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ARTIFICIAL INTELLIGENCE CAPABILITY AND PROJECT SUCCESS: THE MEDIATING ROLE OF AI-ENABLED PROJECT DECISION-MAKING

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Abstract
Pakistani organisations are investing in artificial intelligence (AI), but many projects in construction, IT, banking and public sector delivery continue to go over budget and schedule. In this study, we propose and test a model in which AI capability mainly improves project success by improving project decision making. Based on resource-based view, dynamic capabilities theory and decision-making theory, it connects four variables: AI capability (independent), AI-enabled project decision-making (mediator), project success (dependent) and top management support (moderator). Five hypotheses are put forth. H1: AI capability is expected to increase project success. H2: AI capability is expected to reinforce AI-enabled decision making. H3: AI-enabled decision making is expected to increase project success. H4: AI-enabled decision making is expected to mediate the capability–success link. Top management support is proposed to strengthen the capability-to-decision-making path (H5). The study is a cross-sectional survey of project managers and team leads in Pakistan's IT, banking, telecom, construction and public-sector project environments, to be analysed using partial least squares structural equation modelling (PLS-SEM). This paper contributes by providing a context-specific model, a measurement plan and a reporting template. Moreover, this paper provides practical guidance to project-based organisations in Pakistan on how to build AI capability to reach the decision, not only the dashboard.

1. INTRODUCTION

Artificial Intelligence (AI) is transforming the way organisations plan, deliver and execute projects. Projects are the tool to implement change in the organization: digital transformation, infrastructure development, operational improvement. However, project success is still a challenge as project managers have to decide on schedules, budgets, resource allocation, risk management and stakeholder expectations under uncertainty (Shenhar & Dvir, 2007; Serrador & Turner, 2015). Artificial intelligence (AI) tools such as machine learning, predictive analytics, and natural language processing can help with these decisions by processing massive amounts of data, predicting possible problems and identifying opportunities for improvement

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(Davenport & Ronanki, 2018; Duan et al., 2019).

Adopting technology alone does not guarantee that AI will be successful in project management. Rather, it also depends on the organization's ability to embed AI resources into management practices. AI capability is the technological infrastructure, data resources, employee expertise, and organisational processes that facilitate the effective use of AI (Mikalef & Gupta, 2021). Previous studies on digitalisation and organisational performance have suggested that the integration of digital resources with company capabilities is significant for operational outcomes (Alam et al., 2025; Fahad et al., 2025). Moreover, the studies on AI and big data in project risk and quality management emphasise the significance of such technologies for enhancing project-related practices in Pakistan (Mumtaz et al., 2025). However, the technology capabilities may not deliver the expected benefits if project managers do not incorporate the AI-generated knowledge into their real decisions.

AI-enabled project decision making is one potential way that AI capability can contribute to project success. AI-powered predictions, recommendations, and simulations integrated into project planning, risk assessment, scheduling, and resource allocation enable project teams to improve decision accuracy and respond faster to emerging challenges. The area of knowledge management and breakthrough innovation also emphasises the significance of converting organisational knowledge into innovative and performance results (Hassan et al., 2026). However, the transformation of AI capabilities into effective decision-making may depend upon top management support. This means senior executives need to make resources available, invest in training, create policies that support AI and encourage decisions based on evidence.

Pakistan offers a useful setting for studying these relationships as organisations in manufacturing, construction, banking, telecommunications and information technology are increasingly embracing digital technologies. However, success of AI deployment might be influenced by disparities in technological infrastructure, employee competence, organisational readiness, and commitment of leadership. Further studies on sustainable risk and quality management in construction projects of Pakistan further demonstrate the significance of effective management practices in project-based environments (Arshad et al., 2025). Nevertheless, additional empirical research is needed to understand how AI capability affects project success and whether AI-enabled decision making and top management support mediate this relationship.

Thus, the present study investigates the relationship between AI capability and project success in Pakistani project based organisations. It explores the mediating effect of AI-enabled project decision making and the moderating effect of top management support. This study offers an explanation for the way organisations can transform AI resources into better project outcomes by drawing on the resource-based view, dynamic capabilities theory, and decision-making theory. The results are expected to contribute to AI and project management research and provide practical guidance for project managers and senior executives who wish to improve project performance by effective utilisation of AI.

