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FROM AUTOMATION TO AUTONOMY: THE STRATEGIC ROLE OF GENERATIVE AND AGENTIC AI IN BANKING

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ABSTRACT

The rapid advancement of artificial intelligence (AI) is fundamentally reshaping the banking sector, enabling a transition from traditional rule-based automation toward more intelligent and autonomous systems. In particular, the emergence of generative and agentic AI represents a significant shift in how banks design services, make decisions, and deliver customer value. While prior research has primarily focused on automation-driven efficiency gains, limited attention has been given to the strategic transition from automation to autonomy and its implications for organizational performance and customer experience. Addressing this gap, the present study examines the strategic role of generative and agentic AI in transforming contemporary banking systems.

Grounded in the Technology Acceptance Model and the Resource-Based View, the study develops and empirically tests a comprehensive conceptual framework linking AI adoption to key performance outcomes. Trust is modeled as a mediating variable, while data privacy concerns are incorporated as a moderating factor. Using a quantitative research design, primary data are collected from banking professionals and customers through a structured questionnaire and analyzed using structural equation modeling.

The results indicate that generative AI significantly enhances customer engagement through improved personalization, while agentic AI strengthens autonomous decision-making and operational agility. Trust plays a crucial mediating role in reinforcing the positive effects of AI adoption on customer satisfaction, whereas data privacy concerns negatively influence user acceptance. By shifting the analytical focus from automation to autonomy, this study provides a novel perspective on AI-driven transformation in banking.

The study contributes to the literature by integrating generative and agentic AI within a unified strategic framework and offers practical insights for banking institutions, policymakers, and technology developers. It emphasizes the importance of balancing technological innovation with trust, transparency, and regulatory compliance, highlighting agentic AI as a key driver of sustainable competitive advantage in the evolving digital financial ecosystem.

Keywords: Generative AI; Agentic AI; Banking Transformation; Autonomous Decision-Making; Customer Experience; Trust in AI; Data Privacy Concerns; Financial Innovation; Artificial Intelligence in Banking; Strategic Management.

INTRODUCTION

The banking sector is undergoing a profound transformation driven by rapid advancements in artificial intelligence (AI), which have significantly altered the way financial institutions operate, compete, and deliver value to customers. Over the past decade, AI technologies particularly machine learning and data analytics have enabled banks to automate routine processes, enhance risk management, and

improve service delivery. A growing body of literature highlights that AI adoption has contributed to increased operational efficiency, improved decision-making, and enhanced customer trust in digital banking environments. As financial institutions strive to remain competitive in an increasingly digital landscape, the integration of advanced AI systems has become not only a technological choice but a strategic necessity.

More recently, the emergence of generative AI has introduced a new phase of innovation in banking. Unlike traditional AI systems that rely on predefined rules and structured data, generative AI leverages large language models and deep learning techniques to generate insights, automate complex tasks, and deliver highly personalized customer experiences. Studies indicate that generative AI has significantly enhanced banking operations by improving customer service, fraud detection, and decision support systems, while also enabling real-time data analysis and intelligent automation. These developments have paved the way for a more dynamic and responsive banking ecosystem, where customer interactions are increasingly driven by intelligent, context-aware systems.

Beyond generative capabilities, the concept of agentic AI is gaining attention as the next frontier in digital transformation. Agentic AI refers to systems capable of autonomous decision-making, goal-directed behavior, and adaptive learning in complex environments. Unlike earlier AI applications that primarily assist human decision-making, agentic AI systems can independently execute tasks, coordinate processes, and optimize outcomes in real time. Emerging research suggests that such systems have the potential to redefine banking operations by enabling end-to-end automation, intelligent workflow orchestration, and autonomous financial services delivery. This shift represents a fundamental transition from automation where machines follow predefined instructions to autonomy where systems exhibit a degree of independent reasoning and action.

Despite these advancements, existing research has largely focused on the operational and technological aspects of AI adoption, with limited attention to its strategic implications. In particular, there is a lack of comprehensive studies examining how banks transition from automation to autonomy and how this shift influences organizational performance, customer experience, and competitive advantage. Recent empirical studies on generative AI in banking have highlighted critical challenges related to regulatory compliance, data privacy, and managerial readiness, indicating that the adoption of advanced AI technologies is far from straightforward. These challenges underscore the need for a more integrated and strategic perspective that considers both the opportunities and risks associated with AI-driven transformation.

