International Journal of Business and Management Sciences **E ISSN**: 2708 – 4337 **P ISSN:** 2708 – 4329
Available online at http://www.ijbms.org
International Journal of Business and Management Sciences
Volume 05 (4), 2024
Received, 01 August, 2024, Accepted, 11 November, 2024, Online, 12 November, 2024.

The Role of Project Manager's Competency and Affective Commitment in Project Success: The Mediating Effect of Knowledge Management

[1]*Muhammad Waseem*, [2]*Tahir Saeed*, [3]*Shahid Iqbal*

ABSTRACT

This study investigates the influence of project manager's competency (PCM) and affective commitment (AC) on project success (PS), with knowledge management (KM) serving as a mediating variable, specifically within the telecommunications sector. In the context of complex, large-scale projects within a competitive and dynamic telecommunications sector, strong leadership, team dedication, and knowledge dissemination are essential for achieving successful project results. The study employed structural equation modeling (SEM) to evaluate data for hypothesis testing. The findings indicate that project manager skill and affective commitment exert significant positive influences on project success. Furthermore, knowledge management was identified as a significant mediator in the link between project manager's competency and project success, as well as in the association between affective commitment and project success. The findings indicate that telecom vendors can improve project success by investing in managerial skill development, promoting affective commitment, and executing effective knowledge management procedures. The research, contextualized by Social Exchange Theory (SET), emphasizes that reciprocal exchanges of knowledge and commitment among teams can enhance collective effectiveness in project management. The research addresses a significant deficiency in the literature by examining these interrelated elements within the telecommunications industry and offers practical recommendations for enhancing project success.

Keywords:
Project Manager's Competency, Affective Commitment, Project Success, Knowledge Management, Social Exchange Theory.

INTRODUCTION

In the rapidly advancing telecommunications sector, where innovation and efficiency are crucial, project success increasingly depends on the skills of project managers and the emotional dedication of team members. Telecom vendors, which supply essential infrastructure and services for network operations, frequently oversee intricate and extensive

[1] *Ph.D. Scholar, Management Studies Department, Bahria Business School, Bahria University, Islamabad. Email: showgran@yahoo.com (Corresponding Author)*
[2] *Ph.D. Scholar, Management Studies Department, Bahria Business School, Bahria University, Islamabad., Email: tahirsaeed445@yahoo.com*
[3] *Senior Associate Professor, Management Studies Department, Bahria Business School, Bahria University, Islamabad. Email: siqbal.buic@bahria.edu.pk*

projects. These projects require both technical proficiency and strong leadership, as well as team cohesion, to guarantee timely completion and alignment with customer objectives. In this setting, the significance of the project manager's competency and the affective commitment of the project team is paramount (Siddiqui et al., 2024). The capacity to manage knowledge efficiently within teams is crucial for informed decision-making, promoting innovation, and guaranteeing project success. Telecom vendors, confronted with escalating rivalry and client expectations, can substantially improve performance in this high-stakes business by comprehending the aspects that affect project success (Siddiqui et al., 2024).

The research aims to elucidate the interplay of project manager's competency and affective commitment on project success, mediated by knowledge management within the telecommunications industry. Despite extensive study on individual characteristics affecting project success, there is a deficiency of comprehensive studies examining the interplay of managerial abilities, team dedication, and knowledge management in influencing project success among telecom vendors. This study seeks to address this gap by analyzing these correlations through structural equation modeling to offer insights that may assist telecom vendors in enhancing their project success.

Despite the crucial role of project managers and the necessity for dedicated teams in the telecommunications sector, numerous projects fail to achieve their objectives due to insufficient leadership and ineffective knowledge management procedures (Jinasena et al., 2023). Telecom vendors are especially susceptible to project failures due to their operation in a rapidly changing environment characterized by ever increasing technologies and client expectations. Although current literature emphasizes the significance of managerial competency and affective commitment in project management, there is insufficient comprehension of how these elements interact with knowledge management (KM) to affect project success (Ng, 2023). The mediating role of knowledge management in the relationship among project manager competency, affective commitment, and project success within the telecommunications sector is inadequately examined.

LITERATURE REVIEW

Project Success (PS)

The notion of project success has been thoroughly analyzed in academic literature, with scholars highlighting its complex and multifaceted nature. The success of a project is generally recognized as not being solely determined by the triple constraint criterion, sometimes referred to as the iron triangle. Shenhar et al. (2002) noted that the conventional

approach to evaluating project performance relies on the triple constraint framework, encompassing scope, time, and cost. Researchers have explored other methodologies, including assessing project success by metrics such as quality, cost, and time (Frefer et al., 2018). Additional components have been identified as critical for achieving project success, including consumer acceptability, stakeholder satisfaction, organizational performance, commercialization, and potential opportunities (Shaukat et al., 2022).