2. Literature Review and Hypotheses Development

2.1. AI Capability and Project Success

AI capability is the organization's ability to deploy and utilise AI-related resources including data, technological infrastructure, employee expertise, and organisational knowledge to support its activities (Mikalef & Gupta, 2021). According to the resource-based view, organisational resources provide a competitive advantage when they are valuable and well integrated into organisational processes (Barney, 1991). AI capability in project-based organisations can support continuous project monitoring, identify potential risks, improve resource allocation and conduct

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predictive analysis. These capabilities allow project managers to anticipate schedule delays, control costs and maintain project quality. Related studies on digitalisation and operational performance in Pakistani organisations indicate that digital resources can contribute to improved organisational outcomes when they are supported by appropriate organisational capabilities (Alam et al., 2025; Fahad et al., 2025). Likewise, the potential use of AI and big data in project risk and quality management is highlighted by the studies (Mumtaz et al., 2025). The arguments made here suggest that organisations with more advanced AI capabilities are more likely to meet their project objectives. We therefore suggest the following hypothesis.

H1: AI capability has a positive effect on project success.

2.2. AI Capability and AI-Enabled Project Decision-Making

The level of AI capability may affect project managers' use of AI-generated insights in their decision-making. To incorporate analytical insights into project planning, scheduling, resource allocation and risk management, organisations need reliable data, the right technology infrastructure and employees who can interpret AI outputs. However, technological resources alone might not be enough if the employees do not have the required skills or if organisational processes do not facilitate the use of AI. Research on digitalisation and operational performance emphasise the importance of the combination of technological resources alongside organisational capabilities (Alam et al., 2025; Fahad et al., 2025). Likewise, the use of AI and big data in project management is suggested to be of importance for project risk assessment and quality-related activities (Mumtaz et al., 2025). From the decision making theory perspective, artificial intelligence can provide more information to managers and help them evaluate alternatives under uncertain conditions (Simon, 1960; Shrestha et al., 2019). This implies that organisations with more advanced AI capabilities will be better positioned to incorporate AI insights into project-related decision-making. The following hypothesis was therefore suggested.

H2: AI capability has a positive effect on AI-enabled project decision-making.

2.3. AI-Enabled Project Decision-Making and Project Success

AI-powered project decision-making: This covers AI-based predictions, recommendations, and analytical findings that support project planning, scheduling, risk management, resource allocation, and performance monitoring. When used well, artificial intelligence can help project managers identify emerging risks, evaluate options and respond to deviations before they have a negative impact on project outcomes. The theory of dynamic capabilities suggests that organisations that can identify new threats and opportunities and reconfigure their resources accordingly are more successful (Teece et al., 1997). AI-enabled decision-making can facilitate these processes by enhancing the availability and timeliness of relevant information . Further support for the relevance of analytical technologies to project-related management practices is derived from research on project risk and quality management in Pakistan (Mumtaz et al., 2025). In addition, research on digitalisation indicates that data-driven organisational processes may lead to improved operational performance (Alam et al., 2025; Fahad et al., 2025). This approach allows project teams to use the insights generated by AI to better manage costs, schedules, quality standards, and stakeholders when they take those insights into account when making decisions. The following is proposed as a hypothesis.

H3: AI-enabled project decision-making has a positive effect on project success.

2.4. Mediating Role of AI-Enabled Project Decision-Making

While the AI capability provides necessary resources for utilising AI, the impact of the AI capability on project success may depend on the

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extent to which these resources are embedded in decision-making practices. The use of AI in project decision-making offers a possible means of transforming technological infrastructure, employee expertise and organisational resources into better project outcomes. AI capability is more effective project execution when project teams apply AI generated knowledge to uncover risks, predict delays, allocate funds and track performance. This argument is consistent with the resource-based view that emphasises the significance of the integration of organisational resources for value creation (Barney, 1991) and dynamic capabilities theory that describes how organisational capabilities facilitate adaptation and enhancement in performance (Teece et al., 1997). Similarly, knowledge management and breakthrough innovation research highlights the role of processes by which organisational knowledge leads to performance outcomes (Hassan et al., 2026). But the ability of artificial intelligence (AI) can also directly influence project success through automation and better monitoring. Therefore, it is hypothesised that AI-enabled project decision making mediates at least some of the relationship between AI capability and project success. Thus, the following is hypothesised.

H4: AI-enabled project decision-making mediates the relationship between AI capability and project success.

