Exploring the Role of AI in Enhancing Leadership Effectiveness and Its Impact on Organizational Performance: A Strategic Framework for Integration

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Abstract- This study investigates the transformative role of Artificial Intelligence (AI) in modern leadership and its influence on organizational performance. As technological advancements continue to reshape business landscapes, the integration of AI into leadership practices has emerged as a key driver of improved decisionmaking, employee engagement, communication, and strategic adaptability. Utilizing a quantitativedescriptive research design, the study surveyed 45 professionals across various sectors in Cabanatuan City to assess AI adoption levels, leadership structures, and organizational cultures. Findings indicate that while AI significantly enhances leadership effectiveness and contributes to productivity, innovation, and financial growth, adoption levels vary by industry, with technologyfocused sectors showing greater integration. Challenges such as skill gaps, technological limitations, ethical concerns, and resistance to change were identified as key barriers. Ethical considerations, particularly around data privacy and algorithmic bias, were also highlighted. The study proposes a strategic framework grounded in the Input-Process-Output (IPO) model to guide organizations ethically effectively in and incorporating AI into leadership. Tailored recommendations include investing in training, infrastructure, ethical governance, and sectorspecific strategies to maximize AI's potential in enhancing leadership and organizational outcomes.

Indexed Terms- AI-driven Innovation, Artificial Intelligence, Digital Transformation Leadership

Effectiveness, Technology in Management, Organizational Performance.

I. INTRODUCTION

The speedy development of Artificial Intelligence (AI) has transformed several aspects of contemporary business processes, affecting everything from production processes to customer support. Among the most revolutionary fields of AI adoption is leadership, where its capacity to optimize decisionfacilitate innovation, and maximize making, organizational performance is increasingly clear. Leadership, being the foundation of organizational success, has been transforming in light of technological developments, with AI being a key driver of more efficient, responsive, and data-based leadership practices. This research investigates the contribution of AI to leadership effectiveness and its influence on organizational performance, with the goal of presenting a strategic framework for the effective incorporation of AI into leadership frameworks.

The objectives of the study are multi-faceted, focusing on understanding the current landscape of AI adoption in leadership.

Firstly, it seeks to outline the profile of organizations that are applying AI leadership, taking into account industry type, organization size, levels of AI adoption, leadership structure, and organizational culture.

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Secondly, the research will explore how AI impacts leadership effectiveness, specifically decisionmaking and problem-solving, employee engagement, communication, and leadership flexibility. In addition, it will investigate the perceived effect of AIled leadership on organizational performance, specifically in terms of productivity, innovation, employee engagement, and financial development.

The research also seeks to determine challenges and ethical implications of AI-led leadership, offering a complete understanding of the implications for leaders and organizations.

Finally, the study will suggest a strategic framework for applying AI to leadership to improve organizational performance, with actionable suggestions for organizations that aim to leverage the potential of AI to transform their leadership practices.

II. REVIEW FOR RELATED LITERATURE

A. Foreign Studies

The use of Artificial Intelligence (AI) technologies in leadership practices has been noted to improve decision making, strategic thinking, and the overall effectiveness of a leader. Neiroukh et al. (2024) demonstrate in their study that the use of AI capabilities enhances the speed and quality of decision making which has a positive effect on organizational performance. The authors conclude that AI is a very important asset for leaders intending to enhance the performance of their organizations. [1] In the same context, Sposato (2024) underscores the imperative for leaders to combine technical competencies with interpersonal skills in the age of AI. With the application of behavioral theory and AI analytics, organizations can create customized leadership training initiatives aimed at actively promoting adaptive and resilient leadership cultures. [1]

The intersection of AI and leadership evolution is marked by several key developments reshaping how leaders operate and drive their organizations forward. AI-enhanced decision-making is a primary example, where AI provides data-driven insights and predictive analytics, complementing traditional decision-making approaches that often rely on intuition and experience (Davenport, 2018). [5]

This integration allows leaders to make more informed and accurate decisions. Additionally, the automation of routine tasks by AI enables leaders to shift their focus from administrative functions to strategic planning and higher-value activities. This transition aligns with the trend toward more collaborative and agile leadership, emphasizing adaptability and teamwork (Brynjolfsson & McElheran, 2016). [6]

