. 运用情绪智力提升建筑项目经理领导技能：一项定性德尔菲研究。《Journal of Legal Affairs and Dispute Resolution in Engineering and Construction》, 2025, 17(3): 04525011. <https://doi.org/10.1061/JLADAH.LADR-1246>
- [11] Woramol Chaowarat Watanabe, Muhammad Shafiq, M. Javid Nawaz, Irfan Saleem, Sonia Nazeer. 情绪智力对项目成功的影响：团队凝聚力的中介作用与组织文化的调节作用。《International Journal of Engineering Business Management》, 2024, 16: 18479790241232508. <https://doi.org/10.1177/18479790241232508>
- [12] Lincoln Sposito, Isabel Cristina Scafuto, Fernando Ribeiro Serra, Manuel Portugal Ferreira. 项目经理专业知识与经验对项目成功的影响：情绪智力的调节效应。《International Journal of Managing Projects in Business》, 2024, 17(1): 1–26. <https://doi.org/10.1108/IJMPB-06-2023-0129>
- [13] Sina Moradi, Kalle Kähkönen, Kirsi Aaltonen. 学术界与业界对项目经理胜任力观点的比较研究。《International Journal of Managing Projects in Business》, 2020, 13(3): 543–572. <https://doi.org/10.1108/IJMPB-04-2019-0085>
- [14] Ignacio Pavez, Hugo Gómez, Canlong Liu, Vicente A. González. 项目团队绩效测量：综述与概念框架构建。《International Journal of Project Management》, 2022, 40(8): 951–971. <https://doi.org/10.1016/j.ijproman.2022.11.001>
- [15] Francesca Iandolo, Antonio La Sala, Lorenzo Turriziani, Francesco Caputo. 系统性风险管理中的利益相关者参与。《Business Ethics, the Environment & Responsibility》, 2025, 34(4): 1069–1085. <https://doi.org/10.1111/beer.12694>
- [16] Mohammad Bilal Shaukat, Khawaja Fawad Latif, Aymen Sajjad, Gabriel Eweje. 重新审视可持续项目管理与项目成功之间的关系：利益相关者参与与团队建设的调节作用。《Sustainable Development》, 2022, 30(1): 58–75. <https://doi.org/10.1002/sd.2228>
- [17] Faisal Alshammari, Khairulzan Yahya, Zaiton Haron. 为提升科威特建筑业复杂项目绩效而构建项目经理技能框架（PMSF）的概念方法。《IOP Conference Series: Materials Science and Engineering》, 2020, 849(1): 012007. <https://doi.org/10.1088/1757-899X/849/1/012007>
- [18] Munther Al-Nimer, Muhammad Sualeh Khattak, Qiang Wu, Rizwan Ullah. 解锁可持续项目管理：从利益相关者参与视角探讨项目经理胜任力在资源拼凑中的作用。《Business Strategy & Development》, 2024, 7(3): e408. <https://doi.org/10.1002/bsd2.408>
- [19] Widhi Setya Wahyudhi, Lim Sanny, Boto Simatupang, Asnan Furinto. 资产管理对项目绩效的作用：环境动态性的调节效应——以印度尼西亚矿业项目为例。《Uncertain Supply Chain Management》, 2024, 12(4): 2123–2136. <https://doi.org/10.5267/j.uscm.2024.7.003>
- [20] André Barcaui, André Monat. 谁在项目规划中表现更优？生成式人工智能还是项目经理？。《Project Leadership and Society》, 2023, 4: 100101. <https://doi.org/10.1016/j.plas.2023.100101>
- [21] Van Luy Tong, Truong Van Luu. 运用欧洲质量管理基金会（EFQM）模型评估项目实施促进因素对建筑项目绩效的影响。《Journal of Asian Architecture and

