International Journal of Economic Practices and Theories (IJEPT)
ISSN: 2247-7225
Volume 2026, Issue 1

AI-assisted Decision Making and Strategic Agility in Organization: An Empirical Study

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Abstract:

Artificial Intelligence has appeared as a transformative technology that is reshaping organizational decision-making and enhancing the ability of firms to respond effectively to dynamic business environments. AI-assisted decision making enables organizations to analyse large volumes of data, identify patterns, generate predictive insights and respond rapidly to changing business conditions. The study focuses on key dimensions of AI-assisted decision-making, including data-driven insights, predictive analytics, decision accuracy, real-time information processing, and managerial support examining the influence on strategic agility. Strategic agility is assessed through organizational responsiveness, adaptability, speed of decision-making, innovative capability, and the ability to reconfigure resources in response to emerging opportunities and threats. The findings are expected to show that effective integration of AI into organizational decision processes can improve decision quality, accelerate managerial responses, strengthen adaptability, and support proactive strategic decisions. The study also highlights the importance of human judgement, employee capabilities, data quality, and responsible AI practices in achieving effective AI-enabled decision-making. A sample of 373 was collected to find the result of the study. The factors affecting AI-assisted Decision Making and Strategic Agility in Organization are AI decision support, Decision-making Speed, Strategic Agility and Human AI collaboration.

Keywords: Artificial Intelligence, AI-enabled decision-making, Strategic agility, decision quality, organizational adaptability

Introduction

In modern business decision-making, Artificial Intelligence has become a highly important part. Companies in present times are using Artificial Intelligence system, for different activities like marketing strategies, forecasting of customer analysis and other operational management. Artificial Intelligence is helping businesses to improve efficiency, reduction of errors and making the decision-making faster as it processes massive amount of data in very less time and accurately. Despite all such benefits, judgements made by humans keep playing a major role in strategic business decision-making. These findings suggest that the association between Artificial Intelligence and humans in decision-making in complicated. Therefore, as Artificial Intelligence has become very common in business organizations, it is essential to understand how an individual perceive and use Artificial Intelligence in decision-making in context of strategic businesses (Singh et al., 2026). With the evolving AI technologies, they are highly integrated into the process of strategic decision-making across industries. Strategic decision-making can be enhanced significantly with the integration of Artificial Intelligence when implemented in a responsible manner. Managers need to play an active and responsible role to ensure that the Artificial Intelligence system is not just efficient but also ethical, transparent and aligned properly with organizational values. Artificial Intelligence system improves the decision-making as it offers predictive insights, massive datasets in real-time, reduction of cognitive biases and supporting managerial judgement. However, there are challenges like ethical concerns, algorithmic denseness, over-dependence and organizational resistance that brings substantial obstacles in effective adoption (Nadia, 2025). Transformative potential is held by AI to improve organizational decision-making as it increases accuracy, speed and adaptability. However, realization of these advantages needs addressing with substantial ethical challenges associated with

accountability, transparency, privacy and biases. Importance of integration of technical solutions are highlighted in the paper such as explainable Artificial Intelligence with strong framework of governance and ethical awareness. With the development of culture valuing responsible AI use and collaboration of human and AI, companies that are leveraging Artificial Intelligence to improve decision-making results while maintaining trust of stakeholders as well as ethical integrity (Singh, 2025; Yadav et al., 2023).