AI also plays a crucial role in personalization and employee engagement. AI-driven tools facilitate personalized interactions and engagement strategies, which support transformational leadership approaches that emphasize individual motivation and development (Kiron et al., 2014). [7]

This capability allows leaders to understand better and meet the unique needs of their employees, fostering a more motivated and productive workforce. Finally, the rise of AI introduces new ethical considerations and governance challenges. Leaders must address AI ethics, bias, and transparency issues to ensure the responsible use of AI systems. Ethical leadership and AI governance are critical for maintaining trust and alignment with organizational values and societal expectations (Dastin, 2018). [8]

B. Local Studies

Artificial Intelligence (AI) has increasingly become a transformative force across various sectors. revolutionizing the way enterprises operate and make decisions. The integration of AI into enterprise operations has profound implications for human resource management, financial operations, production processes, and strategic decision-making. As emphasized by Zhang and Aquino (2023), AI facilitates improved efficiency, cost reduction, enhanced data management, and decision support, while simultaneously introducing challenges such as job displacement and ethical concerns related to data privacy. [9]

The emerging Uses of Artificial Intelligence in the Business World is becoming a well-recognized phenomenon as one of the most preferred and discussed areas in AI application in the Philippines. The PwC 2025 Global CEO Survey stated that 75 percent of CEOs from Philippine-based companies believe in AI's capability to optimize business processes, with 88 percent expecting to incorporate AI in their companies within the next three years. This reveals a notable strategic shift aimed at using AI to gain a competitive edge. [2]

A systematic review examining the role of artificial intelligence (AI) technology in improving the effectiveness of a leader was conducted by Pago International (2024).In the Journal of Multidisciplinary Research and Analysis, the study showed that AI impacts leadership positively in critical areas such as business communications, predictive analytic, and making decisions based on compiled data. The review highlighted that AI facilitates the performance of mundane activities and task automation, providing situational insight for real-time updates AI enhances, and not replaces, leadership. This allows leaders to strategic decisions ascertain long-term plans. The automation of rationally defined processes AI technologies depends on the willingness of digital leaders towards transformation, ethical questions about transparency and bias correction, among other things. Pago argues that productivity gains, employee engagement, and customer satisfaction figures flow from AI-enabled leadership, where hybrid intelligence designed by human beings works best. [3]

In the 2024 edition of the International Journal of Research and Innovation in Social Science, Avila, Adoro, and Baltar examined the impact of cultural transformation due to technology on leadership within small enterprises in the Philippines. The authors claimed that organizational leaders have had to adapt to the shifts caused by the digital transformation as it has fundamentally changed the norms and expectations pertaining to leaders. It is imperative for organizational leaders to integrate technology with innovation and undergo a profound shift in their thought processes. The researchers underscored the need to build a digital culture through continuous training, knowledge management, learning, as well as proactive employee participation. Moreover, the study found that the

adoption of advanced and digital management techniques such as data-driven decision models and virtual teamwork enhanced operational efficiency and business growth in a sustained manner. [4]

Moreover, the research also highlighted that the resistance to change is still an essential barrier during digital transformation endeavors. Therefore, effective leadership at this point comes down to an equilibrium between technology understanding and the management of human resources. In addition to adopting digital tools, leaders need to inspire and engage their teams into learning new workflows and systems as well. This study adds to the knowledge that digital transformation is not a technology upgrade but a cultural transformation that relies significantly on leadership ability. [4]

C. Conceptual Framework

This study adapts the input-process-output (IPO) model to explore how organizational characteristics impact the integration of AI in leadership, its effects on leadership effectiveness, and overall organizational performance.

The framework begins with inputs such as industry type, organization size, AI adoption level, leadership structure, and organizational culture, which influence an organization's readiness for AI integration. The process involves using AI to enhance decisionmaking, employee engagement, communication, and leadership adaptability, aiming to improve leadership effectiveness. The outputs include increased productivity, innovation, employee satisfaction, and financial growth. Moderating factors, such as data privacy, algorithmic bias, resistance to change, and accountability, can affect the success of AI integration.

Ultimately, the research aims to develop a framework for ethically and sustainably integrating AI into leadership, providing guidelines to help organizations fully harness its potential.



Fig. 1 IPO Model

III. METHODOLOGY

A. Research Design

This study utilized a quantitative-descriptive research design employing the survey method to examine the perceptions and practices of professionals regarding the integration of artificial intelligence (AI) in leadership development. The design was chosen to enable the collection of numerical data that can describe trends, patterns, and relationships within the target population.