Timely and budget-compliant project execution is essential; however, modern success also hinges on the project's alignment with stakeholder expectations, organizational strategy, and its ability to create long-term value (Naji et al., 2023). Modern projects are expected to be flexible, incorporating feedback systems and iterative approaches that enable adjustments in dynamic environments (Naji et al., 2023). Furthermore, factors such as innovation, social impact, and environmental sustainability have become essential indicators of a project's success, reflecting the evolving expectations of businesses and society (Naji et al., 2023).

Project Manager's Competency (PCM) and Project Success

Goleman et al. (2013) defined competences as the application of emotional intelligence in practical contexts; in other words, these are the acquired competencies based on emotional intelligence that lead to excellence and efficacy. Obradovic et al. (2013) conducted a study on the interrelationships of emotional intelligence and the competencies of project managers. His research sought to identify the competences related to the position and the enhanced efficacy of project managers. The researcher gathered information on employment positions executed by 74 construction project managers via a spectrum of data collection methods. Ghorbani (2023), proposed arguments that emphasized the characteristics of projects, particularly the actions of project managers in areas such as communication, collaboration, fostering interpersonal relationships, vigilance, and administration disputes. To substantiate this assertion, this work was undertaken empirically by Clarke (2010), who amalgamated these skills associated with the behavioral indicators in the realm of project management. Clarke (2010) selected objects from the project management competency framework by PMI and categorized 24 project managers' behaviors into four areas of managerial skill, specifically communication and collaboration, vigilance and dispute resolution.

Researchers Ekrot et al. (2016) found a positive correlation between project management proficiency retention (PMCR) and the average project success of the organization. They additionally revealed that project management competency retention is achieved by formal

developmental perspectives in project management as a profession, career, or credentialing opportunities, as well as instituting formal learning systems (Ekrot et al., 2016).

The competencies of managers are of paramount importance (Ghorbani, 2023). In the face of critical project modifications, these competencies are essential for effective project management. According to Siddiqui et al. (2024), the project manager's competency serves as a supplement to organizational competencies. However, it should not be used as a replacement for organizational competencies. Therefore, the combination of project managers' skills and organizational competencies plays a crucial role in improving the execution of project success (Siddiqui et al., 2024). Certain knowledge, skills, and abilities have arisen as particularly pertinent to the achievement of all projects, irrespective of their magnitude or intricacy; these encompass involvement, documentation, and implementation (Siddiqui et al., 2024). In conclusion, we articulate the subsequent hypothesis:

H1: *Project manager's competency has a positive impact on project success.*

Affective Commitment (AC) and Project Success

Affective Commitment (AC) signifies the emotional commitment and identification an individual experiences towards a specific organization or endeavor (Chernyak-Hai et al., 2024). Affective commitment in project management denotes the degree of emotional investment team members possess towards the project's goals and objectives (Cao et al., 2020). When individuals are emotionally committed to a project, they are more inclined to demonstrate proactive actions, including exerting additional effort, sustaining motivation during difficulties, and cooperating efficiently with fellow team members (Cao et al., 2020). This emotional connection fosters a sense of ownership and accountability for the project's success, as team members are motivated by a profound personal investment rather than merely completing their assigned tasks (Cao et al., 2020).

The influence of affective commitment on project success is substantial, as emotionally invested team members foster a positive project culture (Cao et al., 2020). Such individuals are more inclined to disseminate knowledge, propose innovative solutions, and endure challenges, all of which are essential for attaining project milestones. Affective commitment fosters improved communication, trust, and coherence among team members, hence increasing collaboration and the overall project atmosphere (Cao et al., 2020). This emotional commitment frequently results in enhanced productivity, superior job quality, and greater adaptability, ultimately affecting the project's capacity to achieve its objectives regarding scope, time, and money (Cao et al., 2020). Consequently, cultivating affective commitment

among team members can be a crucial determinant of project success. According to the above a rationale, the second hypothesis of the study is as follows:

H2: *Affective commitment has a positive impact on project success.*

The mediating role of knowledge management between project manager's competency and project success

Knowledge Management (KM) pertains to the systematic capture, organization, dissemination, and utilization of knowledge within an organization or project (Farooq, 2024). It entails establishing processes and policies that guarantee the timely accessibility of valuable information, insights, and expertise to those who require them. In project management, knowledge management improves decision-making, problem-solving, and innovation by enabling team members to utilize both explicit information (documents, data) and tacit knowledge (personal experience, expertise) (Farooq, 2024). Effective knowledge management mitigates redundancy, safeguards against knowledge attrition, and fosters cooperation, assuring the application of lessons learned and best practices across the project lifetime (Farooq, 2024). Ultimately, knowledge management enhances efficiency and increases the probability of project success by promoting the dissemination of information and ensuring that knowledge is a collective asset rather than confined inside individuals or departments (Farooq, 2024).

