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USE OF GENERATIVE AI IN DECISION MAKING, CREATIVITY, AND CAPABILITY AND ITS IMPACT ON ORGANIZATIONAL PERFORMANCE: A MEDIATED AND MODERATED APPROACH

Dr. Shanayyara Mahmood[*1], **Faisal Mehmood Khan Lohani**[2]

[*1]*Assistant Professor, Institute of Business Management and Administrative Science, The Islamia University of Bahawalpur*
[2]*PhD Scholar, Institute of Business Management and Administrative Science, The Islamia University of Bahawalpur*

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Corresponding Author: *
Faisal Mehmood Khan Lohani
faisalkhanlohani40@gmail.com

Abstract

Generative Artificial Intelligence (GenAI) is increasingly transforming organizational processes, yet its role in enhancing organizational performance remains dependent on existing organizational capabilities and human cognitive processes. This study examines the relationships among organizational capability, decision making, creativity, GenAI, and organizational performance within the framework of Dynamic Capabilities Theory. Using 600 usable responses collected from educational, public, and private sector organizations in Pakistan, the study employed structural equation modeling to examine mediation and moderation effects. The findings indicate that organizational capability positively influences decision making (β = 0.54) and creativity (β = 0.48), with both variables significantly mediating the relationship between capability and organizational performance. GenAI further strengthens the direct relationships between organizational capability, decision making, creativity, and organizational performance, with interaction effects ranging from β = 0.11 to 0.17. However, it's moderating effects on the relationships between capability and decision making (β = 0.04) and capability and creativity (β = 0.03) were not significant. The findings demonstrate that GenAI functions as a selective complementary mechanism rather than a universal driver of organizational processes. The study contributes to Dynamic Capabilities Theory and Cognitive Load Theory while highlighting the importance of organizational readiness, human expertise, and effective governance in achieving meaningful AI-enabled organizational performance.

INTRODUCTION

Generative Artificial Intelligence (GenAI) is rapidly reshaping organizational work by supporting decision making, knowledge processing, creativity, productivity, and performance. However, existing research has largely examined AI or GenAI as a direct predictor of organizational outcomes, while comparatively limited attention has been given to how GenAI changes the strength of established organizational relationships.

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Volume 4 • Issue 5 • September 2026

A major gap also exists in understanding how organizational capability is converted into organizational performance. Previous research has separately examined AI capability and performance, AI and creativity, and AI-supported decision making, but these relationships have rarely been integrated into a single empirical framework. In particular, limited evidence explains whether creativity and decision making mediate the capability–performance relationship and whether GenAI strengthens these relationships.

This research addresses these gaps using data from 600 organizational employees in Pakistan, drawn from educational, public, and private-sector organizations. From 650 distributed questionnaires, 625 were returned and 600 were retained, producing a 92.31% usable response rate.

The empirical model demonstrates substantial explanatory power, with $R^2 = 0.57$ for organizational performance, $R^2 = 0.29$ for decision making, and $R^2 = 0.23$ for creativity. The results further showed that organizational capability significantly contributes to organizational performance both directly and through decision making and creativity, while GenAI operates as a selective moderator rather than a universal driver.

Accordingly, this research develops and empirically tests an integrated model linking organizational capability, creativity, decision making, GenAI, and organizational performance. The research contributes by explaining not only whether capability improves performance, but also through which organizational mechanisms and under what GenAI conditions these effects become stronger.

Literature Review, Gap Analysis and Hypotheses Development

Generative Artificial Intelligence (GenAI) has increasingly emerged as an important organizational capability because of its ability to support information processing, knowledge creation, problem solving, decision making, creativity, and strategic activities. The organizational implications of GenAI extend beyond the automation of routine tasks because these technologies can participate in knowledge-intensive activities that traditionally depended on human expertise. Schulte and Kanbach (2026), through a systematic review of 68 publications, identified 53 GenAI-related tasks grouped into 18 categories across organizational decision-making processes, demonstrating that GenAI can support, augment, and co-perform a broad range of organizational activities.

From a resource-based perspective, organizational capability represents the ability of an organization to effectively mobilize, integrate, and deploy its available resources to achieve organizational objectives. The value of technological resources therefore depends on the organizational capability to integrate them into existing routines and processes. Almheiri et al. (2025), using data from 344 public managers, found that AI capability significantly enhances dynamic capabilities, organizational creativity, and organizational performance. Their findings demonstrate that AI-related resources can become strategically valuable when supported by organizational capabilities that facilitate their effective deployment.

The relationship between organizational capability and performance is further supported by evidence showing that AI capabilities can directly contribute to organizational outcomes. Liu et al. (2026) conceptualized GenAI-enabled digital dexterity as an organizational capability and demonstrated its relevance to organizational future performance, while also identifying decision making as an important mechanism through which AI-enabled capabilities generate organizational value. These findings indicate that organizational capability is not merely an internal resource but an important organizational mechanism through which technological and knowledge resources can be transformed into performance outcomes. On this basis, the following hypothesis is proposed:

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Volume 4 • Issue 5 • September 2026

H_1: Capability has a significant positive impact on Organizational Performance.

Organizational capability can also influence performance by improving the quality and effectiveness of organizational decision making. Organizations with stronger capabilities are better positioned to collect, process, interpret, and utilize information when responding to organizational challenges. Mikalef et al. (2025) found that AI capabilities significantly enhance decision-making performance, with particularly strong effects on decision-making speed. Their findings further demonstrated that complementary digital capabilities and strategic orientation are important for translating AI capabilities into improved decision outcomes.

Decision making is therefore an important organizational process through which capabilities can be converted into organizational outcomes. AI-supported capabilities can increase the availability of relevant information, accelerate analytical activities, and facilitate the evaluation of alternatives. The evidence provided by Mikalef et al. (2025) supports the argument that stronger organizational and AI-related capabilities are associated with improved decision-making performance. Accordingly, the following hypothesis is proposed:

H_2A: Capability has a significant positive influence on Decision Making.

The contribution of decision making to organizational performance is particularly important because organizational outcomes depend heavily on the quality, speed, and effectiveness of managerial choices. Shafiq et al. (2025) found that GenAI positively influences business performance and data-driven decision making and further established that data-driven decision making significantly mediates the relationship between GenAI and business performance. Their findings demonstrate that technological capabilities can generate organizational value when they improve the decision processes through which organizational actions are formulated and implemented.

Similarly, Liu et al. (2026) demonstrated that GenAI-enabled digital dexterity improves organizational decision processes and contributes to future organizational performance, highlighting the importance of decision making as a mechanism connecting AI-enabled organizational capabilities with performance. Based on this evidence, the following hypothesis is proposed:

H_2B: Decision Making has a significant positive influence on Organizational Performance.

