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The Mediating Effect: How Team Performance Absorbs Organizational Resources for Project Success in the Software Engineering Industry

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Abstract. *The rapid growth of Indonesia's IT industry is accompanied by a high rate of project failures, prompting a critical examination of traditional success factors. While organizational culture, top management support, and team competence are widely advocated, their direct impact remains ambiguous. This study examines the intricate relationship between these factors, team performance, and project success within Indonesian software companies. Using a quantitative cross-sectional survey, data were collected from 67 professionals in a Jakarta-based IT company and analyzed with PLS-SEM. The results reveal a pivotal finding: organizational culture and competence do not directly affect project success but exert their influence entirely through the mediating mechanism of team performance. Conversely, the direct and indirect effects of top management support were found to be non-significant. This study uniquely establishes team performance as the critical mediator, challenging linear models and offering a more nuanced understanding of project success pathways. The practical contribution is a strategic reorientation for managers and HR, emphasizing that investments in collaborative team development and a supportive culture are more consequential for achieving project outcomes than relying solely on top-down directives or individual competencies. This research provides a validated framework for enhancing project sustainability in dynamic IT environments.*

Keywords: Organizational *culture; top management support; competence; team performance; project success; information and communication technology.*

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Introduction

The software development industry in Indonesia plays a pivotal role in driving the national digital economy, with growth rates consistently exceeding the national economic average (Google, Temasek, & Bain, 2021). This expansion, driven by substantial investments in digital infrastructure and increasing domestic demand, creates a dynamic environment where the ability to deliver projects successfully is crucial for firms seeking a competitive advantage. Consequently, effective project management has become a critical competency for Indonesian Information and Communication Technology companies navigating these complex market conditions. Within the broader project management discourse, sustainable project management has emerged as a strategic imperative, compelling organizations to integrate environmental, social, and economic dimensions into their core processes (Armenia, 2019).

A substantial body of literature affirms a positive correlation between the adoption of sustainable practices and project success, with benefits encompassing enhanced stakeholder satisfaction and improved strategic control (Carvalho & Rabechini, 2017; Martens & Carvalho, 2016). Project success itself is increasingly defined as a multifaceted construct, measured by the integration of sustainability benchmarks, a shift largely driven by regulatory demands and heightened stakeholder expectations (Goel, Ganesh, Kaur, 2020). This evolution in understanding project outcomes necessitates a theoretical foundation that can account for both internal resources and external relationships.

This research is anchored in two complementary theoretical frameworks: the resource-based view and stakeholder theory. The resource-based view explains how firms gain a competitive advantage by leveraging valuable and rare internal resources, particularly human capital and organizational capabilities (Barney, 2007; extended in Tiwari,et.al, 2024).

Stakeholder theory complements this by emphasizing that project success is also dependent on effectively managing the interests and influences of all pertinent parties, from top management to end-users (Dmytriyev, Freeman, & Hörisch, 2021). Together, these theories provide a robust lens for examining how organizational factors and stakeholder alignments converge to influence project outcomes in Indonesia's software sector.

However, a significant portion of the empirical research on these relationships has been conducted within developed economies (Shaukat et.al, 2022; Larsson & Larsson, 2020). While studies in developing contexts are emerging, a specific gap remains concerning the Indonesian ICT sector, representing a significant population and an evidence gap. Theoretically, existing literature has predominantly focused on direct relationships between factors, such as organizational culture and project success, without sufficiently explaining the underlying mechanisms through which these factors operate (dos Santos, Soares, & Pimenta, 2019). Methodologically, there is a reliance on models that omit critical mediating variables; specifically, the roleof team performance as a conduit between organizational antecedents and project success remains underexplored, creating a substantive theoretical and practical knowledge gap.

Research Objectives

Therefore, this study is designed to address these interconnected gaps through three primary research objectives. The primary objective is to investigate the direct impact of organizational culture, top management support, and team competence on project success within Indonesian software development firms. The second objective is to investigate the mediating role of team performance in the relationships between these organizational factors and project success. The third objective is to explore the contextual influence of sustainable project management practices on success metrics within the Indonesian ICT industry.