Knowledge Management (KM) serves a crucial mediating function in the correlation between project manager competency and project success by facilitating the efficient exchange, retention, and application of knowledge within the project team (Alghail et al., 2024). An adept project manager holds the ability to lead teams, make strategic decisions, and mitigate project risks; nevertheless, the true efficacy of these competencies is achieved through good knowledge management (Alghail et al., 2024). A skilful project manager fosters an environment conducive to the free exchange of knowledge, promoting the sharing of insights, experiences, and best practices among team members (Alghail et al., 2024). This consequently results in enhanced decision-making, innovation, and problem-solving—essential elements of project success. In the absence of good knowledge management, even the most proficient project manager's abilities may fail to yield ideal results, as critical information may be misused or lost (Alghail et al., 2024).

Within the framework of Social interchange Theory (SET), knowledge management serves as a conduit for the interchange of intellectual resources (Ahmad et al., 2023). An adept project manager cultivates trust and collaboration among team members, promoting mutual

knowledge exchange. Team members are more inclined to participate in these interactions when they believe their efforts will be appreciated and reciprocated (Ahmad et al., 2023). This mutual exchange of knowledge increases project performance by augmenting team cohesion, boosting innovation, and minimizing errors. The project manager's responsibility in fostering a knowledge-sharing culture predicated on mutual benefit corresponds with the tenets of Social Exchange Theory, as the project manager's expertise and capacity to manage knowledge enable exchanges that enhance project success (Ahmad et al., 2023). Consequently, knowledge management serves as the conduit via which a project manager's competencies are maximally utilized, leading to enhanced project results. The aforementioned literature review posits the third hypothesis of the study as follows:

H3: Knowledge management mediates the relationship between project manager's competency and project success.

The mediating role of knowledge management between affective commitment and project success

Knowledge Management (KM) serves as a vital intermediary between affective commitment (AC) and project success by converting the emotional investment and dedication of team members into concrete project results through the dissemination and use of knowledge (Alghail et al., 2024). Team members exhibiting a high degree of affective commitment are more inclined to participate in actions that enhance the project's success, including the dissemination of valuable insights, experiences, and skills to their peers (Ng, 2023). For this emotional commitment to significantly influence project outcomes, it must be directed through proficient knowledge management procedures. Knowledge management guarantees that the insights provided by dedicated team members are documented, structured, and utilized to improve decision-making, foster creativity, and elevate overall project performance, hence resulting in enhanced success (Ng, 2023).

Within the framework of Social Exchange Theory (SET), affective commitment cultivates reciprocity and trust among team members, hence promoting participation in knowledge-sharing endeavors (Ahmad et al., 2023). SET posits that individuals are more inclined to offer their expertise when they possess an emotional connection to the project and perceive that their efforts will be appreciated and repaid. This mutual flow of knowledge fortifies collaboration and elevates the team's collective intellect, hence increasing the likelihood of project success (Ahmad et al., 2023). As a mediator, KM guarantees the successful utilization of information derived from reciprocal exchanges, converting individuals' emotional

commitment into concrete insights and practices that directly enhance project success (Ahmad et al., 2023). The preceding literature evaluation articulates the study's fourth hypothesis as follows:

H4: *Knowledge management mediates the relationship between affective commitment and project success.*

The suggested theoretical framework encompasses multiple sub-hypotheses alongside its principal hypotheses, outlined as follows:

H5: *Project manager's competency has a positive impact on knowledge management.*

H6: *Affective commitment has a positive impact on knowledge management.*

H7: *Knowledge management has a positive impact on project success.*

Figure 1 depicts the theoretical framework of the study.