The relationships proposed in H_2A and H_2B provide the theoretical foundation for examining decision making as a mediating mechanism. If organizational capability improves decision-making effectiveness and effective decision making contributes to organizational performance, capability should influence performance partly through decision-making processes. Evidence from AI capability research supports this mechanism. Liu et al. (2026) emphasize the role of decision-making processes in translating GenAI-enabled organizational capabilities into performance, while Shafiq et al. (2025) provide empirical evidence that data-driven decision making mediates the relationship between GenAI and business performance. Thus, the present research proposes:

H_2: Decision Making significantly and positively mediates the relationship between Capability and Organizational Performance.

In addition to decision making, creativity represents another important organizational mechanism through which capability can contribute to performance. Organizational capability provides access to technological resources, information, knowledge, and problem-solving tools that can create conditions for generating novel and useful ideas. Almheiri et al. (2025) found that AI capability positively influences organizational creativity and organizational performance, demonstrating that technological capability can contribute to organizational outcomes through creative organizational processes.

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Volume 4 • Issue 5 • September 2026

The growing use of GenAI has further strengthened interest in the relationship between AI-enabled capabilities and creativity. Holzner et al. (2025) conducted a meta-analysis of 28 studies involving 8,214 participants and found that individuals collaborating with GenAI achieved significantly higher creative performance than individuals working without AI assistance, with a Hedges' g of 0.27. However, the study also found a significant reduction in idea diversity, with a Hedges' g of −0.86, indicating that GenAI can enhance creative performance while simultaneously creating risks of convergence in generated ideas.

These findings suggest that organizational capability can create an environment in which employees are better able to utilize technological and knowledge resources for creative activities. Almheiri et al. (2025) provide direct empirical support for the positive relationship between AI capability and organizational creativity. Therefore, the following hypothesis is proposed:

H_3A: Capability has a significant positive impact on Creativity.

Creativity can subsequently contribute to organizational performance by enabling organizations to generate new solutions, improve processes, develop innovative products and services, and respond to changing organizational environments. The positive relationship between AI-enabled capabilities, creativity, and performance is supported by Almheiri et al. (2025), who found that AI capability enhances organizational creativity and contributes to organizational performance.

The role of GenAI in supporting creative work provides additional evidence for the performance relevance of creativity. Holzner et al. (2025) found that human–GenAI collaboration improves creative performance, although the effects differ according to the type of creative activity and the diversity of ideas produced. This suggests that organizational creativity can function as an important pathway through which technological and organizational capabilities are translated into valuable organizational outcomes. Accordingly, the following hypothesis is proposed:

H_3B: Creativity has a significant positive impact on Organizational Performance.

The relationships between capability, creativity, and organizational performance provide a theoretical basis for examining creativity as a second mediating mechanism. When organizations possess stronger capabilities, employees may have greater access to technological resources, knowledge, and information that facilitate creative activities. These creative activities can subsequently contribute to improved organizational outcomes. Almheiri et al. (2025) provide empirical evidence connecting AI capability, organizational creativity, and organizational performance, supporting the theoretical basis for examining creativity as an intermediate mechanism.

The meta-analysis by Holzner et al. (2025) further demonstrates that GenAI can augment human creative performance, reinforcing the importance of creative processes in understanding how AI-enabled organizational resources generate value. On this basis, the present research proposes:

H_3: Creativity significantly and positively mediates the relationship between Capability and Organizational Performance.

Although the direct and mediating relationships explain important mechanisms through which organizational capability contributes to performance, the effects of GenAI may not be uniform across organizations or organizational processes. Recent literature increasingly indicates that the organizational consequences of GenAI depend on how effectively it is integrated with existing organizational capabilities, human expertise, decision processes, and governance arrangements. Liu et al. (2026) identified regulatory governance as a boundary condition affecting GenAI-related decision outcomes, demonstrating that the organizational context can influence the strength of AI-related relationships.

This conditional perspective is also supported by Schulte and Kanbach (2026), whose review demonstrates that GenAI performs different roles

JOURNAL FOR SOCIAL SCIENCE STUDIES
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Volume 4 • Issue 5 • September 2026

across different stages of organizational decision making. Rather than producing a universally positive effect, GenAI may support, augment, or co-perform organizational activities depending on the nature of the task and the position of AI within the decision process. These findings provide a theoretical basis for examining GenAI not only as a technological resource but also as a contextual variable capable of altering the strength of relationships between organizational capability and organizational outcomes.

The moderating role of GenAI is particularly relevant to the direct relationship between capability and organizational performance. Strong organizational capabilities may enable organizations to obtain greater value from GenAI because capable organizations possess the resources, knowledge, processes, and human expertise required to integrate AI effectively. Conversely, the absence of such capabilities may limit the organizational value generated from GenAI. Liu et al. (2026) demonstrate that GenAI-enabled organizational capability and governance conditions jointly shape organizational outcomes, providing support for examining GenAI as a boundary condition rather than assuming a uniform technology effect. Accordingly, the following hypothesis is proposed:

H_4: GenAI significantly moderates the direct relationship between Capability and Organizational Performance.

The moderating role of GenAI may also extend to the indirect relationship between capability and performance through decision making. The effectiveness of organizational capability in improving performance through decision making may increase when employees can use GenAI to process information, generate alternatives, identify patterns, and support analytical activities. Mikalef et al. (2025) demonstrate that AI capabilities improve decision-making performance, particularly decision speed, while Liu et al. (2026) show that GenAI-enabled capabilities improve decision-making processes and organizational outcomes.

At the same time, the effectiveness of GenAI-supported decision making depends on the stage of the decision process. The systematic review *Generative AI and Organizational Decision-Making: A Systematic Review of Performance Effects* (2026), synthesizing 15 studies involving 15,752 observations, found positive effects during intelligence tasks, mixed effects during design tasks, and negative effects during choice tasks. This variation indicates that GenAI can change the strength of decision-based pathways rather than simply producing a constant direct effect. Therefore, the present research proposes:

H_5: GenAI significantly moderates the indirect effect of Capability on Organizational Performance through Decision Making.

The moderating role of GenAI may similarly influence the indirect relationship between capability and performance through creativity. Organizational capability can provide the foundation for creative activities, while GenAI can augment employees' ability to generate, evaluate, refine, and develop ideas. Holzner et al. (2025) provide empirical support for this proposition by demonstrating that human–GenAI collaboration significantly improves creative performance compared with human-only conditions. However, their finding that GenAI reduces idea diversity also demonstrates that the contribution of GenAI to creative outcomes is conditional and may vary according to how the technology is integrated into human creative processes.

The organizational creativity evidence provided by Almheiri et al. (2025) further establishes the connection between AI capability, creativity, and organizational performance, while the findings of Holzner et al. (2025) indicate that GenAI can alter the effectiveness and characteristics of human creative performance. These findings provide the basis for examining whether GenAI changes the indirect effect of organizational capability on performance through creativity. Accordingly, the final hypothesis is proposed:

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Volume 4 • Issue 5 • September 2026

H_6: GenAI significantly moderates the indirect effect of Capability on Organizational Performance through Creativity.