2.5. Moderating Role of Top Management Support

The relationship between AI capability and AI-enabled project decision making could be influenced by the extent of top management support. Top management support refers to the commitment of senior executives to provide resources, set priorities, and promote the effective use of AI in the organization's activities. Senior leaders can support AI use by providing for technology and training, enabling project managers to make decisions, and supporting evidence-based management. However, without management support, project teams might not use AI insights when making decisions, even if technological resources and employee expertise are available. The studies related to organisational governance and management practices in Pakistan have demonstrated the significance of organisational arrangements and leadership-related processes in influencing workplace and organisational outcomes (Gul et al., 2021; Hanif et al., 2023; ul Hassan et al., 2023). Furthermore, research on digitalisation and organisational agility suggests that the organisational context may influence the extent to which digital capabilities impact performance (Alam et al., 2025; Fahad et al., 2025). Thus, top management support can reinforce the link between AI capability and AI-enabled project decision-making by creating an environment where project teams are motivated and empowered to leverage AI-generated insights. The following hypothesis is therefore put forward.

H5: Top management support positively moderates the relationship between AI capability and AI-enabled project decision-making, such that the relationship is stronger when top management support is high.

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3.7 Conceptual model

Figure 1 below presents the model.

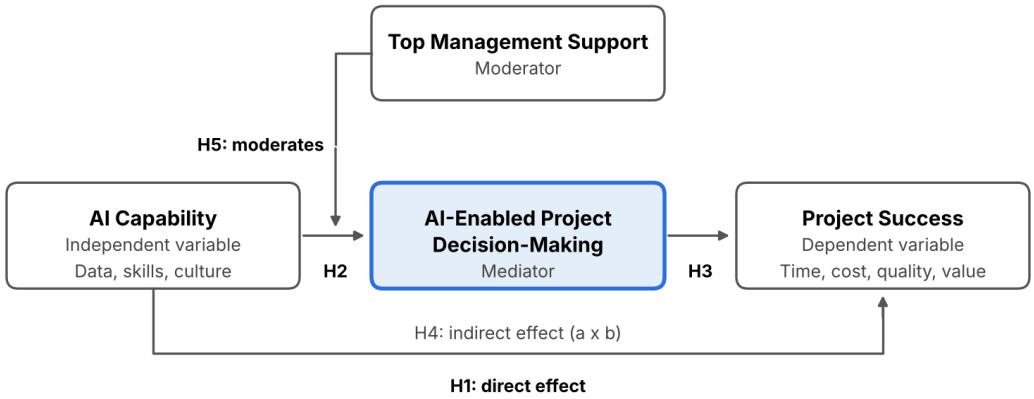


Figure 1. Conceptual model:

4. Research Methodology

This research adopts a quantitative and cross-sectional survey method to explore the relationship of artificial intelligence capability (AIC), AI-enabled decision-making (AIDM), project success (PS), and top management support (TMS) in project-based organisations of Pakistan. The research philosophy of the study is positivist and the approach is deductive in nature, in which hypotheses derived from theory are tested using quantitative data. Data are collected through a structured questionnaire from project managers, project management office (PMO) staff, senior team leaders and department heads who are sufficiently involved in project planning, decision-making, implementation or evaluation. Respondents are asked to evaluate a recent organisational project, preferably within the last 24 months, to ensure that their responses are based on a specific project experience rather than on general impressions.

The target population is professionals in project-based organisations who are using or introducing AI-enabled tools in their project activities. The study looks at five sectors: software and IT services, banking and fintech, telecommunications, construction and engineering, and public sector development agencies. The choice of these sectors is justified by the project-based nature of their operations and by the growing use of digital technologies. As there is no complete sampling frame of project teams using AI, purposive sampling is combined with snowball sampling. Respondents are accessed through professional networks such as Project Management Institute (PMI) chapters, P@SHA member organisations and contacts in banking, telecommunications, construction and public-sector development agencies. Data are needed from Karachi, Lahore, Islamabad-Rawalpindi, Peshawar and other relevant locations in Pakistan. A power analysis (G*Power, version 3.1.9.2, Faul et al., 2009) assuming a medium effect size (f2 = 0.15) and statistical power of 0.80 with up to six predictors indicated that about 100 observations would be sufficient for a simple regression model. However, considering the mediation, moderation and possible sector-based comparisons of the proposed framework, the aim of the study is to get 300-350 usable responses to improve estimation precision and allow for additional analyses.

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All constructs are measured using multi-item reflective scales on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). AI capability is measured with a scale adapted from Mikalef and Gupta (2021), and AI-enabled decision-making is developed with reference to Shrestha et al. (2019) and Duan et al. (2019). The measurement of the success of the project is based on the conceptual bases of Shenhar and Dvir (2007) and Serrador and Turner (2015). Top management support is measured using items adapted from related technology-adoption literature (e.g., Venkatesh et al., 2003). Instrument refinement results in the final measurement structure and number of items. The questionnaire is reviewed by three academics and two industry practitioners for content validity, clarity and relevance to the Pakistani organisational context. A pilot study with about 30 respondents is planned to identify ambiguous wording and assess preliminary reliability. The questionnaire is administered in English, as it is used in the professional and organisational contexts targeted. The control variables are firm size, sector, organisational age, project size, project type, and respondent experience, as these may influence AI capability, decision-making practices, and project outcomes.