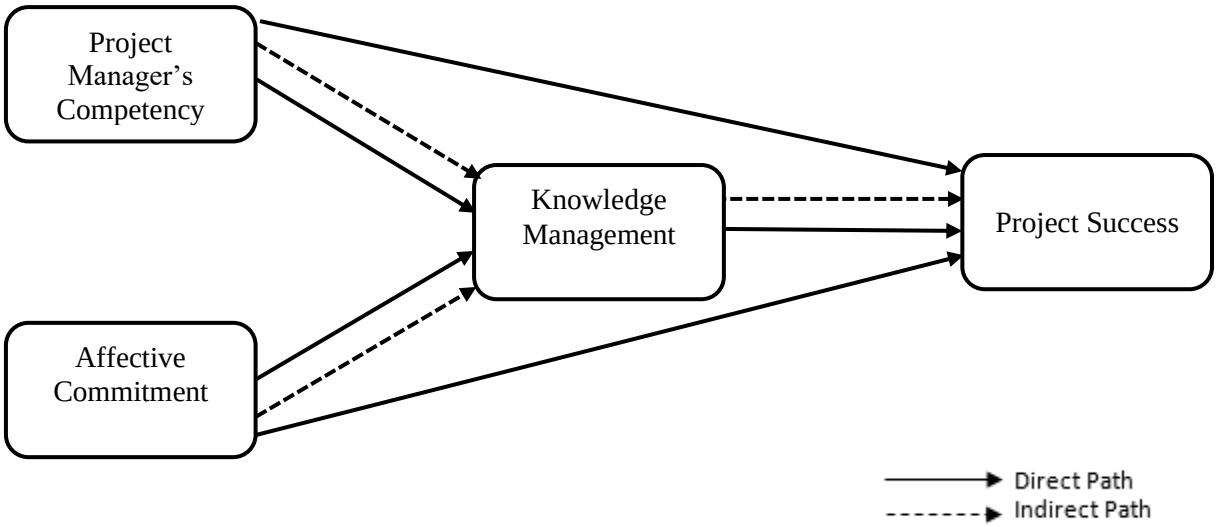

Figure 1: Theoretical Framework

Source: Author's own work

METHODOLOGY

The model is rooted in the Social Exchange Theory (SET), a sociological and psychological concept that explains social behavior through the lens of reciprocal exchanges between individuals or groups (Ahmad et al., 2023). It suggests that relationships are formed and maintained when the parties involved perceive that the benefits of their interactions outweigh the costs (Blau, 1964). In essence, SET operates on the principle of reciprocity, where individuals engage in social exchanges—whether emotional, informational, or material—based on expectations of mutual benefit (Ahmad et al., 2023). People are more likely to engage in behaviors that they believe will be rewarded, and they withdraw from interactions that seem costly or unrewarding. SET is widely used to understand various organizational

dynamics, such as trust, cooperation, and commitment, where individuals are motivated by the rewards they anticipate receiving from their contributions (Ahmad et al., 2023).

Social Exchange Theory (SET) offers a valuable framework for examining the interconnections among project manager competency, affective commitment, knowledge management, and project success. Social Exchange Theory asserts that human connections are established and sustained by reciprocal trades, where individuals participate in relationships when they believe the advantages surpass the costs (Li et al., 2024). In project management, these interactions may manifest as shared knowledge, support, trust, and emotional investment, all of which enhance the project's overall success (Li et al., 2024).

Data and methods

Using a deductive approach (Joslin & Müller, 2016; Ul-Musawir et al., 2017), this study used a quantitative method to look at the proposed relationship between the suggested model and the well-known technique for cross-sectional analysis in project management.

The research was conducted within Pakistan's telecommunications sector, primarily focusing on telecom vendors. Given the significant influence of Pakistan's telecommunications sector on GDP, it was selected as a representative sample to investigate the effects of project manager's competency and affective commitment on project success, with knowledge management serving as a mediating variable. The research employed purposive sampling, drawing on previous empirical studies carried out in similar contexts (Campbell et al., 2020). The survey instrument was distributed to participants through the authors' social network and personal contacts, utilizing both physical and electronic methods on the Google Forms platform.

Sample and Procedure

The sample size substantially affects the research analysis. A power analysis was performed using a cross-sectional design to ascertain the minimal sample size required for obtaining statistically significant results. The survey contained 475 participants and featured statistical metrics like a p-value of 0.05, a statistical power of 0.95, and an effect size of 0.30. Based on these parameters, the minimum sample size for statistical analysis is 213 respondents (Cohen, 2016).

Table 1 presents the demographic characteristics of the study.

Measures	Items	Frequency	%age
Gender	Male	138	64.79%
	Female	75	35.21%
Age (years)	25 – 30	43	20.19%
	31 – 35	117	54.93%
	36 and above	53	24.88%
Education	MS/M. Phil Degree	67	31.46%
	Master's Degree	113	53.05%
	Certification holder	33	15.49%
Work Experience	Less than 5 years	65	30.52%
	5 – 7 years	79	37.09%
	7 years above	69	32.39%

Measures

This study derived its measurements from prior research in the relevant field. Participants were instructed to answer questions related to their specific initiatives. The survey utilized a 5-point Likert scale, where 1 represented strongly disagree and 5 denoted strongly agree.

Project Success (PS): A six-item scale was adopted from Latif et al. (2020). Cronbach's alpha is 0.856, signifying substantial reliability of the scale.

Project Manager's Competency (PCM)): PCM was measured by adopting the scale of Clarke (2010), which consists of 20 items. The Cronbach's alpha is 0.828, demonstrating the high reliability of the scale. Due to less than 0.5 factor loading, PCM2 was removed from the analysis.

Affective Commitment (AC): Affective commitment was derived from the three-factor model established by Meyer and Allen (1997). The measurement is based on Meyer and Allen (1991) organizational commitment scale. The scale was adopted and comprises 8 items. The Cronbach's alpha value of the scale is 0.948, signifying the scale is highly reliable. .

Knowledge Management (KM): Knowledge management was measured by adopting the 9 item scale of Huang and Li (2009). The scale has Cronbach's alpha value of 0.919, demonstrating its high reliability.