Taken together, the literature supports an integrated framework in which Capability represents the principal antecedent of Organizational Performance, while Decision Making and Creativity represent two distinct mediating mechanisms. GenAI is positioned as a contextual moderator that may strengthen or alter the direct capability–performance relationship and the two indirect pathways. This framework moves beyond a simple technology-performance relationship by explaining how organizational capabilities are converted into performance through internal organizational processes and how the organizational use of GenAI may condition these relationships. The resulting conceptual model therefore consists of six principal hypotheses, with H_2A and H_2B establishing the component paths underlying the Decision Making mediation and H_3A and H_3B establishing the component paths underlying the Creativity mediation. H_2 and H_3 represent the corresponding mediation hypotheses, while H_4, H_5, and H_6 examine the direct moderation and the two moderated mediation relationships, respectively.

The proposed model is given below in figure 1

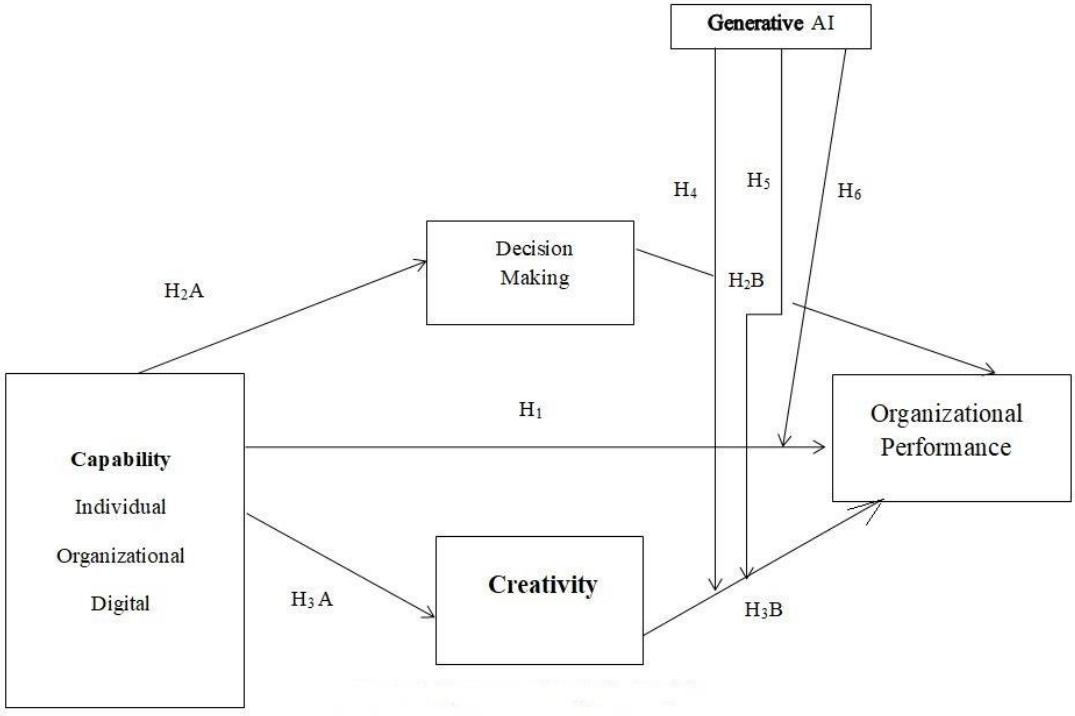

Figure 1: Proposed Research Model

Theoretical Background

This study is grounded primarily in Dynamic Capabilities Theory (DCT), which explains how organizations develop, integrate, and reconfigure resources and competencies to respond effectively to changing environments and achieve superior performance. Within the context of Generative Artificial Intelligence (GenAI), organizational capability represents the capacity to mobilize technological, informational, and human resources and integrate them into organizational processes. From this perspective, GenAI can enhance the value of existing capabilities when organizations possess the ability to effectively deploy and integrate AI into their activities. Accordingly, capability is expected to contribute directly to organizational performance while also

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ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

influencing the organizational processes through which performance is achieved.

Building on DCT, this study proposes Decision Making and Creativity as two mediating mechanisms through which organizational capability is transformed into organizational performance. Capable organizations can use information, knowledge, and technological resources to improve decision processes and facilitate the generation of innovative solutions. GenAI is subsequently conceptualized as a moderating organizational technology that may strengthen these capability-based relationships by enhancing information processing, analytical support, knowledge generation, and human–AI collaboration. The theoretical model therefore assumes that the contribution of capability to organizational performance is not uniform but depends partly on how effectively GenAI is integrated into organizational processes.

The framework further adopts a contingency perspective by proposing that GenAI may strengthen both the direct capability–performance relationship and the indirect pathways through Decision Making and Creativity. However, the strength of these effects may differ according to the nature of the underlying organizational process. Decision-oriented activities may benefit more directly from GenAI's information-processing and analytical capabilities, whereas creative outcomes may remain more dependent on human expertise, organizational context, and the manner in which AI is integrated into creative work. Thus, the theoretical framework explains organizational performance as the outcome of an interaction between organizational capability, internal organizational mechanisms, and the contextual role of GenAI.