This research is expected to make several substantive contributions. Theoretically, it extends the resource-based view and stakeholder theory by introducing and empirically testing team performance as a critical mediating mechanism. This provides a more nuanced understanding of how organizational resources and stakeholder management translate into successful project outcomes, thereby addressing a key theoretical gap. From a practical perspective, the findings will offer managers in Indonesia's ICT sector actionable insights into leveraging their human capital and cultivating effective team dynamics to enhance both sustainability and project performance.

Literature Review

Theoretical Underpinning

The pursuit of project success in the dynamic software development industry necessitates a robust theoretical foundation. This research is anchored in the Resource-Based View (RBV) and Stakeholder Theory, which together provide a compelling framework for analysis. The RBV posits that firms achieve sustainable competitive advantage through valuable, rare, and inimitable internal resources, with human capital and organizational competencies being paramount (Barney, 2007; extended in Tiwari et al, 2024).

Complementing this, Stakeholder Theory contends that organizational success is intrinsically linked to the effective management of relationships with all parties who have a vested interest, emphasizing the importance of addressing their diverse expectations (Dmytriyev, Freeman, & Hörisch, 2021).

These theories collectively inform the study of Sustainable Project Management (SPM), which integrates economic, social, and environmental dimensions into project processes, arguing that long-term viability depends on both internal resource orchestration and external stakeholder alignment (Blak et.al, 2023; Martens & Carvalho, 2016).

Project Success (PS)

Project Success is a multidimensional construct that has evolved beyond traditional metrics. Contemporary scholarship defines it through a multilevel framework that includes not only project management success (adherence to process goals like time, cost, and scope) but also product success (the deliverable's impact and quality) and business success (the achievement of strategic organizational objectives) (Blak, et.al, 2023). This multifaceted perspective is critical, as success is increasingly measured by stakeholder satisfaction and the long-term strategic benefits realized from the project outcome, moving past a narrow focus on the initial "iron triangle" (Ika, L. A., & Pinto, J. K., 2022).

Organizational Culture (OC)

Organizational culture represents the shared values, beliefs, and behavioral norms that shape the functioning of an organization and the behavior of its members (Schein, 1992). From a contemporary perspective, it constitutes the social and psychological environment that influences how work is accomplished and problems are solved (Tsoy & Staples, 2021). A robust organizational culture, particularly one characterized by cooperation and psychological safety, serves as critical infrastructure for effective project execution and risk management (Waseem, et.al, 2025). Research in diverse organizational contexts demonstrates that organizational culture has a significant impact on project success, influencing team coordination and commitment (Jufrizen et al., 2021). Tsoy and Staples (2021) demonstrate that cooperative organizational cultures significantly enhance team performance by fostering psychological safety and open communication channels. Their study of project teams revealed that cultures emphasizing mutual support and knowledge sharing directly improved team coordination and problem-solving capabilities.

Furthermore, studies specifically in project-based organizations confirm that cultural factors directly affect project outcomes and team effectiveness (Waseem, et.al, 2025). Therefore, we hypothesize:

H1: Organizational culture has a significant positive influence on project success.

H4: Organizational culture has a significant positive influence on team performance.

Top Management Support (TMS)

Top management support encompasses the provision of strategic direction, resource allocation, and active sponsorship from senior organizational leaders (Ahmed et al., 2025). It involves committing the necessary authority, financial resources, and political capital to ensure project viability and organizational alignment (Khalil et.al, 2023). This support manifests through visible championing of projects, timely decision-making, and removal of organizational barriers that might impede progress. Empirical investigations across multiple industries consistently identify top management support as a critical success factor for projects (Khazaeni & Khazaeni, 2024). Recent studies in the technology sector further substantiate that executive engagement directly correlates with project performance metrics and stakeholder satisfaction (Khalil et al., 2023). They also established that active executive sponsorship and resource allocation directly enhance team performance by removing organizational barriers and providing necessary authority. Complementing the findings, Ahmed, et.al (2025) revealed that management commitment and trust in project teams correlated strongly with improved team motivation and goal achievement Thus, we propose:

H2: Top management support has a significant positive influence on project success.

