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Strategic Adoption of Artificial Intelligence in Indian Businesses: Opportunities, Governance Challenges, and Capability Building

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Abstract

Artificial intelligence is now a strategic priority for Indian businesses eager to boost their efficiency, respond quickly to customers, enhance their analytical skills, and make better managerial decisions. It is now part of everyday business conversations in India, with firms leveraging it for enhanced efficiency, quicker customer responses, and better decision-making. This study with 117 survey responses explored AI adoption through perceived opportunities, governance challenges, and building capabilities. The results show that recognizing opportunities and developing capabilities are crucial for successfully adopting AI strategically. Additionally, building capabilities helps organizations become more prepared for AI-driven changes. Governance challenges did not show a statistically significant direct effect on strategic AI adoption from the collected sample, showing their potential to impact these challenges in an indirect manner or contextually rather than immediate barriers. The study concludes that businesses derive greater strategic value from AI when their technological goals align with organizational readiness, employee skills, and disciplined execution.

Keywords: Artificial intelligence; Indian businesses; strategic adoption; governance challenges; capability building; organizational readiness

Introduction

Artificial intelligence is increasingly recognized not merely as an emerging technology but as a strategic resource that shapes how firms forecast, automate, engage customers, and support managerial decisions. In the Indian context, AI applications are redefining strategic management by enabling data-driven choices, improving operational agility, and helping firms—especially small and medium-sized enterprises—build competitive advantage (Kulkarni, 2025; Gupta & Shrivastava, 2025). This signals a broader shift from isolated experiments toward deeper, cross-functional integration of AI across organizations (Saha, 2026).

Yet this transition also reveals a persistent tension between technological aspiration and organizational readiness. Numerous Indian companies are keen on integrating AI; however, only a small number have the advanced governance frameworks, skilled personnel, and coordinated processes necessary for responsible and large-scale implementation (Singh, 2025; Bhalla et al., 2023). As a result, the transformative promise of AI often stays only partially realized, which makes it important to examine the conditions that enable or constrain its effective integration (Perifanis & Kitsios, 2023; Popli et al., 2025).

The key issue now is not whether companies should adopt AI, but how they can seamlessly integrate it to create lasting value while managing risks. This is especially relevant in India, where AI is rapidly spreading across industries, yet regulatory frameworks, workforce skills, and institutional capacity are inconsistent. In this context, AI acts as a catalyst for organizational change, requiring strong leadership, strategic skill-building, and careful execution.

This study therefore examines strategic AI adoption through three interlinked dimensions: perceived opportunities, governance challenges, and capability building. Drawing on recent empirical and conceptual work on AI in emerging economies (Rodriguez et al., 2020; Gupta et al., 2026), the paper proposes a model that connects

these dimensions to the extent and depth of AI integration in Indian businesses. By doing so, it aims to clarify why some firms progress toward scalable, organization-wide AI use while others stay confined to pilot-stage experimentation. The research also looks to address a notable gap in the literature: while conceptual discussions on AI and business strategy are abundant, India-specific empirical evidence stays sparse. Practically, the findings are intended to help managers translate AI enthusiasm into structured, value creation that is ethically grounded and aligns with India's evolving regulatory and institutional environment.

Literature Review

AI and business strategy

The strategic significance of artificial intelligence lies in its capacity to reshape how firms collect and interpret information, distribute resources, serve customers, and show innovation pathways. In the early days of AI theory, the technology was seen as a powerful tool to boost efficiency, elevate customer experiences, drive product development, and aid strategic decision-making across various industries. Experts like El-Namaki (2016) and Dwivedi et al. (2019) highlighted AI's role in boosting productivity by integrating it into existing business operations. This perspective framed AI as an enhancer of operational processes, allowing businesses to become more effective by incorporating AI into their workflows.