- Building Engineering》, 2025: 1–17.
<https://doi.org/10.1080/13467581.2025.2493094>
- [22] Qi Zhang, Shengyue Hao. 建筑项目经理的情绪智力与团队效能：团队凝聚力的中介作用与时间的调节效应。《Frontiers in Psychology》, 2022, 13: 845791.
<https://doi.org/10.3389/fpsyg.2022.845791>
- [23] Nelsen A. Rahul. 情绪智力与项目管理的战略对齐：提升项目成功与团队绩效的框架。《American Journal of Industrial and Business Management》, 2024, 14(04): 553–577. <https://doi.org/10.4236/ajibm.2024.144028>
- [24] Kaiyang Wang, Fangyu Guo, Cheng Zhang, Dirk Schaefer. 从工业4.0到建筑4.0：工程与建筑行业数字化转型的障碍。《Engineering, Construction and Architectural Management》, 2024, 31(1): 136–158.
<https://doi.org/10.1108/ECAM-05-2022-0383>
- [25] Jay Barney. 企业资源与持续竞争优势。《Journal of Management》, 1991, 17(1): 99–120.
<https://doi.org/10.1177/014920639101700108>
- [26] Riazulhaq Fazly, Nafla Raees, Muhammad Qaiser Shafi, Shakir Iqbal, Muhammad Javid Nawaz. 项目规划与项目风险管理对项目成功的影响：项目经理胜任力在阿富汗建筑行业中的调节作用。《Journal of Humanities, Social and Management Sciences (JHSMS)》, 2024, 5(2): 1–20. <https://doi.org/10.47264/idea.jhsms/5.2.1>
- [27] Denise R. Simmons, Cassandra McCall, Nicholas A. Clegorne. 建筑行业高管识别的建筑专业人员领导胜任力。《Journal of Construction Engineering and Management》, 2020, 146(9): 04020109.
[https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001903](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001903)
- [28] Mehwish Majeed, Muhammad Irshad, Ikram Khan, Imran Saeed. 团队正念对项目团队绩效的影响：有效团队领导的调节作用。《Project Management Journal》, 2023, 54(2): 162–178.
<https://doi.org/10.1177/87569728221140807>
- [29] SHRIHARSHA, Jagadeesha B Pai, Sumukh S Hungund. 提升建筑项目决策能力——适应性与响应策略在供应链与协调动态中的中介作用。《Results in Engineering》, 2025, 27: 106193.
<https://doi.org/10.1016/j.rineng.2025.106193>
- [30] Dominic D. Ahiaga-Dagbui, Olubukola Tokede, John Morrison, Anthony Chirnside. 构建高绩效与高度整合的项目团队。《Engineering, Construction and Architectural Management》, 2020, 27(10): 3341–3361.
<https://doi.org/10.1108/ECAM-04-2019-0186>