Data collection is carried out over a period of approximately eight weeks through online questionnaires sent via Google Forms or Microsoft Forms, with printed questionnaires used where required. The questionnaire starts with an information statement informing the purpose of the research, the voluntary nature of participation, confidentiality arrangements and participants' rights. Participation is voluntary and informed consent is obtained before participation. In the research report no individual or organization is identified. Data are stored in password protected files and only accessed by authorised members of the research team. Institutional ethical approval will be sought prior to data collection. SPSS was used to screen the data, while SmartPLS 4 was used to estimate the measurement and structural models using partial least squares structural equation modelling (PLS-SEM). This approach is appropriate for the examination of prediction-oriented models with multiple relationships, mediation, and moderation (Hair et al., 2019). The initial screening looks at missing values, outliers, inconsistent answers and distributional characteristics. Skewness and kurtosis are checked where appropriate. The Non-response bias is tested by comparing early and late respondents. Common method bias is controlled using procedural remedies of anonymity and careful questionnaire design, and tested using Harman's single-factor test and full-collinearity variance inflation factors (VIFs), with values below 3.3 being a diagnostic guideline, rather than definitive evidence of the absence of bias (Podsakoff et al., 2003).

The measurement model is assessed for indicator reliability , internal consistency, convergent validity, and discriminant validity. Loadings of the indicators above 0.70, the values of Cronbach's alpha and composite reliability of at least 0.70 and average variance extracted (AVE) of at least 0.50 are acceptable, with theoretical justification. Discriminant validity is assessed by the heterotrait–monotrait ratio (HTMT) which should ideally be less than 0.85 and the Fornell–Larcker criterion (Fornell & Larcker, 1981; Henseler et al., 2015). Higher-order constructs of AI capability, AI-enabled decision-making and project success are modelled where supported by their theoretical and measurement structures using an appropriate two-stage approach. Structural model is assessed through collinearity tests, standardised path coefficients and bootstrapped confidence intervals (based on 5,000 resamples). The coefficient of determination (R^2) is used to evaluate explanatory power, and effect sizes (f^2), predictive relevance (Q^2) and PLSpredict are used to assess the contribution and predictive performance of the model.

The indirect effect of AI capability on project success, which is the multiplication of the path

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from AI capability to AI-enabled decision-making and the path from AI-enabled decision-making to project success, examines the mediating role of AI-enabled decision-making. The importance of the indirect effect is evaluated with bootstrapped confidence intervals. The direct effect is also assessed to differentiate between complementary or competitive mediation and indirect-only mediation, if applicable. To test the moderating effect of top management support, we add an interaction term between AI capability and top management support into the model with a proper two-stage approach. A simple slope analysis was conducted to probe a significant interaction at low and high levels of top management support.

5. Data Analysis and Results

5.1 Respondent Profile

The final dataset comprises 320 usable responses from professionals working in project-based organizations across Pakistan. The respondents represent five sectors, including IT and software, banking and fintech, telecommunications, construction and engineering, and public-sector development agencies. Table 1 presents the distribution of respondents according to sector, organizational size, professional role, experience, and city.

Table 1. Respondent demographic and organizational profile

Characteristic	Category	Frequency	Percentage
Sector	IT/software	100	31.3%
	Banking/fintech	65	20.3%
	Telecommunications	50	15.6%
	Construction/engineering	60	18.8%
	Public sector	45	14.1%
Organization size	Small	85	26.6%
	Medium	105	32.8%
	Large	130	40.6%
Respondent role	Project manager	145	45.3%
	PMO staff	65	20.3%
	Senior team leader	70	21.9%
	Department head	40	12.5%
Experience	Under 5 years	90	28.1%
	5–10 years	130	40.6%
	Over 10 years	100	31.3%
City	Karachi	90	28.1%
	Lahore	95	29.7%
	Islamabad–Rawalpindi	85	26.6%
	Peshawar	30	9.4%
	Other	20	6.3%

The respondent profile indicates that IT and software organizations constitute the largest sectoral group, accounting for 31.3% of the sample, followed by banking and fintech at 20.3% and construction and engineering at 18.8%. Large organizations represent 40.6% of respondents, while medium-sized organizations account for 32.8%. Project managers form the largest professional group, comprising 45.3% of the sample. Regarding professional experience, 71.9% of respondents have at least five years of experience. Geographically, Lahore contributes

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the largest share of responses at 29.7%, followed by Karachi at 28.1% and Islamabad–Rawalpindi at 26.6%. This distribution provides representation across different organizational contexts and professional backgrounds relevant to the study.