However, current trends in India show that AI's role has evolved beyond early experimental stages. Companies are now using AI beyond its initial functions; they are implementing it to transform entire business processes, automate systems, and drive growth through innovation. According to IndiaAI (2024) and Gupta and Shrivastava (2025), AI in Indian enterprises is increasingly tied to strategic data-driven planning, improving supply chains, and creating innovative ways to engage customers. This shift underscores the idea that AI should be regarded as a strategic asset instead of just a tool. Businesses gain value not solely by getting AI technologies but by embedding them into their core operations and decision-making processes. This strategic integration is in harmony with theories suggesting that AI becomes a unique asset when it is hard to imitate, complements existing capabilities, and supports long-term goals (Barney, 1991; Teece et al., 1997). In India, this results in competitive advantages such as improved analytics, operational flexibility, and the development of new business models, particularly in sectors like banking, e-commerce, and manufacturing (IIM Ahmedabad, 2023; DIAB, 2021).

Perceived opportunities

Perceived opportunities refer as far as managers believe AI can generate meaningful strategic and operational benefits for the organization. These benefits typically include productivity improvement, better customer service, faster analytics, enhanced decision support, and competitive differentiation (Gupta et al., 2026; Panigrahi et al., 2024). In the realms of psychology and technology adoption, such perceptions align with ideas such as performance expectancy and perceived usefulness, which are pivotal to models like the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003; Dwivedi et al., 2019). Recent studies on AI adoption within Indian companies reveal that managers have strong confidence in AI's potential to enhance productivity and drive broader business transformation (Gupta & Shrivastava, 2025; Panigrahi et al., 2024).

Managers perceive AI as a source of significant strategic and operational advantages, such as boosted productivity, superior customer service, accelerated analytics, superior decision-making, and competitive edge (Gupta et al., 2026; Panigrahi et al., 2024). When managers believe AI can address critical business issues—like demand forecasting or inventory challenges—they are more inclined to distribute resources and advocate for broader integration (Sun et al., 2022; Slimi, 2023). Perceived opportunities drive firms to transition from small trials to full-scale implementation (Dwivedi et al., 2019; Slimi, 2023).

These beliefs are shaped by both direct experiences and indirect cues, such as peer performance and success stories (IndiaAI, 2024; IIM-Ahmedabad, 2023). The study suggests that recognising these opportunities will encourage strategic AI adoption, particularly in Indian firms, where AI stays a promising but emerging capability.

Governance challenges

Governance challenges, including data privacy, compliance, accountability, ethics, transparency, and decision-making rights, impede AI adoption (Parthasarathy et al., 2024; Agarwal & Nene, 2025). In India, AI's rapid growth outpaces a still-developing regulatory framework, lacking a comprehensive national AI law despite emerging sector-specific regulations (India AI, 2024; Agarwal & Nene, 2025). Research underscores these challenges as central to scaling AI from pilot projects to full business applications (Parthasarathy et al., 2024; Bansal & Jain, 2023). Organizations lacking strong internal policies, audit trails, risk management frameworks, or clear accountability pathways may find it difficult to secure executive support, obtain regulatory approval, or earn stakeholder trust (Bansal & Jain, 2023; Parthasarathy et al., 2024). In certain instances, strict data protection and privacy laws can slow down AI deployment, particularly when compliance costs are high and there is a shortage of workforce ability in AI governance practices (India AI, 2024; Agarwal & Nene, 2025).

From a theoretical standpoint, the constructs of governance challenges align with the institutional and regulatory dimensions of the Technology–Organization–Environment (TOE) framework, which considers external pressures and regulatory settings as key elements that impact technology adoption (Tornatzky & Fleischer, 1990; Pinho et al., 2021). Within this framework, strong governance challenges can impede the effectiveness of AI adoption when organizations lack internal control structures or policy-alignment mechanisms (Parthasarathy et al., 2024; Bansal & Jain, 2023). Consequently, the study suggests a negative correlation between governance challenges and strategic AI adoption, aligning with findings that governance burdens can limit both the scope and depth of AI integration (Bhalla et al., 2023; Rodriguez et al., 2020).