- [31] R. Edward Freeman, Prem Sagar Menghwar, Yael Grushka-Cockayne. 项目管理的利益相关者理论视角。《International Journal of Project Management》, 2025, 43(7): 102764.
<https://doi.org/10.1016/j.ijproman.2025.102764>
- [32] Amir Bahadorestani, Jan Terje Karlsen, Nasser Motahari Farimani. 满足大型项目利益相关者的新方法：平衡共同价值。《Journal of Management in Engineering》, 2020, 36(2): 04019047.
[https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000734](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000734)
- [33] Jere Lehtinen, Kirsi Aaltonen. 跨组织项目中外部利益相关者参与的组织管理：打开黑箱。《International Journal of Project Management》, 2020, 38(2): 85–98.
<https://doi.org/10.1016/j.ijproman.2019.12.001>
- [34] R. Edward Freeman, Sergiy D. Dmytriiev, Robert A. Phillips. 企业的利益相关者理论与资源基础观。《Journal of Management》, 2021, 47(7): 1757–1770.
<https://doi.org/10.1177/0149206321993576>
- [35] Cui Yong, Saba Fazal Firdousi, Ayesha Afzal, Viktorija Florjančič, Minahil Awais. 内部与外部利益相关者机制对创业成功的影响：数字技术采纳的调节作用。《Frontiers in Psychology》, 2022, 12: 821725.
<https://doi.org/10.3389/fpsyg.2021.821725>
- [36] Rebecca Kassa, Ibilola Ogundare, Brian Lines, Jake B. Smithwick, Nancy J. Kepple, Kenneth T. Sullivan. 开发衡量承包商项目经理绩效胜任力的构建。《Engineering, Construction and Architectural Management》, 2025, 32(3): 2003–2021. <https://doi.org/10.1108/ECAM-12-2022-1122>
- [37] Marcelle Cury Rodrigues, Luísa Domingues, João Pedro Oliveira. 定制化：公共机构中PMBOK第七原则应用案例研究。《Procedia Computer Science》, 2023, 219: 1735–1743. <https://doi.org/10.1016/j.procs.2023.01.468>
- [38] Shakir Iqbal, Muhammad Javid Nawaz, Arshad Ali, Esam Osman, Ameer Hamza. 项目规划对建筑项目成功的影响：风险管理与安全氛围的中介作用。《International Journal of Organizational Leadership》, 2024, 13(2024年第一期特刊): 119–139.
<https://doi.org/10.33844/ijol.2024.60426>
- [39] Feiyang Wei, Bon-Gang Hwang, Hanjing Zhu, Jasmine Ngo. 可持续发展项目管理：智能技术环境下项目经理技术能力的关键决定因素。《Sustainable Development》, 2024, 32(4): 3654–3677.
<https://doi.org/10.1002/sd.2869>
- [40] Samrakshya Karki, Bonaventura Hadikusumo. 利用机器学习识别尼泊尔建筑项目的胜任项目经理。《Construction Innovation》, 2023, 23(1): 1–18.