H5: Top management support has a significant positive influence on the team performance.

Competence (Co)

Competence refers to the combination of knowledge, skills, abilities, and behaviors that enable effective task performance and problem-solving in professional contexts (Brasier et al., 2023). In project environments, competence extends beyond technical proficiency to include adaptive capabilities, collaborative skills, and domain-specific expertise necessary for navigating complex project requirements (Greilich et al., 2023). This encompasses both individual competencies and team-emergent capabilities that develop through collaborative interaction and shared experience. Research in knowledge-intensive industries demonstrates that competence levels directly affect project outcomes and quality deliverables (Fayomi et.al, 2023). Studies focusing on project teams specifically indicate that collective competence has a significant influence on project success, enhancing problem-solving capacity and implementation effectiveness (Brasier et al., 2023). In their study, they also demonstrated that teams with strong technical competence and adaptive skills consistently outperformed others in complex project environments. Consequently, we hypothesize:

H3: Competence has a significant positive influence on project success.

H6: Competence has a significant positive influence on team performance.

Team Performance (TP)

Team performance constitutes the collective actions, outputs, and outcomes achieved by a group working toward shared objectives (Mabaso & Manuel, 2024). It reflects the synergy and coordinated effort of team members, as manifested through task accomplishment, the quality of deliverables, and the efficiency of collaborative processes (Hang,et.al, 2025). Effective team performance arises from proper coordination, effective communication, and shared mental models that enable groups to surpass individual capabilities. Research indicates that team performance serves as a crucial mechanism through which organizational inputs translate into project outcomes (Hang et al., 2025). Studies examining mediation pathways consistently demonstrate that team performance transmits the effects of various

organizational and human capital factors to project success (Waseem, et.al, 2023). This leads to our mediating hypotheses:

H7: Team performance has a significant positive influence on project success.

H8: Team performance mediates the relationship between organizational culture and project success.

H9: Team performance mediates the relationship between top management support and project success.

H10: Team performance mediates the relationship between competence and project success.

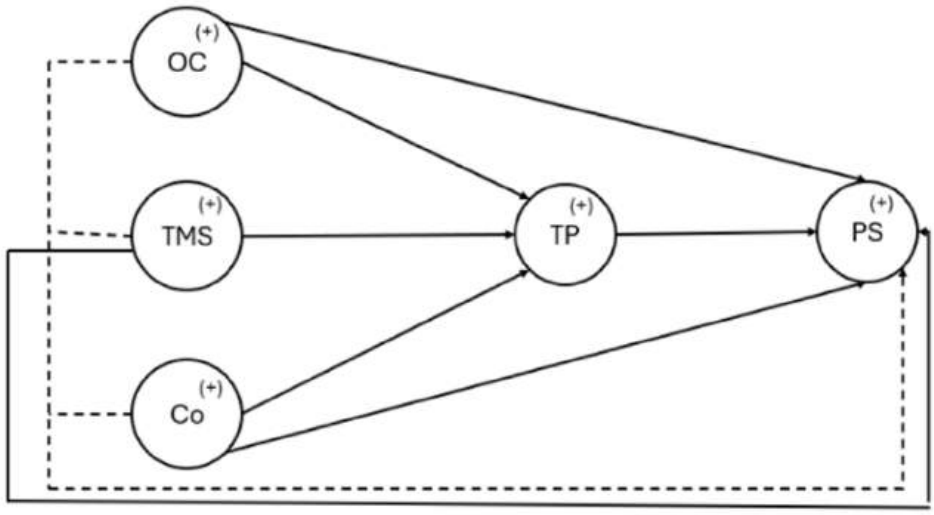

Figure 1.
Research Model

Research Methodology

This study employed a quantitative research design, utilizing a cross-sectional survey methodology, an approach justified by its capacity to systematically examine relationships between predefined variables and test theoretical hypotheses within real-world settings (Hair et al., 2022). A quantitative approach was deemed appropriate because the primary objective of the research was to test hypothesized relationships between latent variables and to examine mediating effects in a theoretically grounded model statistically. Quantitative methods enable researchers to measure constructs objectively, analyze variable relationships, and generalize findings to a broader population (Hair et al., 2022; Creswell, 2022).