Artificial Intelligence tools and applications that improve strategic information processing like scenario modelling, and predictive analytics must ne prioritized, as well as needed human oversight of decisions supported by Artificial Intelligence. When companies need to function in quickly-changing and unpredictable markets, decision-making capabilities powered by Artificial Intelligence can come into great assistance. This part of the study is significant theoretically as it built upon condition-process theory for explaining the association between using Artificial Intelligence in the process of decision-making and strategic agility of companies and extending the research on organizational capabilities enabled by Artificial Intelligence to the context of emerging economies. It is suggested by the findings that investing if Artificial Intelligence augmented decision-making mainly in scenario modelling capabilities are yielding considerable returns in terms of strategic agility, particularly in turbulent environment. As companies are navigating highly in volatile markets, the capability of leveraging Artificial Intelligence for good-quality strategic decision-making would possibly become an important source of competitive advantage (Qureshi et al. 2026). Artificial Intelligence tools and technology is transforming the process of strategic making significantly in business organizations. It has improved the ability of analysing of organizations and prediction of data therefore enhancing efficiency and responsiveness of organizations. Integrating Artificial Intelligence technologies in strategy management has become highly important due to its constant evolution. Success of organizations in future would highly depend on manager's capabilities and institutions adopting and implementing these technologies in the process of decision-making. AI has become one of the highly important technical changes, which is occurring in modern organizational management and decision-making process. Developing machine learning techniques, bid data, predictive modelling and system of decision-support is enabling organizations to perform in a better way, adapting it more efficiently and competing at a higher level (Iqbal, Saini & Kumar, 2026). The quality of decisions has been improved significantly with the adoption of Artificial Intelligence as it has enabled data-driven insights, predictive accuracy and reduced human biases. Additionally, the time of decision-making is also reduced with the adoption of AI through automation and processing of real-time data, thus increases operational efficiency. A strong positive relation between AI-powered decision-making and organizational performance is established by this study, which indicates that Artificial Intelligence makes contribution towards enhanced productivity, competitive advantage and innovation. Managerial trust is strengthened significantly the positive influence of AI on performance, which suggests that human acceptance and confidence in Artificial Intelligence systems are considered critical determinant for success. Likewise, organizational readiness that include digital skills, infrastructure and leadership support make significant impact on the efficacy of implementing Artificial Intelligence. Artificial Intelligence works as a strategic system of decision-making augmenting human judgement rather than replacing them. Important implications are provided by these findings for organizations to pursue digital transformation (Varshney & Kumar, 2026).

Literature Review

As shown by many studies the companies integrating Artificial Intelligence into strategic process are positioned at better stage sensing environmental changes, responding quickly to the changing dynamics of the market, and reconfiguring the resources effectively. A crucial role is played by Strategic agility in translation of AI-related investments into a superior performance result, it highlights that adoption of technology alone is not sufficient without complementary organizational capabilities. Adoption of strategic AI makes a significant positive influence on the performance of firm and strategic agility. Moreover, strategic agility is observed to be influencing positively the performance of the company and mediating the relation between adoption of strategic AI and performance partially. It is suggested by the findings that Artificial Intelligence creates value not just through direct improvement in the performance but it also improves strategic responsiveness and adaptability of the firm (Hameed, 2026). Significant opportunities are offered by AI for improving organizational decision-

making as it enhances accuracy, efficiency and strategic results. Artificial Intelligence enables organization processing massive volume of data quickly, identification of patterns, prediction of trends and optimization of resource allocation as all of these make contribution to more informed and timely decisions. However, integrating AI successfully need to address challenges like privacy of data, organizational readiness and algorithmic biases. In order to leverage Artificial Intelligence fully, companies need to adopt a complete approach include investments in advanced technologies, implementation of ethical guidelines and development of skills of the workforce for management and interpretation of AI results in an effective manner. Association between Artificial Intelligence system and humans is highly critical, it ensures that judgement of humans complementing Artificial Intelligence insights for maintaining fairness as well as accountability (Nizar, 2018). Improving strategic agility and real-time decision-making in the sector of technology need systematic shift in the policy integrating digital intelligence throughout the whole lifecycle of the workforce. Predictive workforce analytics has appeared as a main pillar in this transformation. It enables business organizations to foresee talent requirements of future, shortage of skills, and mobility trends of the workforce, predictive analytics keeps ensuring strategic planning is anticipatory instead of reactive. Integration of such capabilities into a national framework of employment and organizational strategies permit private as well as public actors making evidence-based decisions aligning it with the capabilities of the workforce with the emerging frontiers of technology (Ongesa, 2025).