B. Respondents of the Study

A total of 45 respondents participated in the study. The respondents of the study comprised individuals with relevant roles and experience in AI integration and leadership development, specifically: business executives, project managers, human resource practitioners, leadership development professionals, AI and technology experts, and employees from AIintegrated organizations. A purposive sampling method was used to guarantee the respondents' selection who have considerable knowledge and engagement in the topic area.

C. Locale of the Study

This study was conducted among selected companies located in Cabanatuan City, Nueva Ecija such as Information Technology, Manufacturing, Construction, Healthcare, Finance/Banking, Education, Retail, Government/Public Sector. The locale was chosen due to the increasing adoption of digital technologies and artificial intelligence (AI) in local enterprises, particularly in the leadership and management sectors. Several companies were purposively selected to represent varying industries and organizational structures, providing a diverse perspective on AI integration in leadership. A total of 45 respondents, comprising managers and key personnel involved in leadership roles, were selected from these companies to participate in the survey. The location provides a suitable context to explore how AI influences leadership effectiveness and organizational performance at the local level.

D. Data Gathering tools and techniques

Data were collected using a structured survey questionnaire composed of multiple-choice questions, open-ended items, and closed-ended statements rated on a 4-point Likert scale. The scale was designed to measure respondents' attitudes and perceptions with greater consistency, using options such as "Not at all," "Somewhat," "Very," and "Extremely." This format helped capture the degree of agreement or importance assigned to each item without a neutral option, encouraging more decisive responses. The survey was administered online via Google Forms to ensure accessibility and wider reach among the targeted respondents.

E. Statistical tools or methods of analysis

To analyze data, descriptive statistical measures such as frequency counts and percentages scores were used to explain responses and condense findings. Frequency was determined by counting how often a particular response appeared in the data. Percentage was computed using the formula:

$$ext{Percentage} = \left(rac{f}{N}
ight) imes 100$$

where f is the frequency of a specific response and N is the total number of responses. While the mean, or average, was calculated using the formula:

$$Mean = \frac{\sum x}{n}$$

where $\sum x$ represents the sum of all data values and n is the number of values. These methods enabled an in-depth understanding of the respondents' shared perceptions and experiences. The methods enabled an in-depth understanding of the respondents' shared perceptions and experiences.

F. Limitation of the Study

This study has several limitations that should be considered when interpreting the findings. First, the sample size is limited to only 45 respondents from three selected companies in Cabanatuan City, which may not fully represent the broader population or industry-wide practices. As such, the generalizability of the results is constrained. Second, the study relies on self-reported data, which may be influenced by personal biases, perceptions, or a lack of complete knowledge about AI integration in leadership. Third, the rapid pace of technological advancements may mean that some AI tools or practices referenced in the study could evolve quickly, potentially limiting the long-term relevance of the findings. Lastly, the organizational study focuses primarily on perspectives and does not include external stakeholder views such as clients or customers.

G. Ethical considerations

During the research process, ethical principles were followed strictly. All participants were given an informed consent form detailing the aim of the study, the voluntary nature of participation, and the steps taken to maintain confidentiality and anonymity. The data gathered were handled with strict confidentiality and utilized solely for academic and research purposes.

IV. RESULT AND DISCUSSION

A. Organizational Profile





The distribution of industry representation among the 45 survey respondents reveals notable trends across various sectors. The construction industry emerged as the most represented, accounting for 22.2% of the responses. This was closely followed by the

government and public sector, which constituted 20% of the sample. Education also featured prominently, comprising 15.6% of the respondents. These three sectors alone represent over half of the total responses, indicating a potential concentration of interest or relevance of the survey topic within these fields. Other industries, including healthcare, finance and banking, and manufacturing, each contributed 8.9% to the respondent pool, reflecting moderate participation. Retail and information technology were least represented making the sectors, approximately 6.7% and 4.4% of the responses, respectively. This distribution suggests a diverse yet uneven engagement across industry types, which may influence the generalizability of findings depending on the focus of the research.



Fig. 3 Size of Organization

The pie chart shows the distribution of 44 survey respondents by organization size. Most respondents (38.6%) are from small organizations (1–50 employees), followed by 27.3% from medium-sized (51–200), 20.5% from enterprise-level (501+), and 13.6% from large organizations (201–500). Overall, small to medium-sized enterprises (SMEs) make up nearly two-thirds of the sample, indicating a survey focus likely centered on SME-related issues, while still capturing insights from larger organizations.



