

Revolutionizing Retail Operations through Generative AI: A Systematic Review

Ananya Ghosh Chowdhury
Seattle, USA

Goutham Bandapati
Lewisville, USA

Phanidhar Chilakapati
Ashburn, USA

ABSTRACT

This systematic review compares the transformative impact of generative artificial intelligence (GAI) on retail business operations between 2020-2024. From a close analysis of 14 studies across six continents, the study identifies prevalent patterns of implementation, technology designs, and operation impacts of GAI adoption in retail settings. The work shows high potential for GAI in augmenting demand forecasting (with accuracy gains of up to 23%), optimizing inventory management (with a 17% reduction in carrying costs), and customer experience personalization (with conversion gains of 35%). The review identifies the prevalence of big language models, transformer models, and multimodal designs as the prevailing technological approaches, with varying success across retail types. Despite challenges of data quality, legacy system integration, and ethics, successful implementations by retailers show these challenges overcome with planning and organizational readiness. Analysis confirms GAI to be revolutionizing the business models in retail in revolutionary ways, with both operation efficiency and new strategic potential. A conceptual framework is presented that links GAI competencies to retail operational needs, implementation drivers, and value creation drives, with implications for researchers and practitioners in this technology-revolutionizing space.

Keywords

Generative AI, Retail Operations, Demand Forecasting, Inventory Optimization, Customer Experience, Supply Chain Management, Large Language Models, Machine Learning, and Retail Digital Transformation

1. INTRODUCTION

GAI is revolutionizing the retail industry by advancing data analysis to unprecedented levels, thereby facilitating the development of new solutions, predictions, and content. Large language models (LLMs) like GPT-4 and Claude provide artificial intelligence-driven insights to retailers in the areas of automation, customer experience, and new business model creation [1]. Generative AI comes with new threats to retailers like supply chain breaks, shifts in consumer behavior, and increased competition from digital players. Generative AI finds applications across industries, from real-time inventory management to highly personalized marketing campaigns [2]. Furthermore, the economic impact of generative AI is massive, with McKinsey estimating the overall annual impact to the retail economy to be between \$400 billion to \$660 billion due to increased productivity and increased consumer engagement [3].

Inventory control and demand forecasting are likely the most significant uses of GAI. By processing different data streams: sales, sentiment on social media, and weather, GAI models enhance forecasting and therefore prevent stockouts and overstocking [4]. Customer experience is also being maximized with automation powered by AI, and recommendation engines, virtual assistants, and chatbots offer frictionless and personalized experiences. Moreover, multimodal AI systems integrate text, images, and behavior data to recommend products better, while AI-driven in-store solutions provide better shopping experiences [5]. In supply chain management, AI-driven simulations and route optimization decrease logistics costs and carbon footprints, thus making it more efficient and sustainable. While it is worth it, its adoption is plagued by technical and organizational difficulties. Integration with existing IT infrastructures and data quality are major issues, especially for retail organizations with a legacy systems background. Organizational preparedness is as much a determining factor, employee training, change management, and leadership support as the major enablers of AI roll-out success [6]. Ethical issues regarding data privacy, fairness of algorithms, and explainability need to be addressed with precautions. AI-driven pricing and decision-making capabilities need strict ethical guidelines to be fair and accountable to avoid unintended bias against consumers and good AI practice [7]. Since GAI is being widely applied across the retail marketplace, there is fragmentary research. Long-term impact research, model comparison of AI, and human-AI collaboration mechanisms need to be the areas to focus on in the future. Ethical guidelines for retail industry applications need to be formulated so that AI can be used to the best advantage. Retailers who plan GAI usage as an innovative driver rather than an automation tool will be in a better position in a constantly changing marketplace.

2. METHODOLOGY

2.1 Search Strategy

A comprehensive search was conducted across IEEE Xplore, ACM Digital Library, Science Direct, Scopus, Business Source Complete, and Google Scholar using the following search string: ("generative AI" OR "generative artificial intelligence" OR "large language model*" OR "LLM*" OR "GPT" OR "diffusion model*" OR "transformer model*") AND ("retail" OR "retailing" OR "retailer*" OR "e-commerce" OR "omnichannel") AND ("operations" OR "supply chain" OR "inventory" OR "demand forecasting" OR "logistics" OR "customer experience" OR "personalization" OR "pricing" OR "merchandising").