The way organizations lead and adapt by reshaping Artificial Intelligence as it enables smarter decision-making, it improves operations and improve talent development. The way organizations are operating, growing and stay competitive has been transformed significantly by AI. With rapidly spreading digital transformation, leaders are now utilising Artificial Intelligence not just for the automation of everyday tasks but also for gaining strategic insights and making informed decisions. Artificial Intelligence has appeared beyond repetitive work for influencing styles of leadership, strengthening of organizational culture and improving talent management (Ranjitham & Kaviyarasi, 2025). Artificial Intelligence, in this era of digital transformation has appeared as a main driver of agility, organizational competitiveness and innovation. There has been extensive research on the incorporation of Artificial Intelligence in advancing economies, its strategic implications in emerging economy have been explored less relatively. Organizational agility is their capability of perceiving, responding and adapting quickly to the changes and have become critical determinant of success in volatile marketplace in present time. In the same way, innovation is the ability of generating and implementing new ideas is facilitated by Artificial Intelligence, particularly through predictive analytics automations and intelligent system of decision-support. Integration of Artificial Intelligence into strategies of business that permits business organizations in extraction of actionable insights from big data ensuring optimal utilization of resources, and improving customer engagement (Sarkar, 2025). Digital transformation all over the globe has necessitated the adoption of AI in every sector. AI adoption has been used by companies for helping them to enhance their performance. Using Artificial Intelligence is witnessed particularly in the result and performance of the hard aspects of leadership thus leave leaders with soft aspects of leadership to deal with it. Adopting Artificial Intelligence in leadership has made contribution towards improvement of agility, hence, gives business organization a competitive edge over other organizations who have not yet adopted Artificial Intelligence. In order to overcome the weakness in adopting and using Artificial Intelligence in companies, they need to make investment in training & development programs for helping their employees to adapt technical transformation and integration of Artificial Intelligence (Ngui, 2025).

Artificial Intelligence is just an operational tool, but it is a strategic resource capable to reshape the paradigms of decision-making in business enterprises. However, the sustainability of such benefits hinges on balanced governance, ethical integration and constant learning. Strong theoretical and empirical insights are provided by the study; it has also highlighted limitations like dependence on datasets and the requirement for cross-industry validation. Models driven by Artificial Intelligence are outperforming traditional approaches in speed, accuracy and adaptability, with performance improvement in accuracy, operational efficiency and agility metrics (Aaijaz et al. (2025). Integration of Artificial Intelligence improves organizational agility and develop innovation, functioning as a strategic enabler of dynamic capabilities. Implementing AI effectively overcomes obstacles like shortage of skills, issues related to data quality, financial constraints, cultural resistance and ethical or regulatory

concerns. Strategic alignment, executive leadership, development of workforce, strong infrastructure of data, and ethical governance are important to translate Artificial Intelligence investments into a measurable strategic result. Business organizations need to adopt ethical framework of Artificial Intelligence and maintain compliance with privacy and regulatory standards. It is recommended to examine the casual influence of Artificial Intelligence on organizational agility and innovation across diverse sectors. Moreover, combining metrics of objective performance with perpetual data and conducting in-depth data provides rich insights into mechanism through which Artificial Intelligence make contribution towards strategic results (Haider et al. 2025). The dynamics of organizational agility has been transformed rapidly by Artificial Intelligence by improving decision-making, streamlines the operations and developing adaptive capabilities. Business organizations implementing AI strategically are positioned at a better place to respond to changing market, demands of customers, and pressure of competition with precision and speed. From automated process and predictive analytics to intelligence customer services and supply chain adjustments in real-time, Artificial Intelligence provides businesses with the tools and technologies required to stay flexible and resilient in a highly volatile environment. However, the advantages of Artificial Intelligence for organizational agility are not automatic. They need thoughtful integration with present systems, an innovation culture, and a commitment towards constant learning. Furthermore, ethical considerations, data governance and adaptation by employees needs to be managed proactively for realizations of full potential of Artificial Intelligence (Kamath & Reddy, 2025).

Objective

1. To know the factors associated to "AI-assisted Decision Making and Strategic Agility in Organization"
2. To measure the impact of AI-assisted Decision Making and Strategic Agility on organization performance.

Methodology

373 participants were surveyed from participants working in different sizes of organizations. The method of sampling was "Random sampling" for collection of data and examination was done by "Explanatory Factor Analysis" for results.

Findings

Table 1 demonstrates demographic details, it shows that 52.82% are Male, 47.18% are female. Looking at the age, 31.37% are below 30 years of age, 27.61% are between 30 to 35 years of age, and 41.02% are above 35 years of age. With regards to Organization Size, 31.90 are small scale enterprise, 32.44% are medium scale enterprise and 35.66% are large scale enterprise.

