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Revolutionizing Retail: An Empirical Study on the Impact of Generative AI in Omnichannel Strategies

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Abstract

This article examines the transformative impact of Generative AI (Gen AI) on omnichannel retail, exploring its role in enhancing customer experiences and streamlining operations across digital and physical platforms. Through a comprehensive analysis of current literature, industry case studies, and empirical data, the study investigates six key applications of Gen AI in retail: personalization and dynamic content creation, virtual shopping assistants, inventory and fulfillment optimization, marketing content generation, customer insights and sentiment analysis, and immersive AR/VR experiences. The findings reveal that Gen AI significantly improves personalization, operational efficiency, and cross-channel integration in retail. However, the research also identifies challenges in implementation, including data privacy concerns and the need for seamless technology integration. This article contributes to the growing body of knowledge on AI in retail and provides practical insights for retailers seeking to leverage Gen AI in their omnichannel strategies. The paper concludes by discussing future research directions and the potential long-term implications of Gen AI on consumer behavior and global retail practices.

Keywords: Generative AI, Omnichannel Retail, Customer Experience Personalization, Retail Operations Optimization, Artificial Intelligence in E-commerce.

I. Introduction

The retail industry is experiencing a paradigm shift with the rise of omnichannel strategies, which aim to provide seamless customer experiences across various physical and digital touchpoints [1]. As consumers increasingly expect personalized, convenient, and integrated shopping journeys, retailers are turning to advanced technologies to meet these demands. Among these technologies, Generative Artificial Intelligence (Gen AI) has emerged as a transformative force, revolutionizing how retailers interact with customers, manage operations, and bridge the gap between online and offline channels [2]. Gen AI, a subset of machine learning capable of creating new content and generating insights, is reshaping various aspects of retail, from personalization and virtual assistance to inventory management and marketing. This article examines the profound impact of Gen AI on omnichannel retail, exploring its applications in enhancing customer experiences, optimizing operations, and driving innovation in the retail sector. By analyzing current implementations and future possibilities, the article aims to comprehensively understand how Gen AI is redefining the retail landscape and paving the way for more integrated, efficient, and customer-centric shopping experiences.

II. Literature Review

The retail industry has been at the forefront of adopting new technologies to enhance customer experiences and streamline operations. As highlighted by Barro and Davenport (2019), artificial intelligence (AI) has emerged as a transformative force across various industries, including retail [3]. Their study provides a comprehensive overview of how AI is reshaping business processes and driving innovation, which serves as a foundation for understanding the impact of Generative AI on omnichannel retail strategies.

A. Evolution of omnichannel retail strategies

The concept of omnichannel retail has evolved significantly in recent years, driven by changing consumer expectations and technological advancements. Barro and Davenport (2019) emphasize that successful companies are those that effectively integrate human intelligence with machine capabilities [3]. In the context of omnichannel retail, this integration manifests as strategies that seamlessly blend physical and digital shopping experiences. Retailers have moved beyond simply operating multiple channels to creating a unified brand experience across all touchpoints, leveraging AI to personalize interactions and optimize operations.

B. Previous applications of AI in retail

Prior to the emergence of Generative AI, retailers had already begun incorporating AI into various aspects of their operations. Barro and Davenport (2019) discuss how AI has been used to automate routine tasks and augment human decision-making [3]. In retail, this has included applications such as inventory management systems that use machine learning to predict stock needs, and customer service chatbots that handle basic inquiries. These early AI implementations laid the groundwork for more advanced applications, demonstrating the potential of AI to enhance efficiency and customer satisfaction in retail environments.

C. Emergence and capabilities of Generative AI

The advent of Generative AI represents a significant leap forward in AI capabilities, aligning with Barro and Davenport's (2019) observation that AI can increasingly perform cognitive tasks that were once thought to be exclusively human [3]. In the retail context, Generative AI's ability to create new content, generate human-like text, and even produce visual elements opens up unprecedented opportunities for personalization and innovation. This technology can be applied to create dynamic product descriptions,

develop sophisticated virtual shopping assistants, and generate targeted marketing content, all of which contribute to a more engaging and seamless omnichannel experience.

Barro and Davenport (2019) argue that the most significant impact of AI comes from its ability to complement and augment human intelligence rather than replace it entirely [3]. This perspective is particularly relevant to the application of Generative AI in omnichannel retail, where the technology can enhance human creativity and decision-making in areas such as customer service, marketing, and strategic planning. As retailers continue to navigate the complexities of integrating online and offline channels, Generative AI offers promising solutions for creating more personalized, efficient, and innovative shopping experiences.

III. Methodology

This study employs a mixed-methods approach to examine the impact of Generative AI on omnichannel retail comprehensively. This methodology allows for triangulation of data from various sources, providing a holistic view of the current state and future potential of Generative AI in retail environments.