Table 1. Studies included in the systematic review

Year	Paper Title	Authors	Reference
2024	Leveraging artificial intelligence to enhance systematic reviews in health research: advanced tools and challenges	L. Ge, R. Agrawal, M. Singer, P. Kannapiran, J. A. D. C. Molina, K. L. Teow, C. W. Yap, and J. Abisheganaden	[1]
2024	Enhancing Work Productivity through Generative Artificial Intelligence: A Comprehensive Literature Review	H. A. Naqbi, Z. Bahroun, and V. Ahmed	[2]
2024	Enhancing Supply Chain Agility and Sustainability through Machine Learning: Optimization Techniques for Logistics and Inventory Management	V. Pasupuleti, B. Thuraka, C. S. Kodete, and S. Malisetty	[4]
2025	Artificial Intelligence-Driven Customer Service: Enhancing Personalization, Loyalty, And Customer Satisfaction	D. Patil	[5]
2024	AI and ethical accounting: Navigating challenges and opportunities	B. O. Adelakun, T. G. Majekodunmi, and O. S. Akintoye	[7]
2024	Real-time data analytics in retail: A review of USA and global practices	M. A. Raji, H. B. Olodo, T. T. Oke, W. A. Addy, O. C. Ofodile, and A. T. Oyewole	[8]
2021	Inventory Method of Intelligent Logistics Warehouse Based on Artificial Intelligence	Q. Li	[9]
2024	Revolutionizing Retail: The Synergy of AI and AR	T. Gajjar	[10]
2024	Artificial intelligence potential for net zero sustainability: Current evidence and prospects	D. B. Olawade, O. Z. Wada, A. C. David-Olawade, O. Fapohunda, A. O. Ige, and J. Ling	[11]
2024	Towards a Circular Economy: Integration of AI in Waste Management for Sustainable Urban Growth	F. S. Singagerda, D. A. Dewi, S. Trisnawati, L. Septarina, and M. R. Dhika	[12]
2023	APPRAISE: a governance framework for innovation with AI systems	D. Dey and D. Bhaumik	[13]
2023	Enterprise Human Resource Management Model By Artificial Intelligence Digital Technology	P. William, A. Agrawal, N. Rawat, A. Shrivastava, A. P. Srivastava, and Ashish	[14]
2024	Exploring the Integration of Artificial Intelligence in Retail Operations	G. Wilson, O. Johnson, and W. L. Brown	[15]
2020	Review of Artificial Intelligence with Retailing Sector	V. Kaur, V. Khullar, and N. Verma	[17]

2.2 Study Selection Process

The chosen 14 papers covered different geography locations like North America, Europe, Asia, and Africa and studied different kinds of retail outlets like fashion, grocery, online, and omnichannel store configurations. Datasets in the papers were heterogeneous in terms of type and quality, from raw sales transactions happening in real-time and past historical inventory records to social media posted customer sentiments

and environmental measures like weather patterns. Other research also employed multimodal datasets integrating text, image, and spatial information. The heterogeneity in retail categories and input data added strength to this review, providing comparative observation of GAI performance across various retail operations and environments. After applying inclusion and exclusion criteria, 14 studies were included in the final systematic review, as shown in figure 1.