The investigation employed a non-probability purposive sampling technique, with respondent criteria of a minimum of 3 months of working experience and involvement in at least one IT project execution (Etikan, Musa & Alkassim, 2016). Using the census, respondents engaged the entire population of 67 individuals (Hair et al., 2022) from Unit X of a Jakarta-based IT firm. Data were collected over two months, from April to May 2024, using a structured questionnaire instrument with five-point Likert scales.

To mitigate potential sampling bias, the study included all eligible members of the development team rather than selecting a subset. Additionally, anonymity and confidentiality were assured to reduce response bias, and clear definitions of all constructs were provided to enhance the accuracy and consistency of responses.

The decision to include internship students was methodologically grounded. From a project management perspective, interns in contemporary software environments are often integrated into agile teams and contribute

directly to project tasks and deliverables, making their lived experience of team dynamics and workflow a valid source of data on project execution (Bartelt., 2020). Furthermore, from a human resources management standpoint, interns represent a crucial cohort for understanding organizational socialization and the practical application of competence; their inclusion provides critical insights into how knowledge and skills are translated into team performance in a real-world setting, thereby enriching the study's contextual validity (Lin C.P., 2024).

Ethical Considerations

The research protocol received formal approval from the Institutional Research Ethics Committee, ensuring adherence to ethical standards. All participants provided informed consent, and confidentiality was rigorously maintained(Lees, 2021). The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software, a method recognized for its suitability in exploring complex relationships in exploratory research contexts.

This study employed established measurement scales to assess the constructs of organizational culture, top management support, competence, team performance, and project success. Items for measuring organizational culture were adapted from dos Santos et al. (2019) and Tsoy & Staples (2021). Top management support was measured using items from Darma et al. (2018) and dos Santos et al. (2019). Competence was assessed using items from Kindarto et al. (2020) and Tsoy & Staples (2021). Team performance was measured using eight items from Kindarto et al. (2020), while project success was measured using five items from dos Santos et al. (2019) and Cruz et.al (2022).

Instrument Validation and Reliability

The robustness of the research instrument was ensured through a rigorous validation process. Following a pilot test for clarity with a data sample of 30 respondents, the primary study data were analyzed using SmartPLS 4.0 to assess the measurement model. Internal consistency was confirmed, with Cronbach's Alpha and Composite Reliability values for all constructs exceeding the 0.70 threshold. Convergent validity was established as the Average Variance Extracted (AVE) for each construct was above 0.50. Furthermore, discriminant validity was verified using the Heterotrait-Monotrait (HTMT) ratio, with all values below the conservative benchmark of 0.90, confirming that the constructs are distinct (Hair et al., 2022; Cheung et al., 2024). These results collectively affirm the instrument's reliability and validity for measuring the study's latent variables.

Results and Discussion

The following demographic data were collected from the respondents: Age, Gender, Education, Employment Status, monthly income, Role, and Work Experience.

Outer Model Test

The initial stage of outer model evaluation involves assessing the reliability and validity of the measurement model (Hair et al., 2022). Cronbach's alpha and composite reliability values indicate acceptable levels of internal consistency for all five constructs, exceeding the recommended threshold of 0.7. Convergent validity was established.

Through factor loadings and average variance extracted (AVE) analysis (Cooper & Schindler, 2014). As demonstrated in Table 2, all factor loadings surpass the suggested value of 0.7, and AVE values exceed the recommended threshold of 0.5 (Hair et al., 2022). These findings collectively support the reliability and validity of the measurement model.