Fig. 4 AI Adoption Level

Based on the data from 45 respondents, it can be inferred that AI adoption is still in its developmental phase across most organizations. With 28.9% reporting no adoption and 22.2% in early-stage exploration, over half of the respondents have yet to implement AI meaningfully. The fact that 31.1% have only partially implemented AI suggests that many organizations are experimenting but have not yet scaled their efforts. Only 15.6% have fully integrated AI into leadership and operations, and a 2.2% identify as leading AI-driven mere organizations. This indicates that while awareness and interest in AI are present, widespread and advanced adoption remains limited, highlighting a significant opportunity for growth and investment in AI capabilities.



Fig. 5 Leadership Structure

The data shows half (51.1%) of the organizations follow a traditional hierarchical model, indicating it remains the dominant leadership structure. Only 2.2% of respondents reported AI-assisted leadership roles, suggesting that AI integration into leadership is still in its early adoption phase. The data implies that while traditional leadership remains prevalent, a significant portion of organizations are exploring or adopting alternative models.



Fig. 6 Organizational Culture

The data shows that organizational cultures are largely inclined toward innovation and people orientation, each comprising 31.1% of the total. This

suggests a strong emphasis on creativity, continuous improvement, and employee engagement across many organizations. On the other hand, adaptable and agile organizations make up only 8.9%, and conservative/hierarchical cultures are minimally represented. These findings imply that most organizations are evolving toward progressive and inclusive work environments, with fewer maintaining traditional or rigid structures.

Section 2:	AI and	Leadership	Effectiveness
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		1	2	3	4	Interpretation
		Not Important	Somewhat Important	Very Important	Extremely Important	
1	How important is AI (e.g., ChatGPT, Read AI, Gemini, Gamma) for enhancing decision-making in leadership?	6 13.33%	21 46.67%	14 31.11%	4 8.89%	Somewhat Important
2	To what extent has AI improved employee	No Improvem ent	Somewhat Improveme nt	Significan t Improvem ent	Extensive Improvem ent	
	in your organization?	4 8.89%	16 35.56%	20 44.44%	5 11.11%	Significant improvement
	How effective has AI been in improving communication	Not Effective	Somewhat effective	Very Effective	Extremely Effective	
3	and collaboration within leadership teams (e.g., through meeting summaries, brainstorming, or strategic planning)?	4 8.89%	20 44.44%	18 40%	3 6.67%	Somewhat Effective
	Has AI helped leadership adapt to strategic challenges and foster innovation?	Not at all	To a small extent	To a moderate extent	To a large extent	
4		3 6.67%	18 40%	18 40%	6 13.33%	To a small extent / To a moderate extent

The data in question no. 1 suggests a statistically relevant trend that perceptions of AI's importance in leadership decision-making vary by industry. While the overall majority of respondents rated AI as somewhat important (46.67%), the construction sector appears to lean more moderately toward this perception, as indicated by its 28.57% contribution to that category. Conversely, the information technology sector shows a notably different pattern, with 50% of its respondents rating AI as extremely important, despite this being the category with the lowest overall frequency (8.89%). This indicates a potential association between professional sector and perceived value of AI, implying that individuals in technology-related fields may be more likely to view AI as a critical tool for leadership decisions compared to those in other industries. Further statistical analysis could confirm the significance of this association.

The data in question no. 2 indicates that AI has had a generally positive impact on employee engagement

and motivation, with the largest proportion of respondents (44.44%) reporting a significant improvement. However, responses vary notably by sector. The construction industry most frequently reported somewhat improvement (25%), suggesting a moderate but present effect of AI on workforce morale in that field. In contrast, the government sector showed a concentration of responses in the no improvement category (8.89%), indicating possible resistance to or ineffective implementation of AI tools in enhancing employee engagement. These patterns suggest a potential correlation between organizational sector and perceived impact of AI, where private or tech-forward industries may be realizing greater benefits compared to more traditional or bureaucratic sectors like government. Further analysis could explore the underlying factors contributing to these sectorial differences.