ANALYSIS

Table 2: Descriptive Statistics

	Mean	SD	Data Normality		Collinearity Statistics	
			Skewness	Kurtosis	Tolerance	VIF
Project Success	2.836	0.773	0.340	2.033	-	-
Project Manager's Competency	2.953	0.620	0.030	0.409	0.829	1.206
Affective Commitment	3.140	0.930	-0.309	0.136	0.860	1.163
Knowledge Management	3.094	0.825	0.027	-0.091	0.939	1.066

Dependent variable: Project Success

Table 2 displays the mean, standard deviation (SD), skewness, kurtosis, and multicollinearity metrics of the examined constructs. Table 2 displays the ratings allocated by participants across all categories on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). The mean and standard deviation measurements provide crucial insights into the average rating and the extent of variation in the replies, respectively. The standard deviation numbers signify the statistical variability of answers in relation to the mean.

The skewness and kurtosis were assessed to verify the normality of the data, as per Kline (2023). Data is considered to conform to a normal distribution if the skewness value is within ±2 and the kurtosis value is within ±7, as specified by Hair Jr et al. (2014) and Kline (2023). The data conforms to a normal distribution, as seen by the skewness and kurtosis values shown in Table 2. The variance inflation factor (VIF) and tolerance were utilized to evaluate multicollinearity. Daoud (2017) defines multicollinearity as the presence of correlation among variables. Daoud (2017) states that a variance inflation factor (VIF) of 1 indicates no correlation, a VIF ranging from 1 to 5 reflects moderate correlation, and a VIF beyond 5 implies a substantial correlation. A tolerance value under 0.1 indicates collinearity. The tolerance and VIF values presented in Table 2 demonstrate the lack of multicollinearity within the data.

Data Analysis

The assessment of the component structure, reliability, and validity of the construct is performed. The research was performed utilizing SPSS version 27. The hypothesis and its

indirect effect were examined via mediation analysis employing Process Macro Model 4, as established by Preacher and Hayes (2008).

Reliability and validity analysis

Following the preliminary phase of the inquiry, the latent variables were assessed for their composite reliability (CR), convergent validity, and discriminant validity. According to the criteria set forth by Fornell and Larcker (1981), the composite reliability (CR) values for all latent variables above 0.90, signifying no issues with internal consistency. The assessment of convergent validity was conducted by examining the average variance extracted (AVE) values, considered a critical criterion. Sarstedt et al. (2016) determined a threshold value of 0.5 for average variance extracted (AVE). All constructs in the present study had average variance extracted (AVE) values beyond 0.5, signifying no substantial concerns with convergent validity. Discriminant validity was established by conforming to the criteria outlined by Fornell and Larcker (1981). According to the previously stated assumptions, the square root of the mean of all variables must exceed the correlation among all variables. The metrics displayed in Table 3 comprised factor loading, composite reliability (CR), average variance extracted (AVE), and the square root of AVE (SQRT of AVE). The discriminant validity of the components was evaluated in Table 4.

Table 1: Factor loading, CR, AVE, and SQRT of AVE

Construct	Items	Factor Loadings	CR	AVE	SQRT of AVE
Project Success			0.95	0.77	0.877
	PS1	0.874			
	PS2	0.889			
	PS3	0.878			
	PS4	0.879			
	PS5	0.885			
	PS6	0.857			
			0.96	0.59	0.768
Project Manager's Competency (PCM)	PCM1	0.747			
	PCM3	0.762			
	PCM4	0.749			
	PCM5	0.753			
	PCM6	0.892			
	PCM7	0.844			
	PCM8	0.856			
	PCM9	0.909			
	PCM10	0.763			
	PCM11	0.556			
	PCM12	0.781			
	PCM13	0.781			

Construct	Items	Factor Loadings	CR	AVE	SQRT of AVE
	PCM14	0.588			
	PCM15	0.720			
	PCM16	0.601			
	PCM17	0.894			
	PCM18	0.622			
	PCM19	0.868			
	PCM20	0.849			
Affective Commitment			0.96	0.75	0.866
	AC1	0.868			
	AC2	0.806			
	AC3	0.922			
	AC4	0.681			
	AC5	0.931			
	AC6	0.888			
	AC7	0.916			
	AC8	0.890			
Knowledge Management			0.95	0.69	0.829
	KM1	0.918			
	KM2	0.893			
	KM3	0.815			
	KM4	0.840			
	KM5	0.888			
	KM6	0.793			
	KM7	0.910			
	KM8	0.665			
	KM9	0.692			

Table 4 shows Correlation matrix with SQRT of AVE values.

Constructs	PS	PCM	AC	KM
PS	*0.877*			
PCM	0.499**	*0.768*		
AC	0.329**	0.369**	*0.866*	
KM	0.266**	0.239**	0.149*	*0.829*

Note(s): PS = Project Success, PCM = Project Manager's Competency, AC = Affective Commitment, KM = Knowledge Management, **.p < 0.01, *.p < 0.05

Upon careful analysis of the statistical data in Table 4, it is apparent that the bold and italicized figures are arranged diagonally to represent the square root of the average variance extracted (AVE), indicating that all values in the columns are less than the square root of AVE, thus suggesting the discriminant validity is held.