Table 1.
Respondent Demographic

Criteria	*Categories*	*Freq*	*rcent (%)*
Gender	Female	29	*43.3%*
	Male	38	*56.7%*
Age	20 – 30 Years Old	62	*92.50%*
	31 – 40 Years Old	5	*7.5%*
	>40 Years Old	0	*0%*
Education	High School	27	*40.3%*
	D1/D2/D3/D4	6	*9%*
	Bachelor	30	*44.8%*
	Master And Above	4	*6%*
Employment Status	Organic	4	*6%*
	Prohire Digital Talent	1	*1.5%*
	Support Workers	6	*9.0%*
	Project-Based	8	*11.9%*
	Internship Student	48	*71.6%*
Monthly Income	< Rp. 2.500.000	36	*53.7%*
	Rp. 2.500.000– Rp. 5.000.000	12	*17.9%*
	Rp. 5.000.000– Rp. 7.500.000	9	*13.4%*
	> Rp. 7.500.000	10	*14.9%*
Role	Soft. Dev./Engineer	21	*31.4%*
	Software Architect	1	*1.5%*
	Project Manager	2	*3%*
	Product Owner	2	*3%*
	Quality Assurance	4	*6%*
	Scrum Master	3	*4.5%*
	Data Scientist	7	*10.4%*
	Researcher	5	*7.2%*
	UI UX Designer	4	*6%*
	General Support	9	*13.5%*
	Marketing	3	*4.5%*
	Technical Writer	2	*3%*
	Human Capital	4	*6%*
Working Experience	1 - 6 Months	43	*64.2%*
	6 Months < X <1 Year	10	*14.9%*
	1 - 2 Years	7	*10.4%*
	3 -5 Years	3	*4.5%*
	6 - 10 Years	4	*6%*

Source: Author (2024)

Table 2
Validity and Reliability Test Results

Constructs	*Items*	*Factor Loading*	*Cronbach. Alpha*	*Composite Reliability*	*(AVE)*
Org. Culture	OC1	0.835	0.844	0.888	*0.613*
	OC2	0.753			
	OC3	0.796			
	OC4	0.795			
	OC5	0.731			
Top Mgmt Support	TM1	0.744	0.857	0.897	*0.636*
	TM2	0.845			
	TM3	0.748			
	TM4	0.739			
	TM5	0.898			
Competence	C1	0.723	0.830	0.877	*0.589*
	C2	0.729			
	C3	0.758			
	C4	0.774			
	C5	0.846			
Proj. Success	PS1	0.850	0.829	0.881	*0.598*
	PS2	0.728			
	PS3	0.717			
	PS4	0.720			
	PS5	0.839			
Team Perf.	TP1	0.784	0.906	0.924	*0.605*
	TP2	0.779			
	TP3	0.839			
	TP4	0.801			
	TP5	0.716			
	TP6	0.814			
	TP7	0.748			
	TP8	*0.736*			

Source: Author (2024)

Inner Model Test

The inner model evaluation revealed a significant influence of organizational culture (29.1%) and competence (47.4%) on team performance. Notably, employees perceived a cooperative organizational culture, but they expressed dissatisfaction with the workplace facilities. While team members demonstrated strong team skills, self-confidence in individual abilities was a noted area for improvement. Competence emerged as the most influential factor in team performance, surpassing organizational culture in terms of its impact.

The study's findings reveal a significant influence of team performance on project success (63.4%), primarily driven by the team's ability to meet project deadlines. However, budget management challenges emerged as a key area for improvement.

While organizational culture positively influenced project success through its impact on team performance, its direct effect was relatively modest (9.8%). Competence, particularly in team skills, also played a significant role in mediating the relationship between organizational culture and project success. However, individual self-confidence proved to be a limiting factor.

The results presented in Table 3 demonstrate that organizational culture and competence indirectly influence project success by impacting team performance.

Specifically, organizational culture exerts an indirect effect of 0.185 (18.5%) on project success, while competence has a more substantial indirect effect of 0.300 (30%). Moreover, both organizational culture (0.291) and competence (0.474) have a direct influence on team performance, with competence having the most significant impact. Notably, team performance has the most substantial direct effect on project success, at 0.634 (63.4%). These findings underscore the critical role of team performance as a mediator in the relationship between organizational culture, competence, and project success.