Capability building

The concept of capability development involves setting up the organisational conditions essential for the effective adoption, scaling, and management of AI. These conditions encompass employee training, digital literacy, access to skilled talent, data preparedness, support for change management, and cross-departmental coordination (Hammer & Karmakar, 2021; Vudugula et al., 2023). In India, companies are increasingly focusing on upskilling, reskilling, workforce education, and incentive programs to promote AI use, despite the limited availability of specialised AI ability (Hammer & Karmakar, 2021; India AI, 2024).

The literature on organizational learning and capability posits that AI adoption is a form of history-embedded, situational learning. In this process, companies progressively develop technical, managerial, and institutional capabilities related to AI systems (Teece, 2007; Nikou et al., 2024). Qualitative studies of industrial firms adopting machine-learning tools show that capability building is enabled by explorative and exploitative learning, supported through communication, data-infrastructure investment, and structural realignment (Nikou et al., 2024; Weber et al., 2022). In this view, AI capabilities are not simply "bought" but cultivated over time as organizations adjust routines, roles, and performance metrics (Teece, 2007; Pinho et al., 2021).

Empirical work on AI-readiness in Indian organizations further emphasizes that readiness is a multidimensional construct spanning technology, organization, and environment (Pinho et al., 2021; Popli et al., 2025). Specifically, studies using the TOE lens argue that AI adoption is more likely when firms have adequate IT infrastructure, supportive leadership, and alignment between AI initiatives and broader business strategies (Pinho et al., 2021; IndiaAI, 2024). Recent evidence from public-sector and private-sector cases in India shows that breadth and depth of AI service assimilation are positively linked to citizen and customer satisfaction, provided that underlying capabilities—such as data governance and user-support systems—have been developed (India AI, 2024; Popli et al., 2025).

In this study, capability building is expected to positively influence both strategic AI adoption and organizational readiness for AI-enabled transformation. This is consistent with the findings of research that links workforce digital literacy, leadership support, and data governance to more effective AI deployment (Hammer & Karmakar, 2021; Nikou et al., 2024).

Research gap

The conceptual base for AI and business strategy is now well established, with substantial literature on how AI affects efficiency, innovation, customer experience, and decision-making (El-Namaki, 2016; Dwivedi et al., 2019). However, many of these contributions stay conceptual or case-based, with limited empirical testing of organizational drivers in the Indian business context (India AI, 2024; Pinho et al., 2021). At the same time, recent surveys and empirical studies provide datasets that allow these organizational determinants—such as perceived opportunities, governance challenges, and capability building—to be examined together in a single model focused on AI adoption and readiness (Gupta et al., 2026; Panigrahi et al., 2024).

This study fills the existing gap by empirically examining how perceived opportunities, governance challenges, and capability building impact strategic AI adoption and preparedness among Indian business participants. This research aims to fill this gap. by empirically testing the effect of perceived opportunities, governance challenges, and capability building on strategic AI adoption. By analysing these dimensions, the research offers a detailed insight into why some firms succeed in scaling AI integration while others stay at the pilot stage, offering practitioners clearer guidance on converting enthusiasm into sustainable, ethically managed business value.

Research Objectives

The research aims to explore how perceived opportunities affect strategic AI adoption in Indian companies, evaluate governance challenges affecting AI strategies, and assess how capability building influences both AI adoption and organizational readiness for transformation in Indian businesses

Hypotheses

- **H1:** Perceived opportunities have a positive and significant effect on strategic AI adoption in Indian businesses.
- **H2:** Governance challenges have a negative and significant effect on strategic AI adoption in Indian businesses.
- **H3:** Capability building has a positive and significant effect on strategic AI adoption in Indian businesses.
- **H4:** Capability building has a positive and significant effect on organizational readiness for AI-enabled transformation.