The data in question no. 3 shows that AI appears to be moderately effective in enhancing communication and collaboration within leadership teams, with 44.44% of respondents indicating it is somewhat effective and 40% indicating it is very effective. Sector-specific patterns suggest differential adoption and impact. Government and construction sectors each contributed 25% to the somewhat effective responses, implying a cautious or gradual integration of AI tools in leadership communication processes within these fields. In contrast, the education sector showed a strong positive response, accounting for 66.67% of the extremely effective category-despite that being the smallest overall group (6.67%). This suggests that when AI is effectively implemented in education, it can substantially enhance leadership collaboration. These findings imply that sector context significantly influences the perceived effectiveness of AI, warranting further investigation into organizational readiness, culture, and AI implementation strategies across industries.

The data shows in question no. 4 is that AI has moderately supported leadership in adapting to strategic challenges and fostering innovation, with 40% of respondents each selecting to a small extent and to a moderate extent. This suggests that while AI is aiding adaptation, its impact remains limited for many, indicating room for deeper integration and more effective use in strategic contexts. C. Section 3: Perceived Impact of AI-Driven Leadership on Organizational Performance

		1	2	3	4	Interpretation
	How has AI-augmented leadership (via tools like <u>ChatGPT</u> for decision 1 support or Gamma for presentations) impacted overall productivity in your organization?	No improvem ent	Some improve ment	Significa nt improve ment	Extensive improvement	
1		6 13.33%	19 42.22%	15 33.33%	5 11.11	Some Improveme
2	Has AI integration contributed to innovation and competitive advantage in your organization?	No Contributi on	Some Contrib ution	Significa nt Contribut ion	Major Contribution	
		6 13.33%	18 40%	14 31.11%	7	Some Contributio
	How would you rate employee satisfaction and retention in an AI-driven leadership	Decreased	No Change	Improved	Greatly improved	
3		1 2.22%	14 31.11%	25 55.56%	5 1.11%	No Change
4	Has AI-augmented leadership contributed to financial growth in your organization?	No Contributi on	Some Contrib ution	Significa nt Contribut ion	Major Contribution	
		9 20%	19 42.22%	13 28.89%	4	Some Contributio

The data in question no. 1 shows that AI-augmented leadership has generally improved productivity, with most respondents reporting some (42.22%) or significant improvement (33.33%). Government, construction, and IT sectors mainly reported some improvement, while IT leads in extensive improvement (20.01%), indicating stronger AI impact in tech-focused organizations. This suggests sector differences in how effectively AI boosts productivity.

The data in question no. 2 interprets that AI integration is seen as contributing to innovation and competitive advantage, with 40% reporting some contribution and 31.11% reporting significant contribution. The construction sector mostly indicated some contribution (27.78%), while the government sector reported the highest no contribution (33.33%). This suggests that AI's impact on innovation varies by sector, with government lagging behind more progressive industries.

The data in question no. 3 shows that the employee satisfaction and retention under AI-driven leadership are generally positive, with 55.56% reporting improved and 31.11% no change. The construction sector notably leads in the improved category (24%). This indicates that AI integration in leadership is mostly associated with better employee outcomes, though some sectors may experience limited impact.

The data in question no. 4 depicts that AI-augmented leadership is generally viewed as contributing to financial growth, with 42.22% reporting some contribution and 28.89% significant contribution. The construction sector most often reported some contribution (26.32%), while the information technology sector uniquely reported major contribution at 100%, highlighting a strong positive impact of AI on financial outcomes in tech industries.