Table 3
Hypothesis Test Results

Construct	*Path Coefficients*	*T-statistics*	*P-values*	*Decision*
H1: Org. Culture →Proj. Success	0.098	1.014	0.311	*Not Supported*
H2: Top Mgmt Support→ Proj. Success	0.05	0.612	0.541	*Not Supported*
H3: Competence →Proj. Success	0.157	1.781	0.075	*Not Supported*
H4: Org. Culture → Team Perf.	0.291	3.152	0.002	*Supported*
H5: Top Management Support → Team Perf.	0.19	1.804	0.072	*Not Supported*
H6: Competence → Team Perf	0.474	5.041	0.000	*Supported*
H7: Team Perf. →Proj. Success	0.634	6.569	0.000	*Supported*
H8: Org. Culture → Team Perf. → Proj.. Success	0.185	2.857	0.004	*Supported*
H9: Top Management Support → Team Perf. → Proj. Success	0.12	1.768	0.078	*Not Supported*
H10: Competence → Team Perf. → Proj. Success	*0.3*	*3.909*	*0.000*	*Significant*

Note: R^2 Project Success= 0.693, R^2 Team Performance= 0.571, SRMR = 0.096, NFI=0.592
Source: Author (2024)

The structural model, as depicted in Table 3, was assessed using the coefficient of determination (R^2)and goodness-of-fit (GoF) indices (Hair et al., 2022). The R^2 values for Project Success (0.693) and Team Performance (0.571) indicate that the combined influence of Organizational Culture, Top Management Support, and Competence accounts for a substantial portion of the variance in these dependent variables. However, other factors beyond these three variables contribute to the remaining variance.

The goodness-of-fit was evaluated using the Standardized Root Mean Square Residual (SRMR) and Normal Fit Index (NFI). According to Ghazali et al. (2015) and Karin Schmelleh et al. (2003), an SRMR value below 0.08 suggests a good model fit, while a value between 0.08 and 0.10 indicates an acceptable fit. In this study, the SRMR of 0.096 falls within the acceptable range. However, the NFI value of 0.592, while above the 0.5 threshold, is relatively low, suggesting a weak model fit.

Discussion

The analysis of the structural model reveals a compelling narrative about the mechanisms driving project success in Indonesian software development firms. The model demonstrates moderate explanatory power (Hair, 2022), accounting for 69.3% of the variance in project success and 57.1% of the variance in team performance. The direct effects of organizational culture, top management support, and competence on project success (H1, H2, H3) were not statistically significant, challenging conventional wisdom in the project management literature (Dos Santos et al., 2019; Cruz et.al, 2022). However, the indirect pathways through team performance tell a different story. Team performance emerges as a potent mediator, with a substantial direct effect on project success and serving as the critical conduit through which organizational culture and competence ultimately influence project outcomes. This mediation pattern suggests that these foundational resources need to be translated into effective team processes to impact final project deliverables.

The non-significant direct effects (H1-H3) present a theoretically significant departure from previous research. While studies by Dos Santos et al. (2019) and Cruz (2022) reported direct effects, our findings suggest that in the context of Indonesian software development, these factors operate through more complex, mediated pathways. This divergence may be explained by the unique characteristics of software projects, which often follow agile methodologies that allow team autonomy and iterative processes to buffer the direct impact of organizational-level factors on outcomes (Lee & Xia, 2021).

From a Resource-Based View (RBV) perspective, organizational culture and employee competence represent valuable, rare, and inimitable resources. However, this study demonstrates that these resources alone do not automatically confer competitive advantage. Instead, team performance functions as the essential "dynamic capability" that orchestrates and deploys these resources to create value (Teece, 2020). A competent workforce achieves project success only when teams effectively integrate and apply their skills. At the same time, a positive organizational culture impacts outcomes only when it facilitates seamless collaboration and knowledge sharing.

The puzzling case of top management support (H2, H5, H9), which consistently showed non-significant effects, warrants particular theoretical consideration. Through the lens of Stakeholder Theory, this suggests that for managerial influence to be effective, it must be operationalized in ways that directly enable team-level processes. In agile software environments, top management support that focuses solely on budgetary approval or strategic oversight, without engaging with the team's daily challenges and workflow, may be perceived as distant and thus fail to influence performance (Bundy et al., 2020).

This finding challenges the universal application of top management support as a panacea for project challenges and calls for more nuanced theoretical models that account for the quality and implementation of such support.