5.2 Measurement Model Assessment

The measurement model is evaluated in terms of indicator reliability, internal consistency, convergent validity, and discriminant validity. Table 2 presents the reliability and convergent validity results.

Table 2. Measurement model assessment

Construct	Loading range	Cronbach's alpha	Composite reliability	AVE
AI capability	0.74–0.89	0.91	0.93	0.65
AI-enabled decision-making	0.76–0.90	0.90	0.92	0.67
Project success	0.72–0.88	0.89	0.91	0.63
Top management support	0.78–0.91	0.88	0.91	0.67

The indicator loadings range from 0.72 to 0.91, meeting the preferred threshold of 0.70. Cronbach's alpha values range from 0.88 to 0.91, while composite reliability values range from 0.91 to 0.93, indicating satisfactory internal consistency. The AVE values range from 0.63 to 0.67, exceeding the recommended minimum of 0.50. These results indicate satisfactory reliability and convergent validity for the measurement model.

Discriminant validity is further assessed using the HTMT ratio and the Fornell–Larcker criterion. Table 3 presents the HTMT results for the four constructs.

Table 3. HTMT discriminant validity assessment

Construct	AIC	AIDM	PS	TMS
AIC	—			
AIDM	0.72	—		
PS	0.68	0.76	—	
TMS	0.55	0.64	0.59	—

The HTMT values range from 0.55 to 0.76, remaining below the preferred threshold of 0.85. These results support discriminant validity by indicating that AI capability, AI-enabled decision-making, project success, and top management support are empirically distinguishable constructs.

Table 4. Fornell–Larcker criterion

Construct	AIC	AIDM	PS	TMS
AIC	0.806			
AIDM	0.620	0.819		
PS	0.570	0.650	0.794	
TMS	0.480	0.560	0.520	0.819

The diagonal values represent the square roots of AVE, while the off-diagonal values represent interconstruct correlations. The square roots of AVE exceed the corresponding correlations, providing additional support for discriminant validity under the Fornell–Larcker criterion.

Common method bias is assessed using Harman's single-factor test and full-collinearity VIFs. The

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first factor accounts for 31.6% of the total variance, remaining below the conventional 50% screening threshold. Full-collinearity VIF values range from 1.22 to 2.46, while structural VIF values range from 1.18 to 2.31. These results do not indicate serious common method bias or multicollinearity concerns under the selected diagnostic guidelines, although they cannot conclusively establish the absence of common method bias.

5.3 Structural Model Assessment and Hypothesis Testing

The structural model is assessed by examining path coefficients, statistical significance, confidence intervals, explanatory power, and effect sizes. Bootstrapping with 5,000 resamples is used to assess the significance of the hypothesized relationships.

Table 5. Explanatory power and predictive relevance

Endogenous construct	\(R^2\)	Adjusted \(R^2\)	\(Q^2\)
AI-enabled decision-making	0.49	0.48	0.31
Project success	0.42	0.41	0.27

The model explains 49% of the variance in AI-enabled decision-making and 42% of the variance in project success. These results indicate that the predictors included in the model account for a meaningful proportion of the variation in both endogenous constructs. The positive \(Q^2\) values indicate predictive relevance under the applicable assessment procedure. Further evaluation through PLS predict is required to establish the model's out-of-sample predictive performance.

6. Discussion, Future Research Directions and Conclusion

6.1 Discussion

This research investigates the role of artificial intelligence capability (AIC) in project success (PS) via AI-enabled decision-making (AIDM) and the moderating effect of top management support (TMS) on the relationship between AI capability and decision-making. The proposed framework underscores that the value of AI in project management depends not only on the availability of technological resources, but also on their integration into the organisational decision-making processes and the backing of the senior leadership.

The assumed positive relationship between AI capability and project success implies that organisations with better AI-related resources, technological infrastructure, data capabilities, and analytical expertise may be better positioned to achieve project objectives. AI capability can help project managers to estimate resource needs, identify potential risks, track performance and react to changing project condition. But better outcomes cannot be guarantyd simply by investing in technology. Organisations need to develop the management processes and employee skills that will turn AI capabilities into real-world project-management advantages.