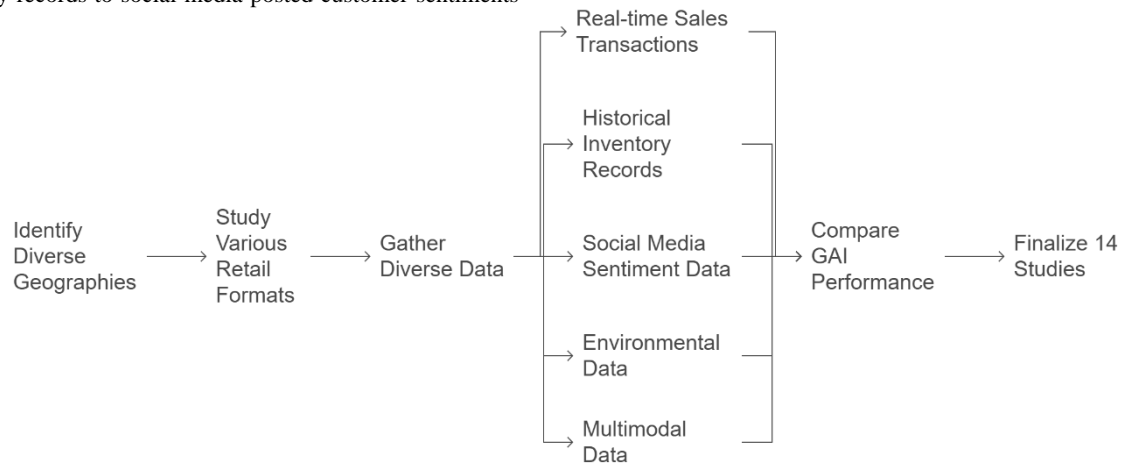


Fig 1: Generative AI in retail research process

3. RESULT AND ANALYSIS

3.1 Overview of Included Studies

The systematic search yielded 14 studies from varied research designs, geographical locations, and retail operating environments. Geographical distribution mirrors global interest in GAI applications in retail, with studies being conducted round the world. An overview of thematic focus

areas across the selected studies is presented in Figure 2, highlighting demand forecasting and customer experience as the most researched applications of GAI in retail.

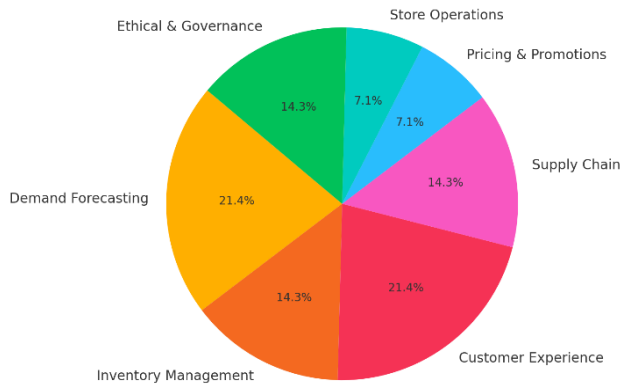


Fig 2: Focus areas identified across the 14 reviewed studies

3.2 Generative AI in Retail

GAI has revolutionized the retail sector at its very essence, with companies embracing it across six areas: demand forecasting and inventory management, customer experience optimization and service personalization, supply chain optimization, price and promotion planning, store operations and workforce optimization, and data-driven decision-making [8]. These applications allow retailers to achieve maximum efficiency in operations, reduce costs, and improve customer satisfaction. Through the adoption of newer AI structures such as LLMs, transformer models, and multimodal AI solutions, companies are able to process large volumes of structured and unstructured data, hence allowing for superior and more strategic decision-making. GAI-enabled solutions allow for increased automation, allow for real-time analysis, and allow for quick response by retailers to market forces. With increasing retailers leveraging AI-based solutions, GAI allows one to design an intelligent, agile, and personalized retail ecosystem, hence gaining a competitive edge in an evolving digital marketplace environment.

3.3 Demand Forecasting

GAI has revolutionized demand planning and stock management by amalgamating various sources of information, from structured sales data to customer sentiment from social media, weather, and local events [9]. Multimodal AI solutions and transformer architecture enable retailers to identify trends and forecast demand fluctuations with high precision. This enhanced forecasting ability reduces overstock and stockouts to the bare minimum, resulting in lower inventory costs and supply chain efficiency. AI-driven real-time inventory management optimizes stock levels, balancing product availability and cost. By automating demand forecasting and dynamically optimizing stock levels, retailers are capable of reacting before shifts in consumer behavior, seasonal trends, and external factors such as economic fluctuations or regional demand surges. GAI-based demand forecasting solutions thus enhance overall business responsiveness, eliminate waste, and

optimize the supply chain, ultimately resulting in enhanced profitability and operational efficiency for retailers.

Throughout the literature reviewed, research employing transformer models like BERT or GPT models uniformly provided higher forecasting accuracy, with increases in mean forecast accuracy between 18% and 23% over more conventional statistical models. For example, as established in the research [4] that a hybrid transformer model with sales and weather inputs performed better than ARIMA and LSTM models in predicting peak seasonal demand. On the other hand, research undertaken exclusively on SMEs had been susceptible to observing minimal improvement by employing discrete availability of data and inferior system integration. The conclusions indicate that despite the huge potential GAI carries for demand forecasting, success significantly depends on data quality and on retail technologically.