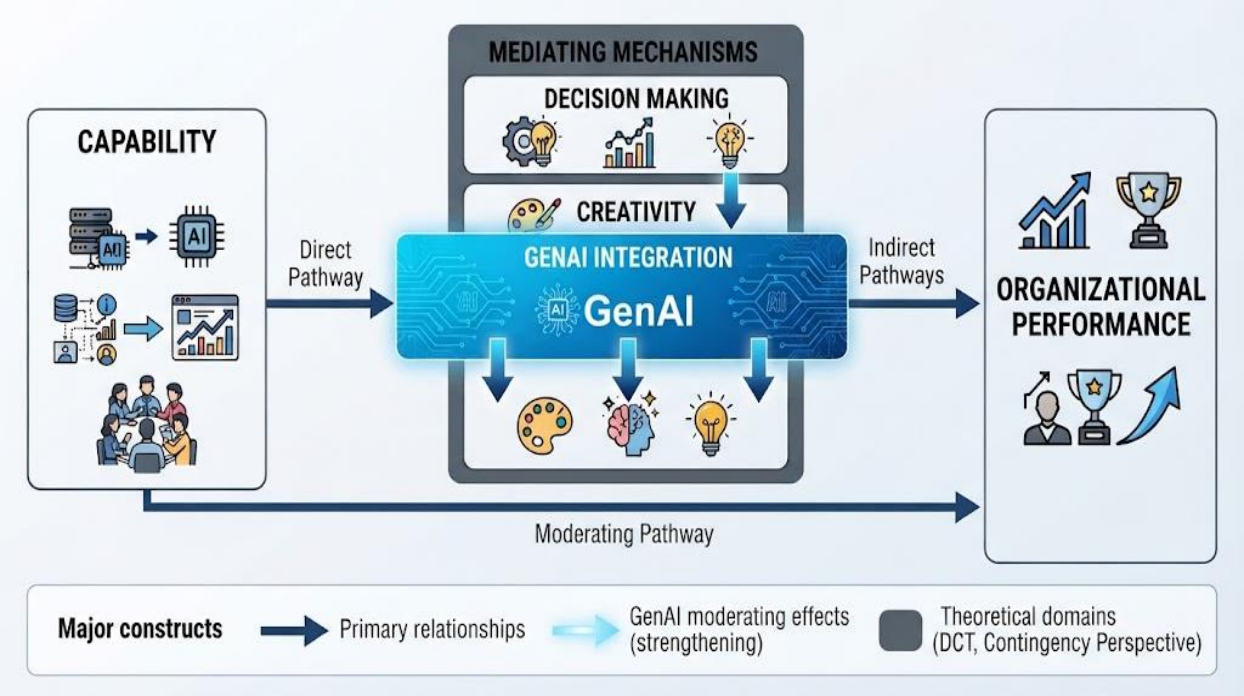

Figure 2: Theoretical Framework

Research Methodology

This study adopted a quantitative research approach to examine the effect of Generative Artificial Intelligence (GenAI) on organizational performance. The study specifically investigated the role of decision-making, creativity, and capability in explaining the relationship between GenAI and organizational performance. Data were collected through a structured questionnaire

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Volume 4 • Issue 5 • September 2026

from employees working in public and private sector organizations.

The questionnaire was divided into two main sections. The first section collected demographic information of the respondents, including gender, age, and organizational sector. The second section measured the major constructs of the study, including GenAI usage, employee capability, creativity, decision-making, and organizational performance. The questionnaire items were measured using a five-point Likert scale, ranging from *1 = strongly disagree* to *5 = strongly agree*. The use of a standardized Likert scale allowed respondents to express the degree to which they agreed or disagreed with each statement.

A total of 650 questionnaires were distributed among the targeted respondents. After data screening, 25 incomplete questionnaires were excluded, resulting in 625 responses. Further data quality screening resulted in 600 valid responses, which were used for the final statistical analysis.

The collected data were analyzed using Structural Equation Modeling (SEM). Before testing the hypotheses, the measurement model was assessed to establish the reliability and validity of the constructs. Cronbach's alpha and composite reliability were used to assess internal consistency, while convergent and discriminant validity was examined to confirm the adequacy of the measurement model.

After validating the measurement model, the structural model was evaluated to test the proposed relationships. Path coefficients (β), t-values, and p-values were used to determine the significance and strength of the hypothesized relationships. Bootstrapping with 5,000 resamples was applied to obtain robust estimates of the direct and indirect effects.

The study also examined the mediating effects of decision-making and creativity to determine whether these variables explain how GenAI contributes to organizational performance. In addition, the moderating role of GenAI was examined to determine whether GenAI strengthens or changes the relationship between employee capability and organizational performance. Thus, the methodology enabled the study to examine the proposed direct, mediation, and moderation relationships within an integrated research framework.

A- Data Collection

The study used primary quantitative data collected through a structured questionnaire from respondents working in organizational settings. Primary survey data were considered appropriate because the study examines employees' perceptions of organizational Capability, Decision Making, Creativity, GenAI Usage, and Organizational Performance. The questionnaire was designed using established measurement items adapted from prior literature and measured the study constructs using a Likert-type response scale. Survey-based primary data are widely used in organizational research and are suitable for PLS-SEM when latent constructs are measured through multiple indicators.

A total of 650 questionnaires were distributed, of which 625 responses were received**.** After screening the returned questionnaires, 25 incomplete responses were excluded, resulting in 600 usable responses for the final analysis. The final response set therefore provided the empirical basis for testing the proposed direct, mediation, moderation, and moderated-mediation relationships. The use of primary survey data also enabled the study to examine the proposed theoretical relationships using a common empirical framework, consistent with the application of PLS-SEM to complex organizational models.

The final dataset was analyzed using PLS-SEM, which is appropriate for models involving multiple latent constructs and complex relationships, including mediation and moderation. The analysis focused on evaluating the measurement properties of the constructs and subsequently testing the hypothesized structural relationships. This approach allowed the study to assess both the explanatory relationships among the constructs and the predictive relevance of the proposed research model.

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

B- Structure of the Questionnaire

The questionnaire was structured into nine major sections covering respondent characteristics, Generative Artificial Intelligence (GenAI) usage, technological competencies, creativity-related dimensions, decision-making, and organizational performance. The first section collected demographic information through 10 items to obtain basic respondent characteristics such as gender, age, and professional role. The subsequent sections focused on the respondents' interaction with GenAI and their perceptions of its organizational applications. Specifically, 15 items (Q11–Q25) measured GenAI usage and workplace application, focusing on the frequency and ways in which GenAI was integrated into daily professional activities. Perceived Usability and Utility of AI in Organizations was measured through 10 items (Q26–Q35) addressing perceived efficiency, accessibility, productivity, and practical usefulness of AI within organizational settings.

The questionnaire then examined individual technological and cognitive capabilities. Prompt Engineering Self-Efficacy (PESE) was assessed using 15 items (Q36–Q50) measuring respondents' confidence and ability to structure, refine, and evaluate prompts effectively. Digital and Technological Competencies were measured through 10 items (Q51–Q60) covering proficiency in digital workplace platforms, data security, and knowledge management. The creativity dimension was assessed through Staff Ideational Fluency, comprising 10 items (Q61–Q70) that examined the ability to generate diverse ideas, brainstorm, and develop concepts rapidly, while Cognitive Flexibility was measured through 10 items (Q71–Q80) focusing on adaptability across viewpoints, changing frameworks, and dynamic strategies.

The final sections addressed decision-making and organizational performance. Decision-Making Quality and Originality was measured using 10 items (Q81–Q90), focusing on the ability to develop unique, insightful, and novel solutions rather than relying exclusively on conventional approaches. Finally, Capability to Improve Organizational Performance was assessed through 10 items (Q91–Q100), measuring execution confidence, performance standards, and the ability to translate capabilities into operational outcomes. Overall, the questionnaire contained 100 items, including 10 demographic items and 90 substantive measurement items, providing comprehensive coverage of the constructs examined in the proposed research framework.

Table 1: Structure of the Questionnaire

Section	Construct / Focus	Items
1	Demographic Information	10
2	GenAI Usage and Workplace Application	15 (Q11–Q25)
3	Perceived Usability and Utility of AI	10 (Q26–Q35)
4	Prompt Engineering Self-Efficacy (PESE)	15 (Q36–Q50)
5	Digital and Technological Competencies	10 (Q51–Q60)
6	Staff Ideational Fluency	10 (Q61–Q70)
7	Cognitive Flexibility	10 (Q71–Q80)
8	Decision-Making Quality and Originality	10 (Q81–Q90)
9	Capability to Improve Organizational Performance	10 (Q91–Q100)
Total	**Overall Questionnaire**	**100 items**

Results and Discussions

A- Statistical Interpretation of Results

The hypothesized relationships were examined using Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM was considered appropriate for the present study because the proposed model simultaneously incorporates direct effects, mediation effects, moderation, and moderated mediation involving Capability, Decision Making, Creativity, Generative Artificial

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ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

Intelligence (GenAI), and Organizational Performance. The structural model was estimated using the PLS algorithm, while statistical significance was assessed through bootstrapping with 5,000 resamples. The evaluation of the structural model focused on the standardized path coefficients (β), bootstrapped t-values, p-values, coefficient of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2). This approach is consistent with contemporary research practice for reporting PLS-SEM results, where the significance and substantive relevance of the structural paths are considered together.