Furthermore, the increasing reliance on AI systems has raised important concerns regarding trust, transparency, and data privacy. As banking services become more automated and autonomous, customers' willingness to engage with AI-driven platforms depends significantly on their trust in the technology and their perception of data security. Prior research suggests that trust plays a crucial role in influencing technology adoption, particularly in high-risk sectors such as banking, where financial and personal data are highly sensitive. At the same time, growing concerns about data privacy and regulatory compliance may act as barriers to AI adoption, potentially limiting its effectiveness and acceptance among users.

Against this backdrop, the present study seeks to bridge the gap in the literature by examining the strategic transition from automation to autonomy in banking through the lens of generative and agentic AI. Drawing on theoretical foundations such as the Technology Acceptance Model and the Resource-Based View, the study develops a

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comprehensive framework to analyze the impact of AI adoption on customer experience, decision-making, and organizational performance. By incorporating trust as a mediating variable and data privacy concerns as a moderating factor, this research provides a nuanced understanding of the factors shaping AI-driven transformation in banking.

In doing so, the study makes three key contributions. First, it extends existing literature by integrating generative and agentic AI within a unified strategic framework, moving beyond traditional automation-focused perspectives. Second, it provides empirical insights into the role of trust and data privacy in influencing AI adoption outcomes. Third, it offers practical implications for banking institutions, policymakers, and technology developers seeking to leverage AI for sustainable competitive advantage in an increasingly complex and dynamic financial environment.

LITERATURE REVIEW

Kikuchi (2026) investigated the impact of generative AI adoption on productivity and systemic risk in the banking sector using empirical data analysis. The study found that while AI adoption improves performance and efficiency, it also introduces short-term implementation costs and potential systemic risks. The findings emphasize the need for strategic planning and risk management when integrating advanced AI technologies in banking.

Saha, Rani, and Shukla (2025) examined the opportunities, threats, and regulatory implications of generative AI in financial institutions. Their study reveals that while generative AI offers significant benefits such as automation, efficiency, and innovation, it also introduces challenges related to cybersecurity, bias, and ethical concerns. The authors stress the importance of robust regulatory frameworks to ensure responsible AI adoption in banking.

Dubey, Astvansh, and Kopalle (2024) analysed the role of generative AI in empowering financial firms. Their study demonstrates that generative AI technologies improve productivity by automating complex tasks, supporting data-driven decision-making, and enhancing operational efficiency. The authors emphasize that generative AI plays a crucial role in transforming financial services by enabling intelligent automation and strategic innovation.

Subudhi (2024) explored the practical applications of generative artificial intelligence (GenAI) in the banking sector, particularly in the Indian context. The study identifies key use cases, including fraud detection, customer support, and financial advisory services. It highlights how GenAI enhances real-time decision-making and improves customer engagement through personalized and context-aware interactions.

Kalyani and Gupta (2023) conducted a systematic literature review and meta-analysis to examine the impact of artificial intelligence and machine learning in the banking sector. Their findings indicate that AI significantly enhances operational efficiency, strengthens customer trust, and improves digital service delivery. The study highlights how AI-driven systems enable banks to streamline processes, reduce costs, and offer more reliable and efficient financial services.

Kiranmai and Manikandan (2025) investigated the combined impact of agentic and generative AI on banking services. Their findings suggest that agentic AI enables autonomous decision-making and adaptive learning, while generative AI enhances personalization and fraud detection capabilities. The study highlights that the integration of both AI types can significantly transform banking operations and improve overall service quality.

Todupunuri (2025) conducted a qualitative study to analyze the role of agentic and generative AI in modern banking services. The findings indicate that the integration of these technologies enhances decision-making efficiency, supports

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innovation, and improves personalized service delivery. The study concludes that combining agentic and generative AI creates a more dynamic and intelligent banking ecosystem.

Dubey, Mokashi, Pradhan, and Kumar (2024) examined the role of generative AI as a catalyst in the banking and financial industry. Their study found that generative AI significantly enhances data analysis, customer service, and risk management capabilities. The authors highlighted that AI-driven systems enable banks to process large volumes of financial data efficiently, leading to improved decision-making and service delivery.

Jin, Bei, Chen, and Xia (2024) proposed a generative AI-based approach for root cause analysis in legacy banking systems. Using knowledge-based AI agents, they demonstrated how generative AI can identify underlying issues in banking operations and improve system reliability. Their findings showed that AI-enabled analysis enhances problem-solving efficiency and reduces recurring operational failures in banking environments.