Table. 1 Respondent's Details

Variables	Participants	Percentage
Gender		
Male	197	52.82%
Female	176	47.18%
Total	**373**	**100**
Ages in years		
Below 30	117	31.37%
30 to 35	103	27.61%

Above 35	153	41.02%
Total	**373**	**100**
Organization Size		
Small scale enterprise	119	31.90%
Medium scale enterprise	121	32.44%
Large scale enterprise	133	35.66%
Total	**373**	**100**

“Factor Analysis”

“KMO and Bartlett's Test”

Table. 2 “Kaiser-Meyer-Olkin Measure of Sampling Adequacy”

“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.759
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	6470.656
	df	91
	Significance	.000

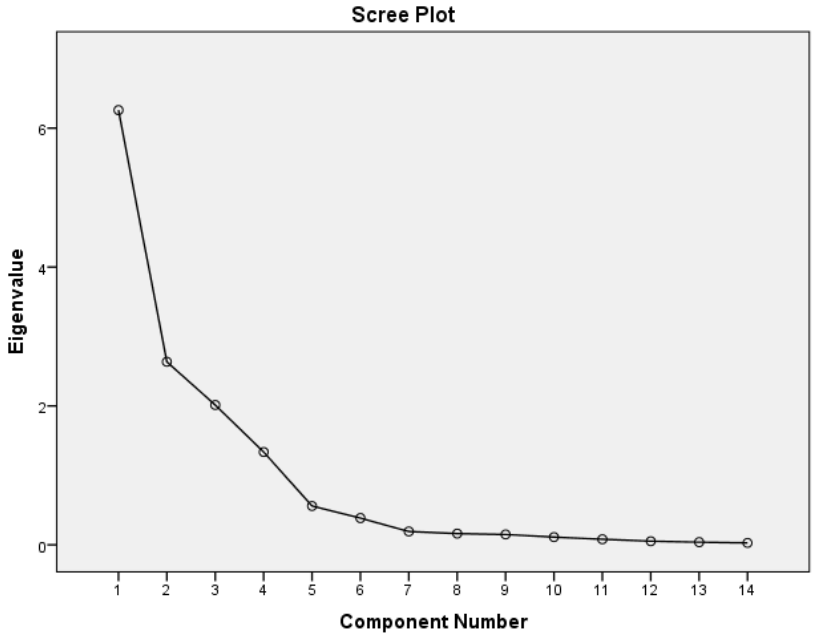
“KMO and Bartlett's Test”, value of KMO is .759 (Table 2).

Table 3 “Total Variance Explained”

“Component”	**“Initial Eigenvalues”**			**“Rotation Sums of Squared Loadings”**		
	“Total”	**“% Of Variance”**	**“Cumulative %”**	**“Total”**	**“% Of Variance”**	**“Cumulative %”**
1.	6.259	44.708	44.708	3.827	27.338	27.338
2.	2.635	18.823	63.531	3.634	25.960	53.298
3.	2.013	14.378	77.909	2.436	17.400	70.698
4.	1.337	9.547	87.456	2.346	16.758	87.456
5.	.559	3.996	91.452			
6.	.385	2.749	94.201			
7.	.192	1.373	95.573			
8.	.162	1.157	96.731			
9.	.149	1.063	97.793			
10.	.112	.798	98.591			
11.	.079	.567	99.158			

12.	.052	.373	99.531			
13.	.038	.273	99.804			
14.	.027	.196	100.000			

The four factors contribute towards explaining total 87.456% of variance. Variance explained by AI decision support is 27.338%, Decision-making Speed is 25.960%, Strategic Agility is 17.400%, and Human AI collaboration is 16.758%. (Table 3).



"Scree Plot"

Table. 4 "Rotated Component Matrix"

S. No.	Statements	Factor Loading	Factor Reliability
	AI decision support		**.949**
1.	AI tools provide useful information for making managerial decision	.952	
2.	AI-assisted system helps managers evaluate different decision alternatives	.907	
3.	AI improves the accuracy of organizational decisions	.847	
4.	AI provides relevant insights for solving business problems	.836	

	Decision-making Speed		**.961**
1.	AI enable managers to make decision more quickly	.960	
2.	AI reduces the time required to analyse business information	.909	
3.	AI helps organizations respond quickly to emerging issues	.898	
4.	AI assisted decision-making improves the timeliness of strategic decisions	.870	
	Strategic Agility		**.869**
1.	Organizations quickly adjust its strategy in response to environmental changes	.917	
2.	Organizations can quickly re-allocate resources when conditions change	.858	
3.	Organization is capable of making timely strategic changes in uncertain situations	.760	
	Human AI collaboration		**.838**
1.	Managers effectively combine AI insights with professional judgement	.930	
2.	Employees trust AI as a supporting tool for decision-making	.929	
3.	Collaboration between employees and AI improves decision quality	.661	