D. Section 4: Challenges and Ethical Considerations in AI-Powered Leadership

	1	2	3	4	Interpretation
	Not Concerned	Somewhat concerned	Very concerned	Extremely concerned	
How concerned are you about data privacy issues in AI-driven leadership?	4 8.89%	18 40%	12 26.67%	11 24.44%	Very Concerned
Do you believe algorithmic	Not Concerned	Somewhat concerned	Very concerned	Extremely concerned	
bias is a potential issue in AI-driven leadership?	5 11.11%	16 35.56%	17 37.78%	7 15.5 6%	Very Concerned
How resistant is your	Not resistant	Slightly resistant	Moderate resistant	Highly resistant	
organization to adopting AI in leadership roles?	11 24.44%	19 42.22%	14 31.11%	1 2.22%	Slightly Resistant
How well are accountability and ethical responsibility	Poorly addressed	Adequately addressed	Well addressed	Fully addressed	
being addressed in AI integration within leadership?	7 15.56%	25 55.56%	12 26.67%	1 2.22%	Adequately Addressed
	How concerned are you about data privacy issues in Al-driven leadership? Do you believe algorithmic bias is a potential issue in Al-driven leadership? How resistant is your organization to adopting AI in leadership roles? How well are accountability and ethical responsibility being addressed in AI integration within leadership?	1 How concerned are you about data privacy issues in AI-driven leadership? Not Concerned 4 8.89% Do you believe algorithmic bias is a potential issue in AI-driven leadership? Not Concerned 5 11.11% How resistant is your organization to adopting AI in leadership roles? Not resistant 11 12 How well are accountability being addressed in AI integration within leadership? Poorty 24.44%	1 2 How concerned are you about data privacy issues in AL-driven leadership? Not Concerned Samewhat Concerned Do you believe algorithmic bias is a potential issue in AL-driven leadership? Not Samewhat Concerned Samewhat Concerned Do you believe algorithmic bias is a potential issue in AL-driven leadership? Not Samewhat Concerned Samewhat Concerned How resistant is your organization to adopting AL in leadership? Not Sightly resistant Samewhat Concerned How resistant is your organization to adopting AL in leadership? Not Somewhat Concerned Samewhat Concerned How well are accountability being addressed in AL integration within leadership? Poorty Softy Adegaately addressed T 25 How well are accountability being addressed in AL integration within leadership? T 25	1 2 3 How concerned are you about data privacy issues in Al-driven leadership? Not 4 Somewhat concerned Very concerned Do you believe algorithmic bias is a potential issue in Al-driven leadership? Not 5 Somewhat 4 12 Do you believe algorithmic bias is a potential issue in Al-driven leadership? Not 5 Somewhat 6 Very concerned How resistant is your organization to adopting Al- in leadership? Not 11 Somewhat 7 Very concerned How well are accountability and ethical responsibility being addressed in Al- in leadership? Poorty 24.44% Adoguately addressed addressed Well addressed addressed How well are accountability integration within leadership? 7 25 12 15.56% 55.56% 26.67% 26.67%	Image:

The data shows in question no. 1 that concerns about data privacy in AI-driven leadership are notably high, with 26.67% very concerned and 24.44% extremely concerned. Government respondents led in very concerned (33.33%), while construction had the highest share of extremely concerned (36.36%). This indicates that trust and data security are significant barriers to AI adoption, especially in public and infrastructure sectors.

The data depicts in question no. 2 is that Concerns about algorithmic bias in AI-driven leadership are prevalent, with 37.78% very concerned and 35.56% somewhat concerned. The construction sector had the highest share of very concerned responses (29.41%), while government led in extremely concerned (25%). This reflects a strong awareness of fairness and ethical risks, especially in sectors where decisions may significantly impact diverse stakeholders.

The data in the question no. 3 shows that organizational resistance to AI in leadership is generally low, with 42.22% reporting slightly resistant and 24.44% not resistant. Government showed the highest slight resistance (26.32%), indicating cautious adoption. In contrast, the construction sector reported no resistance (100%), suggesting full openness to AI integration in leadership within that industry.

The data in question no. 4 states that accountability and ethical responsibility in AI-driven leadership are largely seen as adequately addressed (55.56%), with 26.67% indicating they are well addressed. The construction sector contributed most to the adequately addressed responses (24%), suggesting that while ethical concerns are recognized, most organizations—especially in construction—still see room for improvement in fully embedding ethical frameworks in AI integration.

E. Section 5: Others

		1	2	3	4	Interpretation
	What do you think is the greatest challenge in 1 integrating Al into leadership in your organization? (Select one)	Resistanc e to change	Lack of skills and training	Ethical concerns	Technolo gical Limitatio ns	
1		10 22.22%	12 26.67%	11 24.44%	11 24.44%	Lack of Skills and Training
2	What would you recommend to improve the integration of AI in leadership in your organization? (Select one)	More training and developm ent	Improve ment technolog y infrastruc ture	Clear ethical guideline s and policies	More leadershi p buy-in and support	
		17	17	8	3	More training and development
		37.78%	37.78%	17.78%	6.67%	Improvement technology infrastructure

The data in question no. 1 reveals that the greatest challenge in integrating AI into leadership is lack of skills and training (26.67%), particularly noted in the government (25%) and construction (33.33%) sectors, indicating a need for targeted capacitybuilding in these areas. Resistance to change (22.22%) is most prevalent in the government sector (40%), highlighting cultural or institutional barriers. Ethical concerns (24.44%) are most significant in education (25%) and construction (16.67%), reflecting sensitivity around responsible AI use. Lastly, technological limitations (24.44%) are mainly reported in IT (27.27%), with construction and government also affected (both 18.18%), suggesting infrastructure or integration hurdles even in techoriented fields.