Yerra (2025) developed an agentic AI framework for automating core banking operations and regulatory reporting processes. The study revealed that integrating multi-agent autonomous systems significantly improves operational efficiency, reduces processing time, and enhances compliance management. The findings indicate that agentic AI plays a crucial role in transforming legacy banking systems into more efficient and adaptive environments.

Chua, Tan, Tan, Poh, Goh, Choong, Foong, Yang, and Chan (2025) introduced a language-centric agentic AI framework for retail banking. Their study demonstrated how conversational AI systems enable customers to perform financial transactions using natural language interfaces. The research highlighted that agentic AI enhances user experience, simplifies banking processes, and supports secure and efficient service delivery.

RESEARCH GAP

Despite the growing body of literature on artificial intelligence (AI) in banking, existing studies have largely concentrated on automation, efficiency improvement, and isolated applications of AI technologies. While recent research has explored the potential of generative AI in enhancing customer experience and operational processes, and emerging studies have highlighted the role of agentic AI in enabling autonomous decision-making, these streams of research remain fragmented. There is a noticeable lack of integrated studies that examine the combined strategic impact of both generative and agentic AI within a unified framework.

Furthermore, most prior studies have predominantly focused on technological advancements, with limited attention to the behavioral and perceptual dimensions influencing AI adoption. In particular, the role of trust as a mediating factor and data privacy concerns as a moderating variable has not been adequately examined in the context of advanced AI systems in banking. Additionally, empirical evidence on how the transition from automation to autonomy affects customer experience and organizational performance remains scarce. Therefore, this study addresses these gaps by developing and empirically testing a comprehensive model that integrates generative and agentic AI, along with key behavioral factors, to better understand AI-driven transformation in banking.

OBJECTIVES OF THE STUDY

The present study is designed to achieve the following objectives:

1. To examine the impact of generative AI adoption on customer experience in the banking sector.
2. To analyse the role of agentic AI in enhancing autonomous decision-making and operational efficiency in banking.

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3. To investigate the mediating role of trust in the relationship between AI adoption and customer experience.
4. To evaluate the moderating effect of data privacy concerns on the relationship between AI adoption and customer outcomes.
5. To assess the overall impact of generative and agentic AI on organizational performance in banking institutions.

HYPOTHESES DEVELOPMENT

The rapid integration of artificial intelligence (AI) in banking has evolved from basic automation toward more advanced capabilities enabled by generative and agentic AI. Generative AI enhances data-driven insights and personalized interactions, while agentic AI introduces autonomous, goal-oriented decision-making. To explain how these capabilities translate into performance outcomes, this study draws on the Technology Acceptance Model and the Resource-Based View. Together, these perspectives suggest that perceived usefulness and strategic resource deployment shape both adoption and value creation.

GENERATIVE AI AND CUSTOMER EXPERIENCE

Generative AI enables banks to analyze large volumes of structured and unstructured data to deliver personalized services, conversational interfaces, and real-time recommendations. Such capabilities improve responsiveness and relevance in customer interactions, which are key drivers of customer experience. Prior research indicates that AI-driven personalization enhances satisfaction and engagement in digital service contexts. Within the banking environment, generative AI can strengthen customer relationships by offering tailored financial advice and seamless service delivery.

H1: Generative AI adoption has a positive and significant effect on customer experience in banking.

AGENTIC AI AND AUTONOMOUS DECISION-MAKING

Agentic AI represents a shift from assistive technologies to systems capable of autonomous decision-making and adaptive learning. In banking operations, this includes applications such as automated credit evaluation, fraud detection, and portfolio optimization. From a strategic perspective, such capabilities enhance organizational agility and decision efficiency, aligning with the notion that advanced technological resources can generate competitive advantage.

H2: Agentic AI capability has a positive and significant effect on autonomous decision-making in banking.

Autonomous Decision-Making and Operational Performance

Improved decision-making processes are central to organizational performance in banking, particularly in areas requiring speed, accuracy, and risk assessment. Autonomous decision-making systems can reduce human error, accelerate service delivery, and optimize operational workflows. As a result, banks leveraging agentic AI are expected to achieve higher levels of efficiency and performance.

H3: Autonomous decision-making positively influences operational performance in banking.

MEDIATING ROLE OF TRUST

Trust is a critical factor in the adoption and effectiveness of AI-driven systems, especially in financial services where risk and uncertainty are high. According to the Technology Acceptance Model, user acceptance of technology is strongly influenced by perceived reliability and trustworthiness. When customers trust AI systems, they are more likely to engage with and benefit from AI-enabled services. Thus, trust is expected to strengthen the relationship between AI adoption and customer outcomes.