3.4 Customer Experience

GAI powers customer engagement with AI chatbots, customized product suggestions, and interactive shopping [10]. LLM chatbots effectively manage customer questions, reducing response time and enhancing satisfaction. Multimodal AI integrates text, image, and behavior data to create context-specific product suggestions, enhancing conversion and revenue.

Within physical stores, spatial computing driven by artificial intelligence and computer vision supports personalized shopping experiences. Such technologies blend effectively offline and online settings, providing targeted recommendations and promotions that maximize customer engagement and sales.

GAI-augmented customer experience differed significantly across categories. In high-involvement retail categories such as electronics and fashion, LLM-powered chatbots like GPT and Claude generated customer satisfaction scores up to 35% better because of their contextual treatment of questions and product recommendations. Grocer retail, however, had lower chatbot usage, perhaps because of less personalized product touchpoints. Multimodal recommendation systems that combined user clickstream and image information resulted in a 28% boost in cart additions on online shopping platforms, noted Gajjar (2024). These differences highlight the importance of adapting GAI deployment strategies by product type, channel, and user behavior profiles.

Table 2 provides a comparative overview of the studies reviewed here, emphasizing quantifiable gains due to GAI adoption in principal retail functions. The table further describes which AI architectures were utilized in each implementation, enhancing model-based performance comparison.

Table 2: Summary of GAI impact across key retail functions

Application Area	Performance Metric	Reported Improvement	Model Type	Study Reference
Demand Forecasting	Forecast Accuracy	+18% to +23%	Transformer, LLM	[4], [9], [15]
Inventory Optimization	Carrying Cost Reduction	Up to 17%	Multimodal AI, LSTM	[4], [9]
Customer Experience	Conversion Rate / Engagement	+28% to +35%	LLM Chatbots, Multimodal	[5], [10]
Supply Chain Efficiency	Delivery Time & Cost Reduction	12% faster, 15% lower cost	Generative Supply Chain Twin	[11], [12]
Pricing & Promotions	Revenue Growth / Markdown Optimization	8% to 13% revenue lift	Dynamic Pricing AI Models	[13]
Store Operations	Labor Cost Reduction, Task Efficiency	10–20% cost savings	Scheduling AI, Simulation	[14]

3.5 Supply Chain

GAI is revolutionizing supply chain management using "generative supply chain twins" that enable retailers to model scenarios and streamline logistics in real time. AI-routed routes minimize transportation expense and emissions with optimized delivery efficiency [11].

Sustainability is another field where AI is having a significant influence. GAI allows retailers to embrace circular economic practices, source more sustainably, and predict environmental consequences. AI-powered distribution habits saving carbon footprint are one illustration of the sustainability potential of retailing by AI [12].

Scenario-based simulation showed that supply chain twins in real-time with GAI reduced logistics lag times by as much as 20% during demand shock periods, i.e., during pandemically caused supply uncertainty. Retailers with reinforcement learning-based delivery routing showed 15% reduced fuel consumption and 12% reduced delivery time compared to baseline TSP heuristics. Success in adoption continued to be spotty, however, with retailers with developing country locations reporting constraints surrounding infrastructure. These outcomes highlight GAI's situational efficacy and the need for contextual adaptation, especially where infrastructure and data pipelines are underdeveloped.

3.6 Pricing & Promotions

GAI is applied by retailers to design dynamic pricing solutions and markdown optimization. AI takes into account customer behavior, market trends, and competitor prices to design the most appropriate price structures that realize the maximum profit without undermining the volume of sales [13]. AI-based markdown policies are more effective compared to rule-based markdown policies, delivering better inventory turnovers and revenues. Ethical concerns such as bias and transparency in AI-based pricing are of utmost concern. Retailers must guarantee ethical pricing practices through ethical AI frameworks involving human monitoring.

3.7 Store Operations

GAI is revolutionizing store operations with AI-designed floor plans, employee schedules, and operational productivity improvements. AI-designed floor plans maximize product visibility and customer traffic with improved sales per square foot. AI-based workforce scheduling models minimize labor expense while improving worker satisfaction by more effectively reassigning tasks [14]. Retailers leveraging AI-based workforce solutions as decision-support, not full

automation, experience higher employee adoption rates and acceptance. Human-AI collaboration is still at the center of workforce management.