Structural Model testing

A comprehensive assessment of the reliability and validity of the constructs in the measurement model was performed in the initial phase. The second stage entailed assessing the predictive accuracy and interconnections among the variables in the structural model posited by Hair Jr et al. (2014). Consult Figure 2 for a visual depiction of the path diagram.

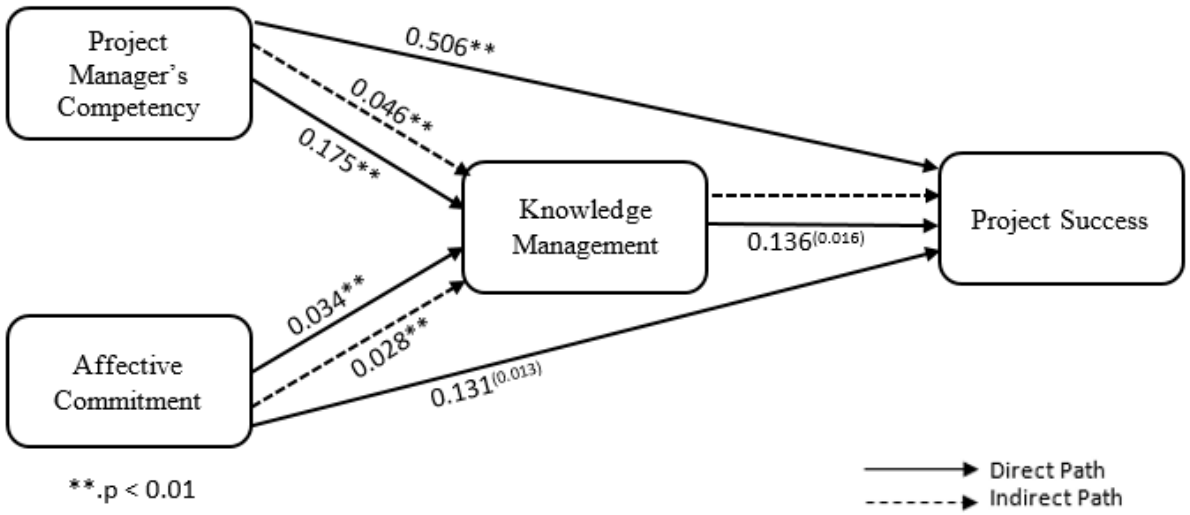

Figure 2: Path Diagram

The standardized coefficient of **H1** (β = 0.506, P < 0.01) demonstrates a statistically significant and positive correlation between project manager's competence and project success in the structural equation model. As a result, the principal hypothesis (**H1**) of the study has been confirmed. The **H2** was correlated with affective commitment and project success. The results demonstrate a positive and substantial connection, as evidenced by (β = 0.131, P = 0.013). Consequently, the second hypothesis (**H2**) of the study is affirmed. The sub-hypotheses (**H5**, **H6**, and **H7**) are directly relevant to the knowledge management and project success analyzed in this study. The study's results confirm the **H5** hypothesis (β = 0.175, P < 0.01), demonstrating a direct relationship between project manager's competency and knowledge management. The research demonstrates a substantial and positive association between affective commitment and knowledge management (β = 0.034, P < 0.01), hence confirming the **H6** hypothesis. The results of the study's **H7** demonstrate a robust and positive correlation between knowledge management and project success (β = 0.136, P = 0.016), hence validating hypothesis **H7**.

The research established hypotheses **H3** and **H4** to align with the indirect effect, particularly mediation. The researcher adhered to the methodology outlined by Preacher et al. (2007) and conducted a bootstrap analysis. Wang et al. (2017) demonstrated that the bootstrap method is

an effective technique for precisely calculating confidence intervals (CI) to evaluate the indirect effect. The researcher employed a dataset of 5000 bootstrap samples to compute 95% bias-corrected confidence intervals, so assuring the trustworthiness of the estimations. Table 5 displays the findings of the mediation research for additional examination and analysis.

Table 2: Bootstrap results for Indirect effect Process Macro Model 4

	Total Effect	T	Sig.	Direct Effect	T	Sig.	Path	Indirect Effect	SE	LLCI 95%	ULCI 95%
H3: PCM → PS	0.621	8.364	0.000	0.575	7.614	0.000	**PCM → KM → PS**	0.046	0.023	0.010	0.099
H4: AC → PS	0.274	5.064	0.000	0.246	4.621	0.000	**AC → KM→ PS**	0.028	0.014	0.005	0.056

Note (s): PS = Project Success, PCM = Project Manager's Competency, AC = Affective Commitment, KM = Knowledge Management, SE = Standard Error, LL = Lower Limit, UL = Upper Limit, CI = Confidence-Interval, Bootstrap Samples = 5000

The bootstrap analysis results reveal that **H3** is significant, as evidenced by the mediating effect of knowledge management on the relationship between project manager's competency and project success (β = 0.046, SE = 0.023, 95% CI [0.010, 0.099]). The bootstrap analysis of **H4** indicates a significant indirect effect of knowledge management on the association between affective commitment and project success (β = 0.028, SE = 0.014, 95% CI [0.005, 0.056]). There is a partial mediation as demonstrated by a substantial direct and indirect effect (Baron & Kenny, 1986; Zhao et al., 2010).