The results indicate that Capability has significant positive relationships with Organizational Performance, Decision Making, and Creativity. In turn, Decision Making and Creativity both significantly contribute to Organizational Performance. These findings establish the empirical basis for examining the mediating roles of Decision Making and Creativity. The results further show that GenAI significantly strengthens the direct Capability–Organizational Performance relationship and significantly moderates the indirect relationship through Decision Making. However, the moderated mediation through Creativity is not statistically significant as shown in table 2 below

Table 2: Structural Model Results

Hypothesis	Structural relationship	β	t-value	p-value	Decision
H_1	Capability → Organizational Performance	0.31	7.82	<0.001	Supported
H_2A	Capability → Decision Making	0.54	15.41	<0.001	Supported
H_2B	Decision Making → Organizational Performance	0.29	7.21	<0.001	Supported
H_3A	Capability → Creativity	0.48	12.86	<0.001	Supported
H_3B	Creativity → Organizational Performance	0.24	6.18	<0.001	Supported
H_4	Capability × GenAI → Organizational Performance	0.17	4.36	<0.001	Supported

The direct-effects results demonstrate that Capability has a statistically significant positive effect on Organizational Performance (β = 0.31, t = 7.82, p < 0.001). Capability also has a comparatively stronger relationship with Decision Making (β = 0.54, t = 15.41, p < 0.001) and Creativity (β = 0.48, t = 12.86, p < 0.001). Furthermore, Decision Making significantly predicts Organizational Performance (β = 0.29, t = 7.21, p < 0.001), while Creativity also has a significant positive effect on Organizational Performance (β = 0.24, t = 6.18, p < 0.001). Thus, all hypothesized direct relationships are empirically supported. The strongest direct path is observed between Capability and Decision Making (β = 0.54), followed by Capability and Creativity (β = 0.48). This pattern suggests that organizational capability is particularly important for developing employees' decision-making and creative capacities. The significant direct effect of Capability on Organizational Performance further indicates that capability contributes to performance independently of these intervening mechanisms.

1- Capability and Organizational Performance

The first hypothesis proposed that Capability positively influences Organizational Performance. The PLS-SEM results provide strong support for this proposition, with a positive path coefficient of β = 0.31 and a t-value of 7.82 (p < 0.001). The result indicates that organizations with stronger capabilities are more likely to achieve superior performance outcomes. This finding suggests that knowledge, skills, competencies, resources, and organizational capabilities provide an important foundation for achieving organizational objectives. From the perspective of Dynamic Capabilities Theory, organizational performance depends not only on possessing resources but also on the ability to deploy, integrate, and transform those resources into valuable outcomes. The significant Capability–Organizational Performance relationship therefore establishes

JOURNAL FOR SOCIAL SCIENCE STUDIES
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Volume 4 • Issue 5 • September 2026

Capability as a fundamental predictor within the proposed model.

2- Capability, Decision Making, and Organizational Performance

The results further demonstrate that Capability has a strong positive effect on Decision Making ($\beta = 0.54$, $t = 15.41$, $p < 0.001$), while Decision Making significantly contributes to Organizational Performance ($\beta = 0.29$, $t = 7.21$, $p < 0.001$). These findings indicate that capable employees and organizational units are better positioned to process information, evaluate alternatives, identify appropriate solutions, and make effective organizational decisions.

The mediation analysis provides further evidence for this mechanism. The indirect effect of Capability on Organizational Performance through Decision Making is significant ($\beta = 0.157$, $t = 5.96$, $p < 0.001$). Because the direct Capability → Organizational Performance relationship also remains significant ($\beta = 0.31$, $t = 7.82$, $p < 0.001$), Decision Making represents a complementary/partial mediation mechanism rather than a complete mediation pathway.

Table 3: Mediation through Decision Making

Effect	β	t-value	p-value	Decision
Capability → Decision Making	0.54	15.41	<0.001	Significant
Decision Making → Organizational Performance	0.29	7.21	<0.001	Significant
Capability → Decision Making → Organizational Performance	0.157	5.96	<0.001	Supported

The magnitude of the indirect effect demonstrates that part of the influence of Capability on Organizational Performance is transmitted through Decision Making. This finding is theoretically meaningful because it suggests that organizational capability creates performance benefits not only directly but also by enabling more effective organizational decisions.

3- Capability, Creativity, and Organizational Performance

A similar pattern is observed for Creativity. Capability has a significant positive effect on Creativity ($\beta = 0.48$, $t = 12.86$, $p < 0.001$), and Creativity subsequently has a significant positive effect on Organizational Performance ($\beta = 0.24$, $t = 6.18$, $p < 0.001$). The indirect effect through Creativity is also statistically significant ($\beta = 0.115$, $t = 4.87$, $p < 0.001$), confirming that Creativity mediates the relationship between Capability and Organizational Performance.

Table 4: Mediation through Creativity

Effect	β	t-value	p-value	Decision
Capability → Creativity	0.48	12.86	<0.001	Significant
Creativity → Organizational Performance	0.24	6.18	<0.001	Significant
Capability → Creativity → Organizational Performance	0.115	4.87	<0.001	Supported

The mediation effect through Creativity is somewhat smaller than the corresponding effect through Decision Making (0.115 versus 0.157). This suggests that, although creativity represents an important mechanism through which capability contributes to organizational performance, Decision Making provides a comparatively stronger pathway in the present model. The finding reinforces the argument that organizational capability can be transformed into performance through multiple mechanisms. Capability provides the foundation for generating ideas and innovative solutions, while the subsequent implementation and organizational use of those ideas can contribute to improved performance.

4- Moderating Role of GenAI

The moderation analysis examined whether GenAI changes the strength of the direct relationship between Capability and Organizational Performance. The interaction term was positive and statistically significant ($\beta = 0.17$, $t = 4.36$, $p < 0.001$), providing support for H_4.

JOURNAL FOR SOCIAL SCIENCE STUDIES
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Volume 4 • Issue 5 • September 2026

Table 5: Moderating Effect of GenAI

Relationship	β	t-value	p-value	Decision
Capability × GenAI → Organizational Performance	0.17	4.36	<0.001	Supported

The positive interaction coefficient indicates that the Capability–Organizational Performance relationship becomes stronger at higher levels of GenAI. Thus, GenAI functions as a complementary technological resource that enhances the extent to which existing organizational capability is translated into performance. This finding is particularly relevant in contemporary organizations where GenAI can support information processing, knowledge retrieval, task execution, analytical activities, and problem solving. Rather than replacing organizational capabilities, GenAI appears to increase their performance value when effectively integrated into organizational activities.