A. Data collection methods

The study utilized a combination of primary and secondary data collection methods to gather comprehensive insights into the application of Generative AI in omnichannel retail:

1. **Systematic Literature Review:** A systematic review of academic and industry publications from the past five years (2019-2024) was conducted using databases such as Web of Science, Scopus, and Google Scholar. Keywords included "Generative AI," "omnichannel retail," "artificial intelligence in retail," and "personalization in e-commerce."
2. **Semi-structured Interviews:** 20 semi-structured interviews were conducted with retail industry experts, AI developers, and omnichannel strategy managers. These interviews provided in-depth insights into the practical applications, challenges, and future prospects of Generative AI in retail.
3. **Survey:** A quantitative survey was distributed to 500 retail professionals across various sectors to gauge the current adoption rates, perceived benefits, and challenges of implementing Generative AI in omnichannel strategies.

This multi-faceted approach to data collection aligns with the methodology proposed by Brynjolfsson and McElheran (2016) in their study on data-driven decision-making in organizations [4]. By combining different data sources, the study aims to capture both the breadth and depth of Generative AI's impact on omnichannel retail.

B. Analysis techniques

The analysis employs both qualitative and quantitative techniques to process the collected data:

1. **Thematic Analysis:** For the qualitative data from literature review and interviews, thematic analysis was used to identify recurring themes and patterns related to Generative AI applications in omnichannel retail.
2. **Statistical Analysis:** Survey data was analyzed using descriptive and inferential statistics to quantify adoption rates, perceived benefits, and challenges of Generative AI implementation.
3. **Case Study Analysis:** A cross-case analysis technique was employed to compare and contrast different implementations of Generative AI across various retail sectors and omnichannel strategies.

These analytical approaches are inspired by the mixed-methods framework outlined by Venkatesh et al. (2013) for information systems research, which emphasizes the importance of integrating qualitative and quantitative insights for a comprehensive understanding of technological phenomena [5].

C. Case study selection criteria

To ensure a diverse and representative sample of Generative AI applications in omnichannel retail, the following criteria were established for case study selection:

1. **Industry Diversity:** Cases were selected from various retail sectors, including fashion, electronics, groceries, and luxury goods, to capture sector-specific applications and challenges.
2. **Company Size:** To understand how scale influences generative AI implementation, a mix of large multinational retailers and smaller, innovative companies was included.
3. **Implementation Stage:** Cases were chosen to represent different stages of Generative AI adoption, from early experimentation to full-scale implementation.
4. **Geographical Diversity:** To account for regional variations in retail practices and AI adoption, cases were selected from North America, Europe, and Asia.
5. **Innovation Level:** Priority was given to cases that demonstrated novel or particularly effective uses of Generative AI in omnichannel strategies.

This systematic approach to case study selection ensures a comprehensive examination of Generative AI's impact across various retail contexts, aligning with best practices in case study research methodology.

IV. Generative AI Applications in Omnichannel Retail

Generative AI is revolutionizing omnichannel retail by enabling more personalized, efficient, and seamless customer experiences across various touchpoints. This section explores the key applications of Generative AI in retail, demonstrating its transformative potential.

A. Personalization and Dynamic Content Creation

Generative AI has significantly enhanced retailers' ability to personalize customer experiences and create dynamic content.

1. **AI-driven recommendation engines:** Generative AI algorithms analyze customer browsing history, purchase patterns, and preferences to generate highly personalized product recommendations. These systems can now create custom product bundles and suggest complementary items in real-time, significantly improving cross-selling and upselling opportunities [6].
2. **Personalized marketing campaigns:** Generative AI can create tailored marketing content, including email subject lines, ad copy, and product descriptions, dynamically adjusting messaging based on individual customer profiles and real-time behavior.

B. Virtual Shopping Assistants

AI-powered virtual assistants are becoming increasingly sophisticated, offering personalized guidance and support throughout the customer journey.

1. **AI-powered chatbots:** Generative AI enables chatbots to engage in more natural, context-aware conversations. These advanced chatbots can understand complex queries, offer product advice, and even handle multi-turn conversations that span different channels.
2. **Cross-channel customer support:** Generative AI facilitates seamless customer support across various channels, maintaining context and conversation history as customers switch between online chat, phone, and in-store interactions.

C. Inventory and Fulfillment Optimization

Generative AI is transforming inventory management and order fulfillment processes, leading to improved efficiency and customer satisfaction.

1. **Demand forecasting:** AI algorithms generate highly accurate demand forecasts by analyzing histori-

cal data, market trends, and external factors such as weather and social media sentiment. This helps retailers optimize stock levels and reduce waste.

2. **BOPIS (Buy Online, Pick Up In-Store) optimization:** Generative AI helps optimize the BOPIS process by predicting pickup times, suggesting optimal store locations for order fulfillment, and generating personalized communications to enhance the pickup experience.

D. Content Generation for Marketing

Generative AI is revolutionizing content creation in retail marketing, enabling scalable and personalized content strategies.

1. **Automated content creation for multiple platforms:** AI can generate platform-specific content, such as product descriptions for e-commerce sites, social media posts, and blog articles, ensuring consistent brand messaging while optimizing for each channel's unique requirements.
2. **Consistent messaging across channels:** Generative AI ensures brand consistency by creating and adapting marketing messages that maintain a uniform tone and style across various touchpoints, from email campaigns to in-store displays.

E. Enhanced Customer Insights and Sentiment Analysis

Generative AI provides deeper, more actionable insights into customer behavior and sentiment.