DISCUSSION

The study's results offer substantial insights into the connections among project manager competency, affective commitment, knowledge management, and project success, affirming the proposed correlations and substantiating the mediating function of knowledge management. The findings of **H1** demonstrate a robust, statistically significant, and affirmative correlation between project manager's competency and project success. The results are aligned with previous findings of Ghorbani (2023). This affirms the essential importance of a project manager's talents, leadership, and decision-making in ensuring project success (Ghorbani, 2023). Skilled project managers, by their capacity to navigate intricate scenarios, communicate proficiently, and lead teams, exert a significant and direct impact on the attainment of project goals (Ghorbani, 2023). This corresponds with prior

research that emphasizes the critical importance of managerial ability in attaining successful project results (Ghorbani, 2023).

The analysis corroborates **H2**, indicating a substantial positive connection between affective commitment and project success. The influence of affective commitment, albeit lesser than that of project management ability, remains significant (Cao et al., 2020). This indicates that when team members are emotionally invested in the project, their involvement and motivation enhance its success. The strong correlation between affective commitment and project success underscores the notion that cultivating a sense of connection among team members to the project improves overall performance (Ng, 2023).

The research further examines the function of knowledge management (KM), validating the direct correlations specified in **H5**, **H6**, and **H7**. **H5** indicates that the competency of project managers is significantly correlated with knowledge management, implying that proficient managers not only lead efficiently but also promote the exchange, retention, and utilization of knowledge within the team (Ng, 2023). **H6** demonstrates a positive correlation between affective commitment and knowledge management, suggesting that emotionally invested team members are more predisposed to share knowledge, hence enhancing the project's collective knowledge base (Ng, 2023). **H7** establishes that knowledge management substantially impacts project success, highlighting the necessity of effective knowledge management to improve decision-making, innovation, and overall project performance (Ng, 2023).

The mediation study further substantiates the importance of knowledge management as a mediator in the interactions among project manager competency, affective commitment, and project success. The bootstrap analysis for **H3** demonstrates that knowledge management substantially mediates the association between project manager competency and project success (Baron & Kenny, 1986). This indicates that although project manager competency directly impacts success, its effect is enhanced when it promotes effective knowledge management techniques (Ng, 2023). **H4** indicates that knowledge management substantially influences the association between affective commitment and project success (Ng, 2023). The partial mediation identified in both instances suggests that knowledge management is a crucial method by which managerial competency and emotional commitment affect project success, although both variables also maintain a direct effect on the outcome (Baron & Kenny, 1986).

These findings correspond with Social Exchange Theory (SET), wherein reciprocal exchanges of knowledge and commitment between team members and project managers result in improved project outcomes (Ahmad et al., 2023). Proficient project managers and emotionally invested team members are more inclined to participate in knowledge exchange, hence enhancing project success. The study emphasizes the vital significance of human and intellectual resources in project management, illustrating the interplay between project manager competency, affective commitment, and knowledge management in determining project success (Farooq, 2024; Siddiqui et al., 2024).

CONCLUSION

This study underscores the essential influence of project manager's competency and affective commitment on project success, especially in knowledge-intensive sectors like Telecom industry. The results indicate that both management skill and the emotional commitment of team members directly influence project success, with their effects considerably amplified by good knowledge management. Knowledge management functions as a crucial intermediary, facilitating the seamless flow of information within the team, hence enhancing decision-making, innovation, and problem-solving, which are vital for project success in dynamic sectors such as information technology. The research highlights the necessity of cultivating leadership abilities and emotional involvement among team members while executing robust knowledge management practices to optimize project results, consistent with the tenets of SET, which posits that reciprocal exchanges of skills, knowledge, and dedication propel collective achievement.

REFERENCES

Ahmad, R., Nawaz, M. R., Ishaq, M. I., Khan, M. M., & Ashraf, H. A. (2023). Social exchange theory: Systematic review and future directions. *Frontiers in psychology*, *13*, 1015921.

Alghail, A., Yao, L., & Abbas, M. (2024). Will knowledge infrastructure capabilities elevate the project management maturity? an empirical study. *VINE Journal of Information and Knowledge Management Systems*, *54*(4), 782-803.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and Social Psychology*, *51*(6), 1173.

Blau, P. M. (1964). Social exchange theory. *Retrieved September*, *3*(2007), 62.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, *25*(8), 652-661.