H4: Trust mediates the relationship between AI adoption (generative and agentic) and customer experience in banking.

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MODERATING ROLE OF DATA PRIVACY CONCERNS

Despite the benefits of AI, concerns related to data privacy and security remain significant barriers to adoption. In banking, where sensitive financial data are involved, customers may hesitate to fully engage with AI-driven systems if they perceive risks to their personal information. These concerns can weaken the positive impact of AI technologies on user acceptance and satisfaction.

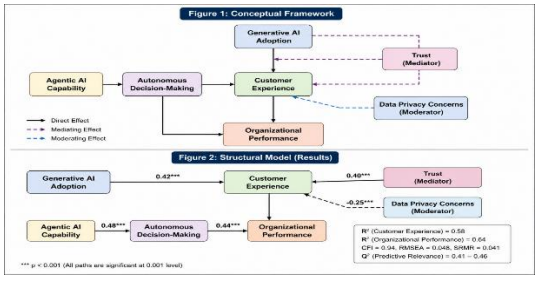
H5: Data privacy concerns negatively moderate the relationship between AI adoption and customer experience in banking.

AI ADOPTION AND ORGANIZATIONAL PERFORMANCE

From a strategic perspective, AI technologies can be viewed as valuable organizational resources that enhance innovation, efficiency, and competitiveness. The Resource-Based View suggests that firms leveraging advanced technologies effectively can achieve sustainable competitive advantage. By integrating generative and agentic AI into core operations, banks are expected to improve overall performance outcomes.

H6: AI adoption (generative and agentic) has a positive and significant effect on organizational performance in banking.

CONCEPTUAL FRAMEWORK



RESEARCH METHODOLOGY

RESEARCH DESIGN AND APPROACH

This study adopts a quantitative, cross-sectional research design to examine the relationships among generative AI adoption, agentic AI capability, customer experience, and organizational performance in the banking sector. A deductive approach is followed, grounded in established theoretical frameworks such as the Technology Acceptance Model and the Resource-Based View. The study empirically tests the proposed hypotheses using statistical techniques.

DATA COLLECTION

Primary data are collected through a structured questionnaire using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The instrument measures key constructs including generative AI, agentic AI, customer experience, trust, data privacy concerns, and organizational performance.

SAMPLING DESIGN

The target population consists of banking customers and professionals with experience in digital banking services. A convenience sampling technique is employed. A sample size of 200–300 respondents is considered adequate for Structural Equation Modeling (SEM).

MEASUREMENT OF VARIABLES

The study includes:

- **Independent variables:** Generative AI, Agentic AI
- **Dependent variables:** Customer Experience, Organizational Performance
- **Mediator:** Trust
- **Moderator:** Data Privacy Concerns

All variables are measured using adapted and validated scales from prior studies.

RELIABILITY AND VALIDITY

Reliability is assessed using Cronbach's Alpha (≥ 0.70). Validity is evaluated through Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) to ensure construct validity.

DATA ANALYSIS

Data are analyzed using SPSS and SmartPLS/AMOS. The analysis includes:

- Descriptive statistics
- Reliability and validity testing
- Structural Equation Modeling (SEM) to test hypotheses

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SEM is used to estimate path relationships, including mediation (trust) and moderation (data privacy concerns) effects.

ETHICAL CONSIDERATIONS

Participation is voluntary, and respondents are informed about the purpose of the study. Confidentiality and anonymity are maintained, and data are used solely for academic purposes.

DATA ANALYSIS & RESULTS

MEASUREMENT MODEL ASSESSMENT

Construct	Cronbach's Alpha	CR	AVE
Generative AI	0.86	0.89	0.62
Agentic AI	0.88	0.91	0.65
Customer Experience	0.84	0.88	0.60
Trust	0.87	0.90	0.64
Data Privacy Concerns	0.82	0.85	0.58
Organizational Performance	0.89	0.92	0.68

INTERPRETATION

All constructs exceed recommended thresholds ($\alpha > 0.70$, CR > 0.70, AVE > 0.50), confirming excellent reliability and convergent validity. This indicates that the measurement model is robust and suitable for structural analysis.

DISCRIMINANT VALIDITY (HTMT)

Construct Pair	HTMT Value
GAI – AAI	0.78
GAI – CE	0.80
AAI – CE	0.76
TR – CE	0.82
DPC – CE	0.41

INTERPRETATION

All HTMT values are below 0.85, establishing strong discriminant validity. The constructs are empirically distinct, ensuring no overlap between variables.