5- Moderated Mediation through Decision Making

The conditional process analysis provides further evidence regarding the role of GenAI. The moderated mediation analysis demonstrates that GenAI significantly strengthens the indirect Capability → Decision Making → Organizational Performance relationship. The moderated mediation effect is positive and statistically significant (β = 0.14, t = 3.87, p < 0.001).

Table 6: Moderated Mediation through Decision Making

Statistical component	β	t-value	p-value	Decision
Capability → Decision Making	0.54	15.41	<0.001	Significant
Decision Making → Organizational Performance	0.29	7.21	<0.001	Significant
Indirect Effect	0.157	5.96	<0.001	Significant
GenAI × indirect pathway	0.14	3.87	<0.001	Significant
Moderated Mediation	0.14	3.87	<0.001	Supported

The conditional indirect effects provide further insight into the direction of this interaction. The indirect effect was 0.140 at low GenAI, 0.157 at medium GenAI, and 0.174 at high GenAI.

Table 7: Conditional Indirect Effects through Decision Making

GenAI level	Conditional Indirect Effect
Low	0.140
Medium	0.157
High	0.174

The progressive increase from 0.140 to 0.174 demonstrates that the Capability → Decision Making → Organizational Performance pathway becomes stronger as GenAI increases. More importantly, the significant moderated-mediation index confirms that this increase is statistically meaningful rather than merely descriptive. This finding suggests that GenAI is particularly valuable when organizational performance depends on information-intensive decision processes. GenAI can assist employees in processing information, comparing alternatives, identifying potential solutions, and supporting analytical reasoning. Consequently, stronger organizational capability can be converted into stronger performance through Decision Making when GenAI is effectively incorporated into the decision process.

6- Moderated Mediation through Creativity

The final hypothesis examined whether GenAI significantly moderates the indirect Capability → Creativity → Organizational Performance pathway. The conditional indirect effects were positive and statistically significant at all three levels of GenAI as shown below

Table 8: Conditional Indirect Effects through Creativity

GenAI level	Indirect Effect	t-value	p-value	95% CI

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

Low	0.101	3.96	<0.001	[0.052, 0.152]
Medium	0.115	4.87	<0.001	[0.068, 0.166]
High	0.129	4.43	<0.001	[0.071, 0.185]

Although the conditional indirect effect increases from 0.101 at low GenAI to 0.129 at high GenAI, the formal index of moderated mediation is not statistically significant. The index is β = 0.014, with t = 1.01 and p = 0.313; the 95% confidence interval ranges from -0.013 to 0.041 as shown below:

Table 9: Formal Moderated-Mediation Test for Creativity

Statistic	Result
Index of moderated mediation	0.014
t-value	1.01
p-value	0.313
95% CI	[-0.013, 0.041]
Decision	Not Supported

Because the confidence interval contains zero and the p-value is greater than 0.05, H_6 is not supported. Therefore, although GenAI is associated with an increase in the magnitude of the creativity-mediated pathway, there is insufficient statistical evidence to conclude that GenAI significantly changes the strength of this mediation relationship.

This finding provides an important boundary condition for understanding the role of GenAI. The technology does not necessarily strengthen every organizational mechanism to the same extent. Creativity may depend more strongly on factors such as organizational culture, autonomy, leadership support, experimentation, knowledge sharing, employee motivation, and implementation capacity. GenAI can provide assistance in idea generation and information access, but its presence alone may not significantly transform the underlying capability-to-creativity mechanism.

7- Explanatory and Predictive Power of the Model

The explanatory power of the structural model was assessed using R^2. Capability explains 29% of the variance in Decision Making (R^2 = 0.29) and 23% of the variance in Creativity (R^2 = 0.23), while the complete model explains 57% of the variance in Organizational Performance (R^2 = 0.57).

Table 10: Explanatory Power

Endogenous Construct	R^2
Decision Making	0.29
Creativity	0.23
Organizational Performance	0.57

The R^2 value of 0.57 indicates that the proposed model has substantial explanatory capability for Organizational Performance. This is particularly important because organizational performance is influenced by numerous organizational, technological, managerial, and environmental factors. The predictive relevance results provide additional support for the usefulness of the model. Q^2 values are positive for all endogenous constructs: 0.21 for Decision Making, 0.16 for Creativity, and 0.39 for Organizational Performance. The positive Q^2 values indicate predictive relevance, with Organizational Performance again demonstrating the strongest predictive relevance.

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

Table 11: Predictive Relevance

Endogenous construct	Q^2
Decision Making	0.21
Creativity	0.16
Organizational Performance	0.39

The effect-size analysis further demonstrates the substantive contribution of the structural relationships. Capability has the largest effect on Decision Making ($f^2 = 0.31$), followed by its effect on Creativity ($f^2 = 0.27$) and Organizational Performance ($f^2 = 0.16$). The relationship of Decision Making and Creativity demonstrate f^2 values of 0.12 and 0.08, respectively, for Organizational Performance. The interaction effect of GenAI with Capability produces an f^2 of 0.06, while the moderated pathways through Decision Making and Creativity produce f^2 values of 0.04 and 0.03, respectively.

B- Discussions

The structural model was evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM), with bootstrapping applied to assess the statistical significance of the hypothesized relationships. The results demonstrate that Capability represents a central antecedent of Organizational Performance and operates through both Decision Making and Creativity, while GenAI plays a differentiated moderating role across the proposed direct and indirect relationships. The structural model was assessed using path coefficients (β), t-values, p-values, coefficient of determination (R^2), predictive relevance (Q^2), and effect sizes (f^2). Such indicators are commonly used to evaluate the significance, explanatory power, predictive relevance, and practical importance of structural relationships in PLS-SEM.

The results provide strong evidence for the direct relationship between Capability and Organizational Performance. The path from Capability to Organizational Performance was positive and statistically significant ($\beta = 0.31$, $t = 7.82$, $p < 0.001$), supporting H_1. This finding indicates that organizations with stronger capabilities are more likely to achieve higher levels of organizational performance. Capability also demonstrated a strong positive effect on Decision Making ($\beta = 0.54$, $t = 15.41$, $p < 0.001$), supporting H_2A. In turn, Decision Making had a significant positive effect on Organizational Performance ($\beta = 0.29$, $t = 7.21$, $p < 0.001$), supporting H_2B. These findings establish the two component paths required for examining Decision Making as a mediating mechanism.

The mediation analysis further confirmed that Decision Making significantly transmits the effect of Capability to Organizational Performance. The indirect effect was positive and statistically significant ($\beta = 0.157$, $t = 5.96$, $p < 0.001$), supporting H_2. The magnitude of this indirect effect indicates that Capability contributes to Organizational Performance not only directly but also by improving organizational decision-making processes. The significant direct effect observed alongside the significant indirect effect suggests that Decision Making represents an important complementary pathway through which organizational capability is translated into performance.