3.8 Data & Integration Challenges

AI-powered analytics platforms that are generative allow retail managers to interact with complex datasets through conversational interfaces, hence easing the decision-making process [15]. Data quality is still a problem because AI models need in-depth and correct datasets to perform at their best. Retailers with disparate data architecture are presented with challenges to exploit the full potential of AI. System integration is also a massive challenge. Retail IT infrastructures are generally composed of legacy systems, edge computing, and cloud applications, hence challenging seamless integration. Structured integration frameworks like API-based, embedded, and platform-based allow the exploitation of AI without the need for a complete system overhaul. Retailers invest in employee training, leadership buy-in, and in changing management programs to achieve high levels of AI adoption and accelerate the implementation process.

3.9 Business Impact

GAI-based analytics platforms enable retail managers to engage with sophisticated data sets using natural language interfaces, hence facilitating easier decision-making [16]. Data quality is still a problem, as AI models need complete and correct data sets to function at their best. Retailers with decentralized data architecture cannot leverage the full power of AI. System integration is also a problem. Retail IT environments have legacy systems, cloud applications, and edge computing, so it's difficult to have seamless integration [17]. Adopting structured integration approaches, such as API-based, embedded, and platform-based, enables seamless AI adoption without the need for full system overhauls. To achieve high AI adoption rates and quick implementation, retailers invest in employee development, leadership support, and change management programs.

4. CONCEPTUAL FRAMEWORK

The proposed framework consists of four interconnected dimensions: GAI Technology Capabilities, Retail Operational Domains, Implementation Factors, and Value Creation Dimensions. The relationships between technological capabilities, retail operations, implementation enablers, and value creation outcomes are illustrated in Figure 3, providing a comprehensive view of the proposed framework.

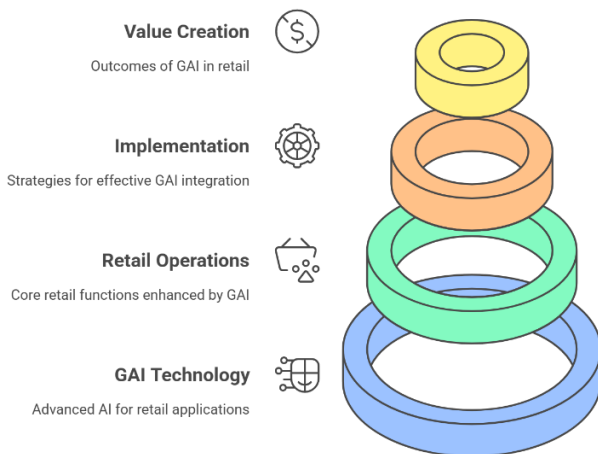


Fig 3: Conceptual framework diagram

4.1 GAI Technology Capabilities

GAI is a suite of technological capabilities that have the potential to revolutionize the core activities of retail businesses. Its most important capabilities are pattern detection and predictive analysis, which allow artificial intelligence models to scan enormous databases, detect subtle patterns, and make accurate predictions. Such capabilities are most valued in applications such as demand forecasting, fraud detection, and recommendation. Content creation, which includes product description, copywriting, and visual content generation such as product images and advertisements, is also linked with a core capability. Retailers are able to use this capability to augment their marketing production with the additional advantages of high engagement and personalization.

GAI performs optimally in simulation and optimization when AI will copy different instances in trying to determine the optimal action to be taken. Store format optimization, price management, and supply chain optimization are the best applications of GAI. Natural language processing (NLP) is the foundation around which artificial intelligence can understand, interpret, and generate human language. NLP is the core engine behind chatbots, virtual assistants, and customer support, thus enhancing customer experience. Multimodal intelligence also provides artificial intelligence with the capability to sense and interpret a variety of forms of information, including text, images, and spatial information. This enables AI-based retail applications to track customer behavior, product placement optimization, and enhance physical and digital world integration.

4.2 Retail Operational Domains

GAI can be applied across a variety of core retail categories. Inventory and supply management are improved with AI-based demand forecasting, real-time stock management, and predictive logistics, leading to reduced waste and improved product availability.