A possible route through which the capability of artificial intelligence may affect project success is AI-enabled decision-making. AI-generated insights can be integrated into project planning, budgeting, scheduling, risk assessment and performance monitoring to enhance and accelerate project managers decision-making. This finding underscores the need to integrate AI into the everyday practices of project management, rather than seeing it as a separate technological resource. Therefore, the mediating effect of AI-enabled decision-making offers a useful description of the way organisational AI capabilities may translate into improved project outcomes.

The mediating effect of top management support emphasises the importance of organisational

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leadership in AI implementation. Senior managers affect the allocation of technological and financial resources, the establishment of data-driven practices, and the employees' willingness to adopt AI-generated recommendations in their decisions. Visible leadership support can also cause project managers to weigh analytical evidence against their professional experience. Hence, organisations with robust AI capabilities are likely to gain more from enhanced decision-making if senior management fosters the use of AI for project-related tasks.

The Pakistani context offers an important setting for examining these relationships. IT, banking, fintech and telecommunications companies could potentially have a relatively higher exposure to digital technologies and data-driven practices. However, public-sector and infrastructure projects might face additional challenges due to procurement procedures, fragmented information systems, resource constraints and long approval processes. These differences may affect the extent to which AI capabilities are translated into effective project decisions. Therefore, the examination of sectoral differences can provide a fuller picture of AI adoption in the different project contexts in Pakistan.

Overall, the proposed framework demonstrates that the success of AI implementation relies on the alignment of technological capability, decision-making practices and management support. Its central thesis is that AI's contribution to project success depends not just on what an organization has, but also on how well it uses those resources in its project-management processes. Finally, the empirical strength of these relationships must be proven by analysis of actual survey data.

6.2 Theoretical Contributions

The paper makes three main contributions to the literature on AI capability and project management. Firstly, it extends the use of the resource-based view and dynamic capabilities perspective to the project level by investigating project success as an outcome of organisational AI capability. The framework not only focuses on firm-level performance, but also on how AI-related resources and competencies may support the achievement of project objectives.

Second, the research conceptualises AI-enabled decision-making as a mediating mechanism between AI capability and project success. This perspective separates the possession of technological resources from their practical application in project decisions. It provides a framework to explore how AI capabilities can create value through better forecasting, planning, monitoring and risk management.

Third, the framework indicates that top management support can moderate the relationship between AI capability and AI-enabled decision making. By including this interaction, this study recognises that the effectiveness of technological resources may depend on the organisational environment in which these are deployed.

Finally, the study focuses on project based organisations in Pakistan, which provides an opportunity to examine the proposed relationships in a developing-economy context. This setting can broaden the understanding of AI-enabled project management beyond the organisational settings which dominate much of the existing literature. The extent to which these contributions will be realised depends on the theoretical and empirical evidence established through the study when completed.

6.3 Future Research Directions

Future research may build on this framework by addressing its methodological, contextual and conceptual limitations. Second, longitudinal studies may explore the impact of AI capability and decision-making practices on project outcomes over time. Collecting data at multiple time points across a project's lifecycle would help establish temporal relationships and provide stronger evidence for the proposed mechanisms. Researchers could also correlate survey responses to objective project records such as budget

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variances, schedule performance, milestone achievement, and project quality indicators. Secondly, comparative studies could explore whether the relationships vary between sectors, organisational sizes and geographical regions. Comparisons between private sector organisations and public sector development agencies can show how differences in governance, technological infrastructure, procurement procedures and managerial discretion affect AI implementation. Such comparisons should be made using appropriate statistical tests and with prior establishment of measurement comparability before interpreting group differences.

Third, future research may explore other organisational and project level factors that affect the effectiveness of AI capability. Potential moderators could be project complexity, data quality, AI governance, algorithmic explainability and organisational digital culture. Potential mediating mechanisms are project risk management, team agility, knowledge integration and coordination quality. Including these variables might provide a more complex explanation of the conditions under which AI impacts project performance.

Fourth, additional research could validate and fine-tune the measurement of AI-enabled decision-making in different project settings. Qualitative interviews and case studies could explain how project managers interpret AI recommendations, resolve conflicts between algorithmic outputs and professional judgement, and incorporate AI-generated information into formal approval processes. Subsequent quantitative studies can use these findings to improve construct validity and test the generalisability of the measurement model.

Finally, new applications for generative AI offer opportunities to investigate AI-assisted project planning, progress reporting, risk communication, and scenario development. "Further research could investigate if generative artificial intelligence can enhance decision quality and project results, the potential for erroneous outputs, excessive dependence on automated recommendations, data security, and responsibility." This kind of research would help us understand how organisations can responsibly integrate AI while ensuring effective managerial oversight.