- <https://doi.org/10.1108/CI-08-2020-0139>
[41] Muhammad Irfan, Raja Abubakar Khalid, Syeed Sami Ul Haq Kaka Khel, Ahsen Maqsoom, Imran Khan Sherani. 工作生活平衡对项目绩效的影响：组织支持与工作倦怠的作用。《Engineering, Construction and Architectural Management》，2023, 30(1): 154–171. <https://doi.org/10.1108/ECAM-04-2021-0316>
- [42] Jennjou Chen, Tsui-Fang Lin. 性别构成与团队绩效：随机实验的证据。《Applied Economics Letters》，2025, 32(15): 2121–2125. <https://doi.org/10.1080/13504851.2024.2332545>
- [43] Hong Min Zhang, Heap-Yih Chong, Yu Zeng, Wei Zhang. 利益相关者管理在BIM实施与项目绩效关系中的有效中介作用。《Engineering, Construction and Architectural Management》，2023, 30(6): 2503–2522. <https://doi.org/10.1108/ECAM-04-2020-0225>
- [44] Ram Shankar Uraon, Anshu Chauhan, Rashmi Bharati, Kritika Sahu. 敏捷工作实践是否通过项目承诺影响团队绩效？信息技术行业的证据。《International Journal of Productivity and Performance Management》，2024, 73(4): 1212–1234. <https://doi.org/10.1108/IJPPM-03-2023-0114>
- [45] Taghi Javdani Gandomani, Zeinab Tavakoli, Hazura Zulzalil, Hadi Khosravi Farsani. 敏捷软件团队中项目经理的作用：系统性文献综述。《IEEE Access》，2020, 8: 117109–117121. <https://doi.org/10.1109/ACCESS.2020.3004450>
- [46] Ayman Mashali, Emad Elbeltagi, Ibrahim Motawa, Mohamed Elshikh. 大型建筑项目中的利益相关者管理挑战：关键成功因素。《Journal of Engineering, Design and Technology》，2023, 21(2): 358–375. <https://doi.org/10.1108/JEDT-09-2021-0483>
- [47] Tommi Pauna, Jere Lehtinen, Jaakko Kujala, Kirsi Aaltonen. 政府利益相关者参与在工业工程项目可持续性中的作用。《International Journal of Managing Projects in Business》，2023, 16(8): 77–99. <https://doi.org/10.1108/IJMPB-09-2022-0197>
- [48] Gisele Blak Bernat, Eduardo Linhares Qualharini, Marcela Souto Castro, André Baptista Barcaui, Raquel Reis Soares. 虚拟团队中项目管理与项目成功的可持续性：考虑利益相关者参与与知识管理的量化分析。《Sustainability》，2023, 15(12): 9834. <https://doi.org/10.3390/su15129834>
- [49] Najib AL-Fadhali. 利用AMOS-SEM评估利益相关者对建筑项目交付绩效影响的方法。《Engineering, Construction and Architectural Management》，2024, 31(2): 638–661. <https://doi.org/10.1108/ECAM-09-2021-0780>
- [50] John W. Creswell. 关于MMIRA《混合方法未来任务小组报告》的反思。《Journal of Mixed Methods Research》，2016, 10(3): 215–219. <https://doi.org/10.1177/1558689816650298>
- [51] Muhammad Javid Nawaz, Aymen Sajjad, Abdul Haseeb Tahir, Muhammad Adnan, Muhammad Umer, Huaming Song. 面向绿色智慧城市：通过可持续实践、创新氛围与管理支持，实现2050年建筑行业净零碳排放。《Sustainable Cities and Society》，2025, 133: 106878. <https://doi.org/10.1016/j.scs.2025.106878>
- [52] Aqeel Siddiqui, Shakir Iqbal, Muhammad Shaukat, Khawaja Latif. 从指导型领导风格到建筑行业项目成功：团队建设与目标清晰度的中介模型。《International Journal of Organizational Leadership》，2023, 12(2023年第一期特刊): 142–164. <https://doi.org/10.33844/ijol.2023.60377>
- [53] Gwennan Hâf Barton. 《设计与实施混合方法研究（第3版；国际学生版）》——John W. Creswell & Vicki L. Plano Clark著。《The Cognitive Psychology Bulletin》，2020, 1(5): 88–89. <https://doi.org/10.53841/bpscog.2020.1.5.88>
- [54] Shakir Iqbal, Muhammad Nawaz, Sohail Aslam, Arshad Ali, Muhammad Rehman, Sana Rehman. 可持续领导对建筑项目成功的影响：绿色创新与组织学习的中介作用。《International Journal of Organizational Leadership》，2024, 0(0): 610–631. <https://doi.org/10.33844/ijol.2024.60433>
- [55] Ned Kock. PLS-SEM最小样本量估计：旅游与酒店研究应用。《Applying Partial Least Squares in Tourism and Hospitality Research》，2018: 1–16. <https://doi.org/10.1108/978-1-78756-699-620181001>
- [56] Huong Thanh Nguyen, Bonavetura H.W. Hadikusumo. 人力资源相关因素与工程采购施工（EPC）项目成功。《Journal of Financial Management of Property and Construction》，2018, 23(1): 24–39. <https://doi.org/10.1108/JFMPC-05-2016-0023>
- [57] Ronald L. Thompson, H. Jeff Smith, Charalambos L. Iacovou. 报告质量与信息系统项目绩效的关联。《Information & Management》，2007, 44(2): 196–205. <https://doi.org/10.1016/j.im.2006.12.004>
- [58] Jun He, Brian S. Butler, William R. King. 团队认知：软件项目团队的发展与演化。《Journal of Management