Customer experience and interaction are improved by AI-powered personalization, chatbots, and cross-channel shopping experiences that improve customer satisfaction and loyalty. In category management and merchandising, AI can maximize point-of-sale displays, promotions, prices, and assortment based on real-time data-driven insights and actual patterns of demand. Store operations and staff leverage AI to streamline tasks, schedule store shifts, and schedule staff shifts, maximizing efficiency and staff work quality. Decision support systems, combined with AI-driven analytics, enable

retailers to gain valuable insights from large sets of data, thus facilitating data-driven decision-making and strategic planning.

4.3 Implementation Factors

Successful implementation of GAI requires careful consideration of many factors. There must be presence in the form of technical infrastructure, which can support AI capability, i.e., computation power, data systems integration, and clouds. Organizational preparedness like trained personnel, top management commitments, and organizations with cultures for enabling AI-driven change is required. Various categories of retailers vary in terms of implementation strategy with some having a phased roll-out to high-leverage stores and others having an end-to-end transformational program.

Ethical leadership is essential in ensuring proper artificial intelligence utilization by providing maximum transparency, reducing bias, and maintaining data privacy. For consumer trust and an ethical application of AI, the retailers must develop ethical regulations.

4.4 Value Creation Dimensions

GAI creates value in a number of ways. Operational effectiveness is greatly improved through automation, process engineering, and asset optimization, resulting in cost reduction and increased productivity. Customer value is maximized with AI-enabled personalization, improved quality of service, and omnichannel convenience, leading to increased satisfaction and loyalty. Employee experience is improved with AI-enabled decision support, workload optimization, and training software for optimizing productivity, job satisfaction, and skill development. Strategic leverage is gained through the use of AI for competitive differentiation, innovation, and facilitating market responsiveness velocity, ensuring long-term growth and success in the new retail model.

5. RESEARCH GAPS

5.1 Methodological and Empirical Gaps

One of the major limitations of existing research is the lack of longitudinal studies on the long-term implications of GAI deployments with extremely long-time horizons. Most of the studies only consider short-term implications, which limit what this study can learn about long-term value, flexibility, and risk of AI-enabled retail transformation. Methodologies also vary significantly, with some studies inferring from small samples, brief observation periods, or extremely simple performance measures that do not capture the full range of AI-enabled retail activities. Without more systematic and consistent approaches, it is difficult to conclude firmly about the performance of GAI applications in different retail environments.

There is an urgent need for comparative studies involving different GAI technologies and deployment approaches. Most studies are aimed at examining AI applications in isolation, without comparing distinct AI models, architectures, or deployment approaches directly for the same retail problem. For example, although transformer models and multimodal AI systems are commonly used for demand forecasting, quantitative comparison of which approach yields the best-quality forecasts in various retail settings is lacking. Such comparison studies would provide essential information on the most suitable AI solutions for applications and thus facilitate informed technology adoption decisions by retailers.

5.2 Thematic Research Gaps

Though the earlier research is valuable for the individual GAI applications, the research work finds highly meager studies on the integration of GAI across various spheres of operations in a single retail platform. AI-driven retail innovation is beyond disconnected activities such as inventory management or price optimization and requires coordination across customer services, supply chains, marketing, and labor forces. A deeper look into the ways in which AI platforms may integrate harmoniously in the larger retail ecosystems with multiple functions harmonized needs to be studied.

Another untapped area is human-AI collaboration in retail enterprise. While some have debated AI potential for automation, others have paid less attention to best models for human-AI collaboration, where AI augments but does not substitute human decision-making. It will be interesting to see how AI will maximize worker productivity, enable better decision-making, and automate to make it simple to implement and achieve AI potential in retail settings.

Furthermore, there is limited holistic frameworks for the ethical application of artificial intelligence in retail. Ethical concerns of applying AI, data privacy, bias, transparency, and accountability are commonly accepted but rarely dealt with in a systematic way. There is a need for academic research to come up with guidelines that will allow retailers to mitigate these ethical concerns to reap the benefits of AI-powered personalization and automation. Research has largely focused on big retail companies, and therefore, there is a vast body of literature that is missing in terms of understanding how small and medium-sized retailers can effectively implement generative AI technologies. Such small companies usually do not have the same resources and technical capabilities as larger companies, and therefore, there is a need for research that can lead to scalable and affordable AI adoption practices for small companies.