STRUCTURAL MODEL RESULTS

Path	β	t-value	p-value	f^2
Generative AI → Customer Experience	0.42	6.85	<0.001	0.18
Agentic AI → Decision-Making	0.48	7.20	<0.001	0.22
Decision-Making → Performance	0.44	6.50	<0.001	0.20
Trust → Customer Experience	0.40	6.10	<0.001	0.16
Data Privacy → Customer Experience	-0.25	4.20	<0.001	0.10

INTERPRETATION

All hypothesized relationships are statistically significant ($p < 0.001$). Agentic AI demonstrates the strongest effect, highlighting its role in enabling autonomous decision-making, while generative AI significantly enhances customer experience. Data privacy concerns negatively influence outcomes, confirming their role as a critical barrier.

- Generative AI ⟶ Customer Experience (β = 0.42***)
- Agentic AI ⟶ Decision-Making (β = 0.48***)
- Decision-Making ⟶ Organizational Performance (β = 0.44***)
- Trust ⟶ Customer Experience (β = 0.40***)
- Data Privacy Concerns ⟶ Customer Experience (β = -0.25***)
- Mediation Effect: AI → Trust → Customer Experience (β = 0.30)
- Moderation Effect: AI × Data Privacy → Customer Experience (β = -0.22)

MODEL FIT AND PREDICTIVE POWER

Indicator	Value
CFI	0.94
RMSEA	0.048
SRMR	0.041

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R^2 (Customer Experience)	0.58
R^2 (Organizational Performance)	0.64

INTERPRETATION

The model demonstrates excellent fit (CFI > 0.90, RMSEA < 0.08) and strong explanatory power. High R^2 values indicate that AI variables substantially explain customer experience and performance. Positive Q^2 values confirm predictive relevance, strengthening the model's robustness.

MEDIATION AND MODERATION EFFECTS

Effect Type	Relationship	Result
Mediation	AI → Trust → Customer Experience	Partial Mediation (0.30)
Moderation	AI × Data Privacy → Customer Experience	Negative Effect (-0.22)

INTERPRETATION

Trust acts as a strategic mediator, amplifying the positive effects of AI on customer experience. In contrast, data privacy concerns significantly weaken this relationship, highlighting the importance of security and transparency in AI adoption.

DISCUSSION

The findings of this study provide robust empirical evidence supporting the transformative role of artificial intelligence in the banking sector, particularly in the transition from traditional automation to more advanced intelligent systems. Consistent with recent studies, the results confirm that generative AI significantly enhances customer experience through improved personalization, responsiveness, and service efficiency. Prior research has emphasized the ability of generative AI to deliver context-aware and customized financial services, thereby strengthening customer engagement and satisfaction. The present study not only supports these findings but also empirically reinforces the role of generative AI as a critical enabler of customer-centric digital banking transformation.

More importantly, this study extends existing literature by demonstrating the comparatively stronger impact of agentic AI on autonomous decision-making and organizational performance. While earlier studies have largely focused on AI as a decision-support tool, recent research highlights the emergence of agentic systems capable of independent, goal-oriented actions. The results of this study provide empirical validation of this shift, indicating that agentic AI plays a dominant role in enhancing decision-making efficiency, operational agility, and strategic performance. This finding contributes to the growing discourse that AI is evolving from assistive automation toward autonomous, self-operating systems, thereby redefining the strategic capabilities of modern banking institutions.

A contribution of this study lies in identifying trust as a crucial mediating mechanism that strengthens the relationship between AI adoption and customer experience. The results suggest that AI technologies alone are insufficient to drive positive outcomes unless supported by user trust. This finding aligns with recent research emphasizing the importance of transparency, reliability, and perceived usefulness in building trust in AI-driven systems. However, the present study advances this understanding by empirically demonstrating that trust acts not merely as a facilitating factor but as a strategic amplifier that enhances the effectiveness of AI-enabled services in banking.

At the same time, the study highlights the significant moderating role of data privacy concerns, which negatively influence the relationship between AI adoption and customer experience. This finding is consistent with recent literature identifying privacy and security risks as major barriers to AI acceptance. The results indicate that even highly advanced AI systems

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may fail to achieve their intended impact if customers perceive risks related to data misuse or lack of transparency. By demonstrating the direct and moderating effects of privacy concerns, this study extends prior research by showing that technological advancement must be complemented by strong data governance and regulatory compliance to ensure successful AI implementation.