The data in question no. 2 shows that the top recommendations for improving AI integration in leadership are more training and development (37.78%) and improvement of technology infrastructure (37.78%), highlighting the dual need to build both human capacity and technical foundations. Clear ethical guidelines (17.78%) and more leadership buy-in (6.67%) were less prioritized, suggesting that while ethics and support are important, practical skills and infrastructure are seen as more urgent areas to address.

CONLUSION

The data reveals that the perceived importance and impact of AI in leadership vary notably across different industries. While technology-focused sectors tend to recognize AI as a critical tool driving productivity, innovation, and financial growth, more traditional sectors such as government and construction show more moderate or cautious adoption. Employee engagement and leadership collaboration also benefit from AI, but with sectorspecific variations. Despite these positive trends, significant concerns remain around data privacy, algorithmic bias. and ethical responsibility, particularly in public and infrastructure-related sectors. Additionally, challenges such as skill shortages, resistance to change, and technological limitations continue to hinder optimal AI integration. The conceptual framework further illustrates that the adoption of digital technologies and enhancement of innovation capabilities drivers of are key performance. However, organizational their effectiveness is significantly mediated by the degree of strategic alignment within the organization. This suggests that merely adopting AI or boosting innovation is not enough; organizations must ensure these efforts are aligned with their strategic goals, resources, and operations to truly realize performance improvements. Strategic alignment acts as a critical mediator that can either amplify or hinder the impact of AI and innovation, underscoring the importance of integrating technology initiatives with overall organizational strategy.

- Perceptions of AI's role in leadership decisionmaking differ significantly by industry, with IT sectors valuing AI more highly than others.
- AI positively influences employee engagement, communication, productivity, innovation, and financial growth, but impacts vary by sector.
- Government and construction sectors show more cautious or moderate adoption, while tech sectors demonstrate stronger AI integration.
- High concerns about data privacy and algorithmic bias persist, especially in government and construction, representing key adoption barriers.
- Organizational resistance to AI is generally low but still notable in government due to cultural and institutional factors.
- Lack of skills, resistance to change, ethical concerns, and technological limitations are the primary challenges to effective AI leadership integration.
- Ethical accountability is recognized but requires deeper integration across organizations, particularly outside tech sectors.
- Strategic alignment is essential for maximizing the benefits of AI and innovation initiatives, ensuring that these efforts translate into improved organizational performance.

RECOMMENDATION

To maximize the benefits of AI in leadership across diverse sectors, it is essential to address existing barriers and tailor integration efforts to industryspecific needs. Focusing on building human and technical capacity, strengthening ethical frameworks, and fostering leadership support will help overcome resistance and enable more effective AI adoption. Targeted strategies that consider organizational culture and sector readiness will enhance AI's positive impact on decision-making, productivity, and innovation.

- Enhance Training and Skills Development: Implement targeted AI education and capacitybuilding programs, especially for government and construction sectors, to address skill gaps.
- Improve Technology Infrastructure: Invest in upgrading AI-related technologies and integration systems to ensure smooth adoption across all

industries, with a focus on government, construction, and IT.

- Strengthen Ethical Guidelines: Develop clear, enforceable ethical standards and accountability mechanisms to address privacy, bias, and fairness concerns.
- Increase Leadership Buy-In: Promote greater engagement and commitment from leadership through awareness initiatives and showcasing AI success stories.
- Tailor Sector-Specific AI Strategies: Design and implement AI integration plans that reflect the unique culture, readiness, and challenges of each sector, particularly for cautious adopters like government and education.
- Address Resistance through Change Management: Deploy change management and communication strategies to reduce organizational resistance, focusing on public sector challenges.
- Continuous Monitoring and Evaluation: Establish ongoing processes to assess AI's impact, effectiveness, and ethical compliance to refine strategies and improve outcomes.

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