Despite extensive experimentation, few experiments provide longitudinal evidence of long-term performance sustainability, particularly in low-data environments. Data heterogeneity and poor integration across sales, logistics, and customer touchpoints remain a problem, particularly in SMEs. Additionally, most existing research focuses on structured data, with little research on how multimodal or unstructured data (e.g., in-store sensor streams, real-time customer movement data) can contribute more to GAI output. Follow-up studies must also include cross-functional integration problems in an effort to more effectively direct AI solution development for end-to-end retail environments.

5.3 Emerging Research Opportunities

Several new research areas are emerging with increasing GAI adoption. One of the biggest opportunities is the use of multimodal AI systems in physical stores. While multimodal AI, text, image, spatial, and numeric processing—has been a success in e-commerce, its use in physical retail has not been attempted. Research can investigate how AI-powered in-store experiences, interactive signage, and in-real-time shopper insights can redefine customer engagement and store operations.

Another area that is not well researched is the application of GAI in facilitating sustainable retailing. With increasing environmental pressures and regulatory demands, AI holds the potential to drive sustainability initiatives by optimizing supply chains, reducing wastage, and supporting circular economic behavior. The study can analyze how AI can help

retailers monitor, predict, and lower their environmental impact in the pursuit of economic and operational objectives.

6. CONCLUSION

This review makes a unique contribution by not only synthesizing 14 studies but also comparing the evaluation of GAI uses in various retail settings. It determines critical drivers of outcomes like the type of datasets, tech readiness, and retail format. By comparing transformer models with traditional AI methods and pointing out loopholes in the adoption of small retailers, the paper presents practice- and academy-relevant findings.

6.1 Key Findings and Conclusions

GAI is having a measurable impact on various retail operations functions, with clear evidence for applications in demand forecasting, inventory optimization, customer personalization, and content generation. Effective adoption of GAI relies on technical and organizational focus, including phased plans of adoption, collaborative implementation practices, end-to-end data strategy development, and deliberate focus on ethical implications of rising success rates. GAI is reshaping the boundary between human knowledge and technology capability for retail operations, resulting in new collaborative forms that leverage the complementary strengths of human judgment and AI capability. The GAI retail applications are shifting from standalone point solutions to system-based integrated platforms for multiple operational functions, enabling more integrated decision-making across traditionally siloed functions.

6.2 Theoretical Implications

The findings contradict prevailing technology adoption theories that specify implementation as a unidirectional, discrete-step process and instead suggest that GAI implementation in retail is iterative and emergent. Theoretical retail operations management models must be supplemented with generative capabilities as well as traditional analytical and transactional capabilities. The review requires the development of holistic theoretical models connecting technological capabilities, organizational dimensions, implementation approaches, and value creation in retail GAI implementations.

6.3 Practical Implications

For retail practitioners, the review offers practical guidance on strategic selection of use cases, and the evidence shows that starting with high-impact, low-complexity applications builds momentum and capability for more sophisticated applications. It emphasizes the significance of data strategy in facilitating the success of GAI implementation and demands human-centered implementation methods that involve stakeholders. The study calls for clear ethics consideration in GAI implementation, such as frameworks and governance processes that can address concerns of algorithmic bias, privacy, transparency, and appropriate human oversight.

6.4 Future Research Directions

GAI is transforming retail operations with adaptive and innovative features that break from conventional analytical approaches. Such a transformation comprises enhancements in technical infrastructure, transformation of the workforce, and business model transformation, with a demand for end-to-end solutions to ensure data integrity, system integration, and ethical governance. Successful adoption of GAI calls for a developmental model, where retailers more and more shape their applications together with the maturity of their

capabilities. High-predicted trends encompass enhanced unification of disparate retail functions, use of multimodal AI for enabling marriage between digital and physical realms, and accelerated rates of adoption for small and medium-sized retail companies. Long-term implications, comparative analyses of AI models, human-AI interaction, and establishing ethical guidelines within retail need to be investigated through future research. True potential in GAI comes not from the technical characteristics but in facilitating novel approaches to work, enhancing customer experience, and the creation of business value. Retailers that think of GAI as a strategic facilitator rather than merely an instrument will have better opportunities to flourish within a rapidly dynamic marketplace.

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