Factors of the study and its related variables

The first factor of the study is AI decision support, it includes variables like AI tools provide useful information for making managerial decision, AI-assisted system helps managers evaluate different decision alternatives, AI improves the accuracy of organizational decisions and AI provides relevant insights for solving business problems. Decision-making Speed is the second factor, the variables it includes are AI enable managers to make decision more quickly, AI reduces the time required to analyse business information, AI helps organizations respond quickly to emerging issues and AI assisted decision-making improves the timeliness of strategic decisions. Third factor is Strategic Agility, the variables it includes are Organizations quickly adjust its strategy in response to environmental changes, Organizations can quickly re-allocate resources when conditions change and Organization is capable of making timely strategic changes in uncertain situations. Last and fourth factor is Human AI collaboration, its variables are Managers effectively combine AI insights with professional judgement, Employees trust AI as a supporting tool for decision-making and Collaboration between employees and AI improves decision quality.

Table 5 "Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.893	14

Total reliability of 14 items that includes variables for "AI-assisted Decision Making and Strategic Agility in Organization" 0.893 (Table 5).

"Table 6 Model Summary"

"Model"	"R"	"R Square"	"Adjusted R Square"	"Std. Error of the Estimate"
1	.854[a]	.729	.726	.40542
Predictors: (Constant), AI decision support, Decision-making Speed, Strategic Agility, and Human AI collaboration				

The adjusted R-squared value is 0.726 with approximately 72% of the variation.

"Table 7 ANOVA"

"Model"		"Sum of Squares"	"df"	"Mean Square"	"F"	"Sig."
1	"Regression"	162.826	4	40.707	247.654	.000[b]
	Residual	60.488	368	.164		
	Total	223.314	372			
a. Dependent Variable: Overall impact of AI-assisted Decision Making and Strategic Agility on organization performance						
b. Predictors: (Constant), AI decision support, Decision-making Speed, Strategic Agility, and Human AI collaboration						

Value under significant column indicates a significant relationship between (AI decision support, Decision-making Speed, Strategic Agility, and Human AI collaboration) and Organisational performance

"Table 8 Coefficients"

"Model"	"Un standardized Coefficients"		"Standardized Coefficients"	"t"	"Sig."
	"B"	"Std. Error"	"Beta"		
(Constant)	3.957	.021		188.505	.000
AI decision support	.328	.021	.423	15.604	.000
Decision-making Speed	.057	.021	.074	2.732	.007
Strategic Agility	.255	.021	.328	12.108	.000
Human AI collaboration	.512	.021	.661	24.353	.000
DV: Overall impact of AI-assisted Decision Making and Strategic Agility on organization performance					

All the factors AI decision support, Decision-making Speed, Strategic Agility, and Human AI collaboration are showing significant impact of AI-assisted Decision Making and Strategic Agility on Organisational performance. Highest impact is shown by Human AI collaboration (.661), AI decision support (.423), Strategic Agility (.328), and Decision-making Speed (.074).

Conclusion

The integration of Artificial Intelligence enables organizations to process large volume of data, identify emerging trends, generate accurate insights, and support managers in making faster and more informed decisions. The empirical findings suggest that organizations that effectively implement and utilize AI in their decision-making processes are better positioned to respond to changing market conditions, customer expectations, technological development and competitive pressure. AI assisted decision making strengthen strategic agility by improving decision speed, information quality, predictive capabilities, organizational responsiveness, and adaptability. At the same time ethical considerations are also important while using AI (Mittal et al., 2023). AI tools such as predictive analytics, machine learning, intelligent dashboards, and automated decision-support systems help managers reduce uncertainty and identify potential opportunities and threats at an early stage. Consequently, organizations can modify their strategies more quickly and allocate more effectively. However, the study also highlights that AI alone cannot guarantee strategic agility. Its effectiveness depends on factors like data quality, technological infrastructure, employee capabilities, managerial support, organizational readiness, and ethical governance. AI and organisational decision making has to be studied in holistic perspective of business and marketing communication which previously proven models (Das & Mittal, 2023). Excessive dependence on automated recommendations may also create risks related to algorithmic biases, data privacy, transparency and reduce human judgement. The factors affecting AI-assisted Decision Making and Strategic Agility in Organization are AI decision support, Decision-making Speed, Strategic Agility and Human AI collaboration. The study concludes that there is significant impact of AI-assisted Decision Making and Strategic Agility on organization performance.

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