Cao, J., Liu, C., Zhou, Y., & Duan, K. (2020). Work-to-family conflict, job burnout, and project success among construction professionals: The moderating role of affective commitment. *International journal of environmental research and public health*, *17*(8), 2902.

Chernyak-Hai, L., Bareket-Bojmel, L., & Margalit, M. (2024). A matter of hope: Perceived support, hope, affective commitment, and citizenship behavior in organizations. *European Management Journal*, *42*(4), 576-583.

Clarke, N. (2010). Emotional intelligence and its relationship to transformational leadership and key project manager competences. *Project management journal*, *41*(2), 5-20.

Cohen, J. (2016). A power primer.

Daoud, J. I. (2017). *Multicollinearity and regression analysis.* Conference Series,

Ekrot, B., Kock, A., & Gemünden, H. G. (2016). Retaining project management competence—Antecedents and consequences. *International Journal of Project Management*, *34*(2), 145-157.

Farooq, R. (2024). A review of knowledge management research in the past three decades: a bibliometric analysis. *VINE Journal of Information and Knowledge Management Systems*, *54*(2), 339-378.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

Frefer, A., Mahmoud, M., Haleema, H., & Almamlook, R. (2018). Overview success criteria and critical success factors in project management. *Industrial engineering & management*, *7*(1), 1-6.

Ghorbani, A. (2023). A review of successful construction project managers' competencies and leadership profile. *Journal of Rehabilitation in Civil Engineering*, *11*(1), 76-95.

Goleman, D., Boyatzis, R., & McKee, A. (2013). *Primal leadership, with a new preface by the authors: Unleashing the power of emotional intelligence*. Harvard Business Review Press.

Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European business review*.

Huang, J. W., & Li, Y. H. (2009). The mediating effect of knowledge management on social interaction and innovation performance. *International Journal of Manpower*, *30*(3), 285-301.

Jinasena, D. N., Spanaki, K., Papadopoulos, T., & Balta, M. E. (2023). Success and failure retrospectives of FinTech projects: a case study approach. *Information Systems Frontiers*, *25*(1), 259-274.

Joslin, R., & Müller, R. (2016). The impact of project methodologies on project success in different project environments. *International Journal of Managing Projects in Business*.

Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.

Latif, K. F., Afzal, O., Saqib, A., Sahibzada, U. F., & Alam, W. (2020). Direct and configurational paths of knowledge-oriented leadership, entrepreneurial orientation, and knowledge management processes to project success. *Journal of Intellectual Capital*.

Li, S., Zhou, Q., Huo, B., & Zhao, X. (2024). Environmental uncertainty, relationship commitment, and information sharing: the social exchange theory and transaction cost economics perspectives. *International Journal of Logistics Research and Applications*, *27*(8), 1363-1387.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human resource management review*, *1*(1), 61-89.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Sage.

Naji, K. K., Gunduz, M., & Adalbi, M. (2023). Analysis of critical project success factors—Sustainable management of the fast-track construction industry. *Buildings*, *13*(11), 2890.

Ng, K. Y. N. (2023). Effects of servant leadership, affective commitment, and trust on knowledge sharing tendency in the financial industry. *Knowledge Management Research & Practice*, *21*(6), 1052-1070.

Obradovic, V., Jovanovic, P., Petrovic, D., Mihic, M., & Mitrovic, Z. (2013). Project managers' emotional intelligence–a ticket to success. *Procedia-Social and Behavioral Sciences*, *74*, 274-284.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, *40*(3), 879-891.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate behavioral research*, *42*(1), 185-227.

Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: where the bias lies! *Journal of Business Research*, *69*(10), 3998-4010.

Shaukat, M. B., Latif, K. F., Sajjad, A., & Eweje, G. (2022). Revisiting the relationship between sustainable project management and project success: The moderating role of stakeholder engagement and team building. *Sustainable Development*, *30*(1), 58-75.

Shenhar, A. J., Tishler, A., Dvir, D., Lipovetsky, S., & Lechler, T. (2002). Refining the search for project success factors: a multivariate, typological approach. *R&d Management*, *32*(2), 111-126.

Siddiqui, A. W., Qureshi, B., & Shaukat, M. B. (2024). Project Manager's Competencies as Catalysts for Project Success: The Mediating Role of Functional Manager Involvement and Stakeholder Engagement. *International Journal of Organizational Leadership*, *13*(First Special Issue 2024), 53-78.

Ul-Musawir, A., Serra, C. E. M., Zwikael, O., & Ali, I. (2017). Project governance, benefit management, and project success: Towards a framework for supporting organizational strategy implementation. *International Journal of Project Management*, *35*(8), 1658-1672.

Wang, A.-C., Chiang, J. T.-J., Chou, W.-J., & Cheng, B.-S. (2017). One definition, different manifestations: Investigating ethical leadership in the Chinese context. *Asia Pacific Journal of Management*, *34*, 505-535.

Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, *37*(2), 197-206.