Research Method

Research design

This study uses a quantitative, cross-sectional approach to explore the links between organisational factors, focusing on how perceived opportunities, governance challenges, and capability building affect strategic AI adoption and readiness in Indian firms. The study's framework relies on survey data gathered from business professionals engaged in or overseeing AI related activities, thereby aligning the design with the directional hypotheses developed in the literature review.

Data source and sample

Data gathered through online surveys and professional networks like LinkedIn and industry groups in India. Participation was voluntary and anonymous, resulting in 117 valid responses. The survey covered five primary areas: perceived opportunities, governance challenges, capability building, AI adoption, and readiness.

Measures

The study operationalizes five multi-item constructs, each measured using four Likert-scale items adapted to the Indian business context. Perceived opportunities are captured by items PO1–PO4, governance challenges by GC1–GC4, capability building by CB1–CB4, strategic AI adoption by SAA1–SAA4, and organizational readiness by OR1–OR4. All items are framed as statements on a standard Likert scale (e.g., 1 = strongly disagree to 5 = strongly agree), enabling the computation of composite scores for each construct. Before analysis, item content was reviewed and pilot-tested with practitioners to ensure clarity, face validity, and alignment with the conceptual definitions used in the literature.

Analytical tools

The data are analysed using a combination of descriptive statistics, reliability assessment, bivariate correlation, and regression techniques. Descriptive statistics describe the sample, while Cronbach's alpha checks reliability. Pearson correlations examine relationships between constructs. Two OLS regression models analyse the impact of opportunities, challenges, and capability building on AI adoption and readiness. These analyses test proposed relationships and evaluate effect sizes.

Analysis and Discussion

Descriptive statistics and reliability

The findings indicate elevated mean scores throughout the major constructs. Perceived opportunities recorded the highest mean at 4.372, followed by strategic AI adoption at 4.338, suggesting that respondents perceive AI as both valuable and increasingly integrated into business practice. Capability building also showed a high mean of 4.038, while organizational readiness was moderately strong at 3.979. Governance challenges produced a mean of 3.917, showing that respondents still perceive meaningful barriers related to privacy, accountability, and regulation.

All constructs demonstrated acceptable internal consistency. Cronbach’s alpha values were 0.739 for perceived opportunities, 0.780 for governance challenges, 0.746 for capability building, 0.772 for strategic AI adoption, and 0.872 for organizational readiness.

Table 1: Descriptive Statistics and Reliability Estimates

Construct	Mean	SD	Cronbach’s alpha
Perceived Opportunities	4.372	0.606	0.739
Governance Challenges	3.917	0.780	0.780
Capability Building	4.038	0.711	0.746
Strategic AI Adoption	4.338	0.580	0.772
Organizational Readiness	3.979	0.814	0.872

Correlation analysis

The correlations show that all major constructs are positively related. Strategic AI adoption exhibits a strong positive relationship with capability building ((r = 0.754)) and a substantial correlation with perceived opportunities ((r = 0.678)). Organizational readiness is also positively related to strategic AI adoption ((r = 0.695)). Governance challenges are positively correlated to the remaining constructs, suggesting that businesses that are more involved in AI may also be more aware of governance-related complexities.

Table 2: Bivariate Correlations

Variable	PO	GC	CB	SAA	OR
PO	1.000	0.610	0.625	0.678	0.446
GC	0.610	1.000	0.680	0.605	0.540
CB	0.625	0.680	1.000	0.754	0.571
SAA	0.678	0.605	0.754	1.000	0.695
OR	0.446	0.540	0.571	0.695	1.000

Hypothesis testing

The first regression model, which predicts strategic AI adoption, is statistically substantial and explains 64.0% of the variance in the dependent variable ((R^2 = 0.640)). Perceived opportunities show a positive and significant effect on strategic AI adoption ((eta = 0.306, p < 0.001)), thereby supporting H1. Capability building also shows a positive and significant effect on strategic AI adoption ((eta = 0.418, p < 0.001)), supporting H3. Governance challenges do not have a statistically substantial direct effect on strategic AI adoption ((eta = 0.046, p = 0.446)), so H2 is not supported.