6.4 Conclusion

The present study offers a conceptual and empirical basis to explore the relationship of AI capability and project success in project-based organisations of Pakistan. The framework indicates that AI capability contributes directly and indirectly to project success through AI-enabled decision-making, and that top management support strengthens the relationship between AI capability and decision-making. The study stresses that AI capability should not be considered solely in terms of technological investment or access to analytical tools. The degree to which insights generated by AI are incorporated into planning, monitoring, risk assessment and other project-management activities also influences its potential contribution to project outcomes. Leadership commitment can also help this process by providing resources, encouraging evidence-based decisions, and creating organisational practices for effective AI use.

This study integrates AI capability, AI-enabled decision making, project success, and top management support into a unified framework, and sets the stage for studying how organisations can convert the AI-related resources into project-level outcomes. Pakistan as a case allows for the exploration of such relationships in a setting with heterogeneity in technological maturity, organisational capabilities and institutional conditions.

The proposed model also suggests a practical direction for organisations to improve the adoption of AI in project management. Investments in AI need to be accompanied by improvements in data quality, employee capabilities, decision-making procedures, and managerial support. Finally, empirical tests of the

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proposed relationships will determine whether and to what extent these factors contribute to project success, and whether their effects vary across different organisational and sectoral contexts.

REFERENCES

Alam, m., younas, a., khan, m., anwar, a., gul, s., & abbas, s. (2025). Integrating supply chain digitalization into project management: effects on operational performance and the role of organizational agility in pakistani manufacturing firms. Qualitative research review letter, 3(2), 1-26.

Arab news. (2025, july 31). Pakistan approves ai policy 2025 to create jobs for youth, enhance public services. Https://www.arabnews.com/node/2610094/pakistan

Arshad, a., gul, s., mumtaz, m. M., bhatty, r. A., & pasha, n. (2025). Sustainable risk and quality management practices in green construction projects: a study of the commercial construction sector in pakistan. Journal of business and management research, 4(2), 230-249.

Atif, m., altaf, y., gul, s., & ul hassan, s. W. (2024). Impact of innovation on pakistan's gdp: the mediating role of sme growth. Journal of research in economics and finance management, 3(2), 55-67.

Gul, s., gilani, u. S., khokhar, a. M., & khan, y. (2021). Direct and indirect effect of ethical leadership on workplace conflict in foreign direct investment (telecom sector of khyber pakhtunkhwa). Ilkogretim online, 20(3).

Gul, s., jan, s., & shah, f. A. (2019). The impact of service quality on students satisfaction in higher education institutes of khyber pakhtunkhwa. Review of economics and development studies, 5(1), 217-224.

Gul, s., limongi, r., & syed, h. W. U. (2024). Unraveling the nexus: social entrepreneur intention and socioeconomic development with mediating role of entrepreneurial knowledge. Kybernetes.

Gul, s., zia, m., awais, m., munir, s., & shahid, m. (2025). The impact of agile strategic entrepreneurship capabilities on sustainable innovation in pakistan's textile industry. Journal of management & social science, 2(2).

Gul, s., zia, m., awais, m., munir, s., & shahid, m. (2025). The impact of agile strategic entrepreneurship capabilities on sustainable innovation in pakistan's textile industry. Journal of management & social science, 2(2).

Gul, s., zulfiqar, b., khan, f., jabeen, n., & fareed, g. (2025). Impact of ai-powered chatbots on customer retention: moderating role of service quality perception. Journal of management science research review, 4(1), 100–117

Hanif, m., khan, y., jamal, s., gul, s., & zeeshan, m. (2023). Role of corporate governance in industries facing difference levels of competition: empirical evidence from pakistan. Journal of social sciences review, 3(1), 639-658.

Hassan, s. W. U., gul, s., & irshad, m. (2026). Knowledge management and profitability: the critical role of breakthrough innovation as a catalyst. Bar-brazilian administration review, 23(01), e250053.

Hassan, s. W. U., kiran, s., gul, s., khatatbeh, i. N., & zainab, b. (2025). The perception of accountants/auditors on the role of corporate governance and information technology in fraud detection and prevention. Journal of financial reporting and accounting, 23(1), 5-29.

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 6 • October 2026

Hassan, s., gul, s., jameel, k., akhtar, c. S., & naveed, s. (2020). Impact of service quality on customer's satisfaction in the airline industry (a case study of pia, oman airline and air-arabia). Ilkogretim online–elementary education online, 19(3), 3562-3573.