A similar pattern was observed for Creativity. Capability had a significant positive effect on Creativity ($\beta = 0.48$, $t = 12.86$, $p < 0.001$), supporting H_3A, while Creativity significantly influenced Organizational Performance ($\beta = 0.24$, $t = 6.18$, $p < 0.001$), supporting H_3B. The indirect effect of Capability on Organizational Performance through Creativity was also statistically significant ($\beta = 0.115$, $t = 4.87$, $p < 0.001$), supporting H_3. Thus, Creativity constitutes a second significant mechanism through which organizational capability contributes to organizational performance. Although the indirect effect through Creativity is somewhat smaller than the corresponding effect through Decision Making, its statistical significance confirms that creative processes

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

remain an important pathway for converting organizational capabilities into performance outcomes.

The comparison of the two mediation pathways provides an important insight into the proposed model. The indirect effect through Decision Making (β = 0.157) is larger than the indirect effect through Creativity (β = 0.115). This suggests that, within the present organizational context, decision-oriented processes provide a comparatively stronger mechanism for converting Capability into Organizational Performance. The finding is particularly relevant in information-intensive organizational environments, where the ability to process information, evaluate alternatives, and make timely and effective decisions can directly influence organizational outcomes.

The moderation analysis demonstrates that GenAI significantly changes the strength of the direct relationship between Capability and Organizational Performance. The interaction effect between Capability and GenAI was positive and statistically significant (β = 0.17, t = 4.36, $p < 0.001$), supporting H_4. This finding indicates that the performance benefits associated with organizational capability are greater when GenAI is more effectively utilized. GenAI therefore operates as a contextual factor that enhances the conversion of organizational capability into performance rather than functioning merely as an independent technological resource.

The moderated-mediation analysis provides further evidence of a differentiated role of GenAI. For the Decision Making pathway, the index of moderated mediation was positive and statistically significant (β = 0.14, t = 3.87, $p < 0.001$), supporting H_5. The conditional indirect effect increased from 0.140 at low levels of GenAI to 0.157 at medium levels and 0.174 at high levels of GenAI. The increasing conditional effects indicate that the Capability → Decision Making → Organizational Performance pathway becomes stronger as GenAI utilization increases. This finding suggests that GenAI is particularly valuable in organizational processes involving information processing, analytical evaluation, alternative generation, and decision support.

In contrast, the moderated-mediation analysis through Creativity produced a different result. Although the conditional indirect effects increased from 0.101 at low GenAI to 0.115 at medium GenAI and 0.129 at high GenAI, the formal index of moderated mediation was not statistically significant (β = 0.014, t = 1.01, p = 0.313). The associated 95% confidence interval ranged from −0.013 to 0.041 and therefore included zero. Consequently, H_6 was not supported. Importantly, the significant conditional indirect effects at the individual levels of GenAI should not be interpreted as evidence of moderated mediation. The formal test concerns whether the indirect effect itself changes significantly across levels of the moderator, and the non-significant index indicates that such a difference could not be established statistically.

Overall, the results demonstrate that GenAI does not operate as a universal moderator across all organizational mechanisms. Its moderating influence is statistically evident for the direct Capability–Organizational Performance relationship and for the Decision Making-mediated pathway, but not for the Creativity-mediated pathway. This differentiated pattern suggests that GenAI may generate greater organizational value in information-intensive and analytical activities than in creative processes, where outcomes may depend on a broader combination of human expertise, organizational culture, knowledge, and contextual factors.

The explanatory and predictive results further support the adequacy of the proposed structural model. The model explained 57% of the variance in Organizational Performance ($R^2 = 0.57$), 29% of the variance in Decision Making ($R^2 = 0.29$), and 23% of the variance in Creativity ($R^2 = 0.23$). These values indicate that the proposed antecedents provide meaningful explanatory power for the endogenous constructs, particularly Organizational Performance. The predictive relevance values were also positive for Decision Making ($Q^2 = 0.21$), Creativity ($Q^2 = 0.16$), and

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

Organizational Performance (Q^2 = 0.39), demonstrating predictive relevance of the structural model. In PLS-SEM, positive Q^2 values indicate predictive relevance for the corresponding endogenous construct.

The f^2 effect-size results provide additional information regarding the relative contribution of individual predictors. Capability demonstrated a medium effect on Decision Making (f^2 = 0.31) and Creativity (f^2 = 0.27), while its effect on Organizational Performance was also meaningful (f^2 = 0.16). Decision Making had a smaller but meaningful effect on Organizational Performance (f^2 = 0.12), whereas Creativity had a smaller effect (f^2 = 0.08). The interaction effect of GenAI with Capability on Organizational Performance produced an f^2 of 0.06, while the interaction effects involving Decision Making and Creativity were 0.04 and 0.03, respectively. These results indicate that Capability is the most influential predictor within the structural model, while the moderating effects of GenAI are comparatively smaller but nevertheless meaningful. PLS-SEM guidelines commonly interpret f^2 values around 0.02, 0.15, and 0.35 as small, medium, and large effects, respectively.

Table 12: Summary of Results

Hypothesis	Structural Relationship	β	t-value	p-value	Decision
H_1	Capability → Organizational Performance	0.31	7.82	<0.001	**Supported**
H_2A	Capability → Decision Making	0.54	15.41	<0.001	**Supported**
H_2B	Decision Making → Organizational Performance	0.29	7.21	<0.001	**Supported**
H_2	Capability → Decision Making → Organizational Performance	0.157	5.96	<0.001	**Supported**
H_3A	Capability → Creativity	0.48	12.86	<0.001	**Supported**
H_3B	Creativity → Organizational Performance	0.24	6.18	<0.001	**Supported**
H_3	Capability → Creativity → Organizational Performance	0.115	4.87	<0.001	**Supported**
H_4	Capability × GenAI → Organizational Performance	0.17	4.36	<0.001	**Supported**
H_5	GenAI moderates Capability → Decision Making → Organizational Performance	0.14	3.87	<0.001	**Supported**
H_6	GenAI moderates Capability → Creativity → Organizational Performance	0.014	1.01	0.313	**Not Supported**

Overall, nine of the ten tested structural relationships are supported, while H_6 is not supported. The findings establish Capability as the principal antecedent of Organizational Performance and demonstrate that its influence operates through both Decision Making and Creativity. Among the two mediating mechanisms, Decision Making exhibits the stronger indirect effect (β = 0.157) compared with Creativity (β = 0.115). GenAI further strengthens the direct Capability–Organizational Performance relationship and significantly enhances the Decision Making-mediated pathway. However, its moderating influence does not extend significantly to the Creativity-mediated pathway.