The second regression model shows that capability building has a strong positive effect on organizational readiness ((eta = 0.654, p < 0.001)). This model explains 32.7% of the variance in organizational readiness ((R^2 = 0.327)), which supports H4.

Table 3: Hypothesis Testing Results

Hypothesis	Path	Coefficient	p-value	Decision
H1	Perceived opportunities -> Strategic AI adoption	0.306	< 0.001	Supported
H2	Governance challenges -> Strategic AI adoption	0.046	0.446	Not supported
H3	Capability building -> Strategic AI adoption	0.418	< 0.001	Supported
H4	Capability building -> Organizational readiness	0.654	< 0.001	Supported

Discussion

The empirical findings suggest that strategic AI adoption in Indian businesses is driven more strongly by opportunity recognition and internal capability than by governance-related pressures alone. When companies see tangible benefits from AI, like increased productivity or better decision-making, managers are more likely to move from pilot projects to full-scale implementation. This aligns with theories of technology adoption, which suggest

firms are more inclined to embrace technologies that are in harmony with their strategic goals (Venkatesh et al., 2003; Teece, 2007). In India, where AI is emerging, such motivation drives adoption.

Investing in workforce preparation, digital readiness, and coordination is crucial for effective AI adoption. This includes training, data literacy, and forming teams to turn AI insights into business actions (Hammer & Karmakar, 2021; Nikou et al., 2024). AI should be integrated into company routines to truly add value.

Governance challenges, although statistically non-significant, might influence the quality or speed of AI implementation rather than being outright barriers. Governance might affect how ethically firms deploy AI, acting more as a moderator. Strong governance can boost confidence, encouraging investment in AI without directly affecting adoption (as seen in surveys).

Conclusion

The research highlights that Indian companies' strategic adoption of AI is primarily driven by the perceived value of AI and the internal capabilities required for its successful implementation. Recognizing strategic benefits and developing essential resources significantly boost AI integration. Capability building enhances organizational readiness for AI transformation, showing that success depends on an organization's ability to adapt and evolve with innovative technologies. This underscores the idea that AI should be perceived as a strategic capability instead of a short-term project. Managers should focus on aligning AI initiatives with long-term goals, investing in workforce development, and strengthening governance. For Indian companies, AI adoption is more about ongoing capability development within a broader organizational transformation rather than isolated technical decisions.

Limitations of the Study

The study is based on a cross-sectional dataset, which means that it captures perceptions and self-reported behaviors at a single point in time and cannot show causal direction or temporal dynamics. The research finds that Indian companies' strategic AI adoption is driven by the perceived value of AI and the necessary internal capabilities for its implementation. Recognizing clear strategic benefits and developing essential resources are essential for successful AI integration. Companies are more inclined to embrace AI when they see its potential and have the means to support it. This adoption is tied to organizational readiness, highlighting the importance of a company's capacity to adapt and grow with innovative technologies. The study emphasizes viewing AI as a strategic capability rather than just a technological tool. Managers should focus on aligning AI with long-term strategies, investing in workforce development, and enhancing governance. For Indian firms, AI adoption is about ongoing capability development within a broader organizational transformation, not just isolated technical decisions.

Scope for Further Research

Future research could enhance existing models by incorporating more organizational and contextual factors affecting AI adoption, such as leadership support, culture, data quality, and digital infrastructure, as these are often cited as crucial facilitators of AI transformation. Exploring leadership styles, risk tolerance, and top management's commitment could reveal how executive strategies influence adoption behaviors among managers and workers. Comparative analysis across sectors like manufacturing, retail, finance, and services in India could offer insights into AI implementation, considering variations in regulations, data maturity, and skills. Studies might uncover differences in capability-building and governance strategies, affecting adoption patterns and outcomes. Additionally, research should examine if governance challenges indirectly affect AI adoption through trust, capability development, quality, or stakeholder engagement, offering a nuanced view of governance as a complex influence on AI transformation rather than just an obstacle.

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