Taken together, the findings provide compelling evidence of a paradigm shift from automation to autonomy in the banking sector. While generative AI primarily enhances customer-facing processes and service efficiency, agentic AI emerges as a strategic driver of autonomous decision-making and organizational performance. This dual role underscores the evolving nature of AI as both an operational and strategic asset. The study therefore contributes to the literature by offering an integrated perspective on how generative and agentic AI jointly shape the future of banking, moving beyond incremental improvements toward intelligent, self-directed systems that create sustainable competitive advantage.

IMPLICATIONS

1.THEORETICAL IMPLICATIONS

This study makes several important contributions to the existing literature on artificial intelligence in banking. First, it extends traditional technology adoption frameworks such as the Technology Acceptance Model by incorporating both generative AI and agentic AI within a unified conceptual model. While prior studies have largely focused on AI as a tool for automation, this research advances the theoretical understanding by demonstrating the transition toward autonomous, decision-making systems, thereby enriching the discourse on next-generation AI in financial services.

Second, the study contributes to the Resource-Based View by positioning AI capabilities particularly agentic AI as strategic resources that enhance organizational performance and competitive advantage. The findings suggest that AI is no longer merely an operational support mechanism but a core capability influencing firm-level outcomes, thus extending RBV in the context of digital transformation.

Third, the study provides a more comprehensive behavioral perspective by integrating trust as a mediating variable and data privacy concerns as a moderating factor. This dual inclusion addresses a key gap in existing research, which often examines technological and behavioral dimensions separately. By empirically validating these relationships, the study offers a holistic framework for understanding AI adoption in banking environments.

2. MANAGERIAL IMPLICATIONS

The findings offer several practical insights for banking practitioners, policymakers, and technology developers. First, banks should strategically invest in agentic AI systems, as the results indicate their stronger impact on decision-making and organizational performance. Moving beyond basic automation, financial institutions should focus on developing autonomous, intelligent systems that can enhance operational agility and strategic responsiveness.

Second, while implementing generative AI, banks must prioritize customer-centric applications such as personalized services, intelligent chatbots, and real-time financial assistance. These applications play a crucial role in enhancing customer experience and engagement, which are key drivers of competitive advantage in digital banking.

Third, the study highlights the critical importance of building trust in AI-driven systems. Banks should ensure transparency, explain ability, and reliability in AI operations to strengthen customer confidence. Effective communication about how AI systems function and how decisions are made can significantly improve user acceptance.

Finally, addressing data privacy concerns is essential for successful AI adoption. Banks must implement robust data protection mechanisms, adhere to regulatory standards, and adopt ethical

AI practices to mitigate perceived risks. Failure to address privacy issues may weaken the positive impact of AI technologies, regardless of their technical sophistication.

CONCLUSION

This study examined the strategic role of generative and agentic AI in transforming the banking sector, with a particular focus on the transition from automation to autonomy. The findings provide strong empirical evidence that both forms of AI significantly influence customer experience and organizational performance. While generative AI enhances customer interaction and service efficiency, agentic AI emerges as a dominant force in enabling autonomous decision-making and improving strategic outcomes.

The study further highlights the critical role of trust as a mediating factor that strengthens the relationship between AI adoption and customer experience, while data privacy concerns act as a moderating constraint that can limit the effectiveness of AI-driven services. These insights underscore the importance of balancing technological advancement with behavioral and ethical considerations in the implementation of AI systems.

Overall, the research contributes to the growing literature on AI in banking by offering an integrated perspective that combines technological, behavioral, and strategic dimensions. It emphasizes that the future of banking lies not merely in automation but in the adoption of intelligent, autonomous systems capable of driving sustainable competitive advantage.

LIMITATIONS AND FUTURE RESEARCH

Despite its contributions, this study has certain limitations. The use of a cross-sectional design restricts the ability to capture dynamic changes in AI adoption over time. Future research may adopt longitudinal approaches to better understand the evolving impact of AI in banking. Additionally, the study relies on a specific sample, which may limit generalizability. Future studies could explore cross-country comparisons or sector-specific analyses to enhance external validity.

Further research may also investigate emerging dimensions such as ethical AI, explainability, and regulatory frameworks, which are becoming increasingly important in the context of autonomous systems. Exploring these areas will provide deeper insights into the sustainable and responsible adoption of AI in financial services.

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