Irshad, m., iftikhar, a., jabeen, m., jabeen, n., & ul hassan, s. W. (2024). An empirical investigation into the impact of e-recruitment on organizational effectiveness. Journal for business education and management, 4(2), 79-97.

Kakakhel, s. J., saeed, t., & gul, s. (2016). Role of ngos in the women empowerment through provision of rural entrepreneurship opportunities. Journal of applied environmental and biological sciences, 6, 331-52.

Khan, s., ahmad, s., gul, s., imtiaz, i., & ul hassan, s. W. (2020). Combating toxic workplace environment through specific hr practices: an empirical study of workplace relations in the hospitals of pakistan. International journal of management research and emerging sciences, 10(4).

Khan, s., gul, s., & khan, m. A. (2020). Putting phronetic leadership in action for social innovation: a tale of social enterprises. Liberal arts and social sciences international journal (lassij), 4(2), 98-113.

Khan, s., gul, s., ul hassan, s. W., & imtiaz, i. (2021). Battling the toxic war at workplace through the introduction of specific hr practices: a case of higher education sector of pakistan. International journal of management (ijm), 12(2), 956-969.

Mumtaz, m. M., gul, s., arshad, a., saeed, m. K., farooq, s. U., & shahid, m. (2025). Ai and big data in project risk and quality management: opportunities and challenges in pakistan. Journal of management & social science, 2(2), 214-225.

Rana, r. A., kiran, s., & gul, s. (2024). The impact of email marketing on consumer buying decision process in the pakistani market. Journal for business education and management, 4(1), 209-226.

Shah fahad, s waleed ul hassan, fazia kausar, & muhammad talha farooq. (2025). The impact of supply chain digitalization on operational performance: the moderating role of organizational agility. Journal of management science research review, 4(3), 1445–1464

Ul hassan, s. W., gul, s., ahmed, m., & tariq, m. (2023). Role of corporate governance on the financial distress: evidence from pakistan. International journal of business and management sciences, 4(2), 143-148.

Barney, j. (1991). Firm resources and sustained competitive advantage. Journal of management, 17(1), 99–120.

Brynjolfsson, e., & mcafee, a. (2017). The business of artificial intelligence. Harvard business review, july 2017.

Davenport, t. H., & ronanki, r. (2018). Artificial intelligence for the real world. Harvard business review, 96(1), 108–116.

Duan, y., edwards, j. S., & dwivedi, y. K. (2019). Artificial intelligence for decision making in the era of big data. International journal of information management, 48, 63–71.

Fornell, c., & larcker, d. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research, 18(1), 39–50.

Hair, j. F., risher, j. J., sarstedt, m., & ringle, c. M. (2019). When to use and how to report the results of pls-sem. European business review, 31(1), 2–24.

Henseler, j., ringle, c. M., & sarstedt, m. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the academy of marketing science, 43(1), 115–135.

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 6 • October 2026

Mikalef, p., & gupta, m. (2021). Artificial intelligence capability: conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. Information & management, 58(3), 103434.

Podsakoff, p. M., mackenzie, s. B., lee, j.-y., & podsakoff, n. P. (2003). Common method biases in behavioral research. Journal of applied psychology, 88(5), 879–903.

Profit. (2025, july 30). Pakistan approves landmark ai policy 2025 to drive digital transformation and empower youth. Https://profit.pakistantoday.com.pk/2025/07/30/pakistan-approves-landmark-ai-policy-2025-to-drive-digital-transformation-and-empower-youth/

Serrador, p., & turner, r. (2015). The relationship between project success and project efficiency. Project management journal, 46(1), 30–39.

Shenhar, a. J., & dvir, d. (2007). Reinventing project management: the diamond approach to successful growth and innovation. Harvard business school press.

Shrestha, y. R., ben-menahem, s. M., & von krogh, g. (2019). Organizational decision-making structures in the age of artificial intelligence. California management review, 61(4), 66–83.

Simon, h. A. (1960). The new science of management decision. Harper & row.

Teece, d. J., pisano, g., & shuen, a. (1997). Dynamic capabilities and strategic management. Strategic management journal, 18(7), 509–533.

Venkatesh, v., morris, m. G., davis, g. B., & davis, f. D. (2003). User acceptance of information technology: toward a unified view. Mis quarterly, 27(3), 425–478.

Wamba-taguimdje, s.-l., wamba, s. F., kamdjoug, j. R. K., & wanko, c. E. T. (2020). Influence of artificial intelligence (ai) on firm performance: the business value of ai-based transformation projects. Business process management journal, 26(7), 1893–1924.