Information Systems》, 2007, 24(2): 261–292.

<https://doi.org/10.2753/MIS0742-1222240210>

[59] Gilberto Francisco De Oliveira, Roque Rabechini Jr.

利益相关者管理对项目信任的影响：定量研究。《International Journal of Project Management》, 2019, 37(1): 131–144.

<https://doi.org/10.1016/j.ijproman.2018.11.001>

[60] Christian M. Ringle, Marko Sarstedt, Rebecca

Mitchell, Siegfried P. Gudergan. 人力资源管理研究中的偏最小二乘结构方程模型。《The International Journal of Human Resource Management》, 2020, 31(12): 1617–1643. <https://doi.org/10.1080/09585192.2017.1416655>

[61] D.A. Aga, N. Noorderhaven, B. Vallejo. 转型型领导与项目成功：团队建设的中介作用。《International Journal of Project Management》, 2016, 34(5): 806–818. <https://doi.org/10.1016/j.ijproman.2016.02.012>

[62] David Gefen, Detmar Straub. 使用PLS-Graph进行因子效度实用指南：教程与带注释示例。《Communications of the Association for Information Systems》, 2005, 16: <https://doi.org/10.17705/1CAIS.01605>

[63] Gordon W. Cheung, Helena D. Cooper-Thomas, Rebecca S. Lau, Linda C. Wang. 使用结构方程模型报告可靠性、聚合与区分效度：综述与最佳实践建议。《Asia Pacific Journal of Management》, 2024, 41(2): 745–783. <https://doi.org/10.1007/s10490-023-09871-y>

[64] Jörg Henseler, Christian M. Ringle, Marko Sarstedt. 基于方差的结构方程模型中评估区分效度的新标准。《Journal of the Academy of Marketing Science》, 2015, 43(1): 115–135. <https://doi.org/10.1007/s11747-014-0403-8>

[65] Claes Fornell, David F. Larcker. 评估具有不可观测变量和测量误差的结构方程模型。《Journal of Marketing Research》, 1981, 18(1): 39–50. <https://doi.org/10.1177/002224378101800104>

[66] Joseph F. Hair, Jeffrey J. Risher, Marko Sarstedt, Christian M. Ringle. 何时使用及如何报告PLS-SEM结果。《European Business Review》, 2019, 31(1): 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>

[67] Marzena Podgórska, Magdalena Pichlak. 项目经理领导胜任力分析：项目成功关系——波兰项目领导者的胜任力是什么？《International Journal of Managing Projects in Business》, 2019, 12(4): 869–887. <https://doi.org/10.1108/IJMPB-08-2018-0149>

[68] Maryam Elmezain, Wan Hamidon Wan Baduruzzaman, Muhamad Azry Khoiry. 项目经理技能与年龄对项目成功的影响。《Brazilian Journal of Operations & Production Management》, 2021, 18(4): 1–16.

<https://doi.org/10.14488/BJOPM.2021.017>

[69] Paola Ochoa Pacheco, David Coello-Montecel, Michelle Tello, Virginia Lasio, Alfredo Armijos. 项目经理胜任力如何影响项目成功？系统性文献综述。《PLOS ONE》, 2023, 18(12): e0295417.

<https://doi.org/10.1371/journal.pone.0295417>

[70] Riaz Ahmed, Simon P. Philbin, Osman Sadiq Paracha. 任务导向、关系导向与创新导向领导胜任力对巴基斯坦项目成功的影响研究：多维高级管理支持的调节模型。《Engineering Management Journal》, 2024, 36(1): 42–65. <https://doi.org/10.1080/10429247.2023.2186681>

[71] Madison H. Munro, Ross J. Gore, Christopher J. Lynch, Yvette D. Hastings, Ann Marie Reinhold. 使用计算方法提升风险与危机沟通：系统性文献综述。《Risk Analysis》, 2025, 45(7): 1683–1697. <https://doi.org/10.1111/risa.17690>

[72] Ernest Kissi, Kofi Agyekum, Theophilus Adjei-Kumi, Debrah Caleb, Ekow Donkor Micheal. 宗教因素对发展中国家绩效因素的影响探索：以加纳建筑行业为例。《International Journal of Productivity and Performance Management》, 2021, 70(7): 1889–1906. <https://doi.org/10.1108/IJPPM-11-2019-0546>

[73] Shazia Nauman, Sabeen Hussain Bhatti, Hassan Imam, Mohammad Saud Khan. 仆人式领导如何通过协作文化与知识共享驱动项目团队绩效。《Project Management Journal》, 2022, 53(1): 17–32. <https://doi.org/10.1177/87569728211037777>

[74] Hanna Lee. 绿色双元性与环境绩效：CEO关注利益相关者作为动态能力微基础的作用。《Journal of Business & Industrial Marketing》, 2025, 40(12): 2225–2244. <https://doi.org/10.1108/JBIM-01-2024-0018>

[75] Andrew Ebekoziem, Clinton Ohis Aigbavboa, Mantoa Ramotshela. 采用定性方法研究建筑项目中的利益相关者参与。《Benchmarking: An International Journal》, 2024, 31(3): 866–883. <https://doi.org/10.1108/BIJ-11-2021-0663>

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