Furthermore, integrating principles of sustainable project management, the mediated pathways revealed in this study emphasize the importance of building enduring team capabilities rather than focusing on short-term project outputs. Sustainable project success depends on developing team competencies and cultural foundations that can be leveraged across multiple projects, creating lasting organizational value beyond immediate project deliverables (Armenia et.al, 2019).

The findings provide clear and actionable guidance for software development firms in Indonesia. From a human resources management perspective, the strong indirect effects of competence through team performance necessitate a strategic shift in training and development programs. Rather than focusing exclusively on individual technical skills, firms should invest in team-based competency development, including collaborative problem-solving, cross-functional communication, and training in agile methodologies. Implementing structured mentoring programs and communities of practice can facilitate the knowledge transfer essential for building collective team capabilities.

Performance evaluation systems must be redesigned to reward team-based outcomes and collaborative behaviors, moving beyond individual performance metrics that may inadvertently undermine teamwork. The significant influence of organizational culture on team performance suggests that HR should lead initiatives to cultivate environments of psychological safety, mutual accountability, and learning orientation—factors known to enhance team effectiveness in knowledge-intensive settings (Edmondson & Mortensen, 2021).

For project management practice, the paramount importance of team performance suggests that project managers should focus on creating stable, cross-functional teams with clear autonomy and accountability. Breaking down projects into manageable components, accurately estimating timeframes, and prioritizing backlog items based on business value become critical management activities. The non-significant findings for top management support suggest that project managers should actively work to translate high-level support into tangible resources and remove impediments that directly impact team workflow.

Conclusion

This study set out to investigate the intricate web of relationships between organizational factors, team performance, and project success within Indonesian software development firms. The hypothesis testing revealed a clear pattern: while the direct paths from organizational culture, top management support, and competence to project success were not supported, their influence is powerfully channeled through the mediating mechanism of team performance. Specifically, three of the five direct effect hypotheses were rejected. In contrast, two of the five mediated pathways were supported, highlighting team performance as the critical linchpin in the project success equation.

The theoretical novelty of this research lies in its challenge to conventional, direct-effect models. By demonstrating that foundational resources, such as culture and competence, require translation through team performance to impact project outcomes, the study provides a more nuanced application of the Resource-Based View. It positions team performance as a dynamic capability that orchestrates resources to create value, a significant refinement to the theory. Furthermore, the consistent non-significance of top management support diverges from established literature and offers

a critical insight from Stakeholder Theory: the mere presence of support is insufficient; its quality, consistency, and integration into team workflows determine its efficacy.

From a practical standpoint, the findings offer a clear mandate for managers and HR professionals in Indonesia's tech industry. The primary contribution is a strategic reorientation from managing individual inputs to cultivating high-performing teams. This entails designing HR strategies that prioritize team-based competency development and performance evaluations, as well as project management practices that foster team autonomy, psychological safety, and collaborative workflows. Investing directly in the team ecosystem is the most reliable pathway to achieving sustainable project success.

This study is not without its limitations. The relatively small sample size from a single geographic and industrial context may affect the generalizability of the findings. The cross-sectional nature of the data, collected at a single point in time, restricts the ability to infer causality definitively. Future research should aim to overcome these limitations by using larger, more diverse samples across various sectors and national cultures. Longitudinal studies would be particularly valuable in tracing the evolution of team performance and its antecedents over the project's lifecycle. Additionally, qualitative methods, such as in-depth interviews, could provide a richer understanding of why top management support failed to resonate in this context. Future investigations should also explore potential moderating variables, such as project complexity, team maturity, or specific leadership styles, which might condition the relationships uncovered here.

The new finding and significance of this research is its delineation of a fully mediated pathway to project success. It matters because it provides evidence-based guidance for organizations, arguing that the most effective investment for achieving project success is not in isolated resources or symbolic leadership support, but in building the collective capacity and performance of the team itself.

Declaration

Author Contributions

1,2,3. developed the theory and performed the data analysis. 1,3. verified the analytical methods. 1,2 encouraged 1,3 to investigate the results and their practical implications, and supervised the findings of this work. All authors discussed the results and contributed to the final manuscript.

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Competing Interest

The authors declare that they have no conflicts of interest to report regarding the present study.

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