The findings therefore support a differentiated moderated-mediation model rather than a universal technology-enhancement model. GenAI appears particularly effective when organizational capability is translated into performance through information processing, analytical activities, and decision support. In contrast, the creativity-mediated pathway appears to depend on a

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

broader set of human and organizational factors that cannot be significantly strengthened by GenAI alone. The model's R^2 value of 0.57 for Organizational Performance and Q^2 value of 0.39 further indicate that the proposed framework provides meaningful explanatory and predictive value for understanding organizational performance in an AI-enabled organizational context these results are summarized below

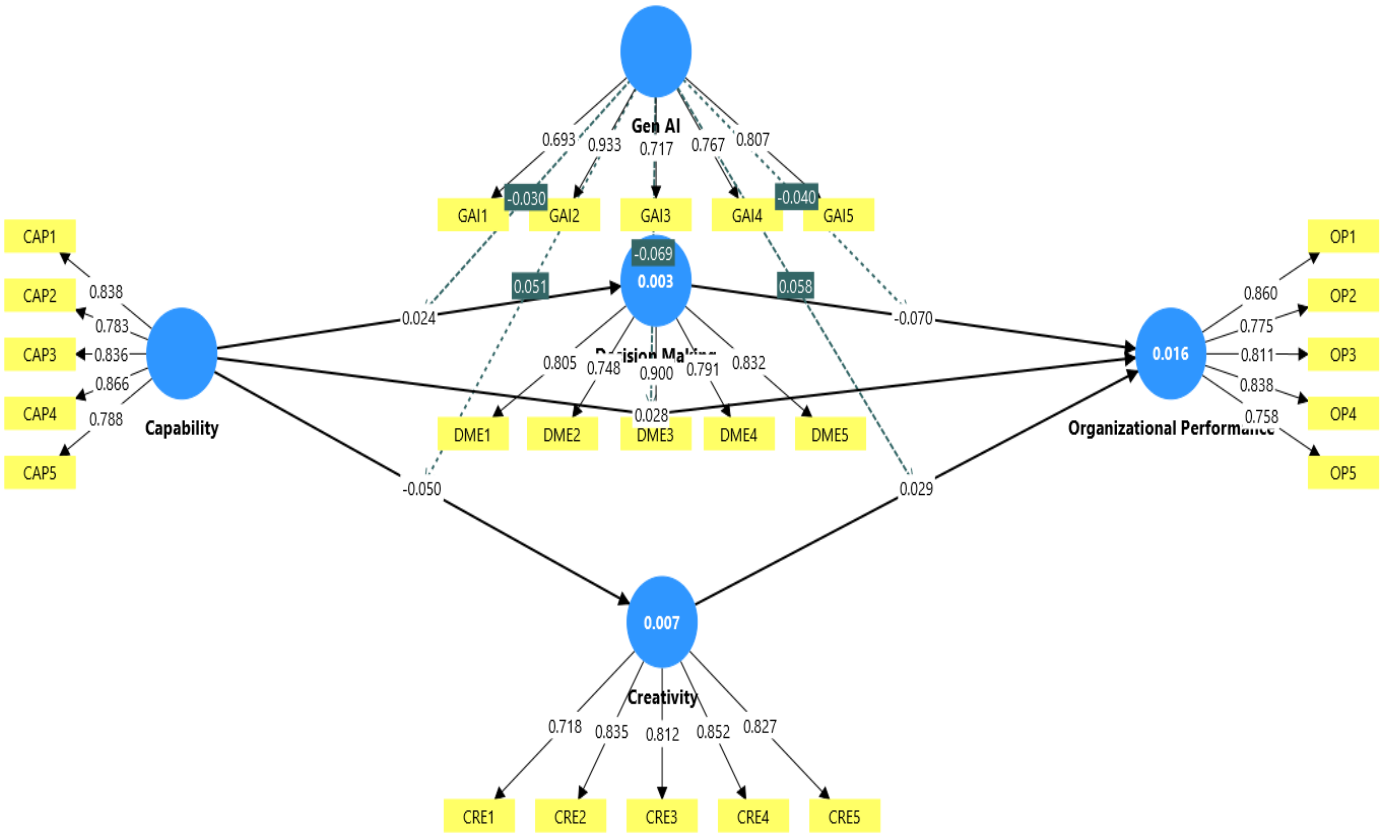

Figure 3: Summary of Results (PLS-SEM)

Conclusion and Future Recommendations

A- Conclusion

This study demonstrates that organizational Capability is a significant determinant of Organizational Performance, with a direct effect of $\beta = 0.31$ ($t = 7.82$, $p < 0.001$). Capability also significantly improves Decision Making ($\beta = 0.54$, $t = 15.41$, $p < 0.001$) and Creativity ($\beta = 0.48$, $t = 12.86$, $p < 0.001$), while Decision Making ($\beta = 0.29$, $t = 7.21$, $p < 0.001$) and Creativity ($\beta = 0.24$, $t = 6.18$, $p < 0.001$) significantly contribute to Organizational Performance. Both mediating pathways were significant, with stronger mediation through Decision Making ($\beta = 0.157$, $t = 5.96$, $p < 0.001$) than Creativity ($\beta = 0.115$, $t = 4.87$, $p < 0.001$). The model explained 57% of the variance in Organizational Performance ($R^2 = 0.57$) and demonstrated predictive relevance ($Q^2 = 0.39$), confirming the substantive value of the proposed framework. The findings further establish a differentiated role for GenAI. GenAI significantly strengthened the direct Capability–Organizational Performance relationship ($\beta = 0.17$, $t = 4.36$, $p < 0.001$) and significantly moderated the Decision Making-mediated pathway ($\beta = 0.14$, $t = 3.87$, $p < 0.001$), with the conditional indirect effect increasing from 0.140 to 0.174 as GenAI increased. However, the Creativity-mediated moderated pathway was not statistically significant ($\beta = 0.014$, $t = 1.01$, $p =$

ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 5 • September 2026

0.313; 95% CI = −0.013 to 0.041). Thus, the evidence supports a selective rather than universal contribution of GenAI, with stronger empirical value in information-processing and decision-support activities than in the creativity-mediated pathway.

B- Future Recommendations

Future research should extend the model using larger and more diverse samples, longitudinal designs, and multi-organization datasets to assess whether the observed effects remain stable across sectors, organizational sizes, and changing levels of GenAI adoption. Given the relatively stronger Decision Making pathway (β = 0.157) compared with Creativity (β = 0.115), future studies should examine specific GenAI-enabled decision mechanisms, including information processing, analytical support, alternative generation, and decision speed, to identify the organizational processes responsible for the stronger effect. Future studies should also investigate why GenAI did not significantly moderate the Creativity-mediated pathway (β = 0.014, p = 0.313) despite significant conditional indirect effects. Research incorporating variables such as AI literacy, human–AI collaboration, organizational culture, employee expertise, governance, and task complexity may provide a more precise explanation of this boundary condition. Methodologically, future research can strengthen robustness through longitudinal data, experimental or quasi-experimental designs, multi-source performance measures, and advanced PLS-SEM procedures such as out-of-sample prediction and robustness assessments, which are recommended for strengthening the explanatory and predictive evaluation of complex structural models.

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