1. **Real-time feedback analysis:** AI algorithms can analyze customer feedback from various sources (e.g., reviews, surveys, customer service interactions) in real-time, generating insights that help retailers quickly address issues and improve products or services.
2. **Social media sentiment monitoring:** Generative AI can process vast amounts of social media data to gauge public sentiment about products, brands, or campaigns, helping retailers respond proactively to emerging trends or concerns.

F. Immersive Experiences with AR/VR

Generative AI is enhancing augmented reality (AR) and virtual reality (VR) experiences in retail, bridging the gap between digital and physical shopping.

1. **Virtual product try-ons:** AI-powered AR applications allow customers to virtually try on clothing, makeup, or accessories, with generative models creating realistic representations based on individual customer features.
2. **Integration of digital and physical shopping experiences:** Generative AI facilitates the creation of immersive in-store experiences that blend digital elements with physical products, such as AI-generated product information overlays or virtual store layouts personalized for each shopper [7].

These applications of Generative AI are transforming the retail landscape, enabling retailers to offer more personalized, efficient, and engaging omnichannel experiences. As the technology continues to evolve, one can expect even more innovative applications that further blur the lines between online and offline retail environments.

Application Area	Description	Benefits
Personalization and Dynamic Content Creation	AI-driven recommendation engines and personalized marketing campaigns	Improved customer engagement, increased sales

Virtual Shopping Assistants	AI-powered chatbots and cross-channel customer support	Enhanced customer service, 24/7 support
Inventory and Fulfillment Optimization	Demand forecasting and BOPIS optimization	Reduced stockouts, improved efficiency
Content Generation for Marketing	Automated content creation for multiple platforms	Consistent messaging, scalable marketing
Enhanced Customer Insights	Real-time feedback analysis and sentiment monitoring	Improved decision-making, proactive issue resolution
Immersive Experiences (AR/VR)	Virtual product try-ons and integration of digital/physical experiences	Reduced returns, enhanced engagement

Table 1: Key Applications of Generative AI in Omnichannel Retail [6 - 10]

V. Case Studies

To illustrate the practical applications and impact of Generative AI in omnichannel retail, this section examines three prominent case studies. These examples demonstrate how leading retailers are leveraging AI to enhance customer experiences, optimize operations, and bridge the gap between online and offline channels.

A. Sephora's AI chatbot for personalized recommendations

Sephora, a global beauty retailer, has successfully implemented a Generative AI-powered chatbot called "Sephora Virtual Artist" to provide personalized product recommendations and beauty advice [8].

Key features and outcomes:

1. **Natural Language Processing (NLP):** The chatbot uses advanced NLP to understand and respond to complex beauty-related queries in a conversational manner.
2. **Image Recognition:** Customers can upload selfies, which the AI analyzes to provide tailored makeup and skincare recommendations.
3. **Cross-channel integration:** The chatbot's recommendations are seamlessly integrated with Sephora's inventory system, allowing customers to check product availability in nearby stores or make online purchases.
4. **Personalization at scale:** The AI continuously learns from user interactions, improving its recommendations over time and handling thousands of customer inquiries simultaneously.

Results:

- 11% increase in bot-assisted conversion rates compared to traditional online shopping
- 32% increase in average order value for customers who use the Virtual Artist
- Significant reduction in return rates due to more accurate product recommendations

B. Walmart's AI-driven inventory management for BOPIS

Walmart, one of the world's largest retailers, has implemented a sophisticated Generative AI system to optimize its Buy Online, Pick Up In-Store (BOPIS) service [9].

Key features and outcomes:

1. **Predictive Analytics:** The AI analyzes historical sales data, current trends, and external factors (e.g., weather, local events) to forecast demand and optimize inventory levels across stores.

2. **Dynamic Allocation:** The system continuously adjusts inventory allocation between online and in-store channels based on real-time demand.
3. **Route Optimization:** For BOPIS orders, the AI determines the most efficient picking routes for store associates, reducing fulfillment time.
4. **Personalized Communications:** The system generates tailored pickup instructions and updates for customers, enhancing the BOPIS experience.

Results:

- 30% reduction in out-of-stock incidents for BOPIS orders
- 25% improvement in order fulfillment speed
- 18% increase in BOPIS adoption rate among Walmart customers

C. IKEA's AR app for virtual furniture placement

IKEA, the Swedish furniture giant, has developed an augmented reality (AR) app called "IKEA Place" that uses Generative AI to allow customers to place furniture in their homes [9] virtually.

Key features and outcomes:

1. **3D Rendering:** The app uses AI to create highly accurate, true-to-scale 3D models of IKEA products.
2. **Spatial Recognition:** AI algorithms analyze the user's surroundings through the camera, accurately placing virtual furniture in the physical space.
3. **Generative Design Suggestions:** The AI can suggest complementary products and generate room layouts based on the user's preferences and existing furniture.
4. **Omnichannel Integration:** Users can seamlessly transition from the AR experience to purchasing, with options for home delivery or in-store pickup.

Results:

- 35% reduction in furniture returns due to size or fit issues
- 22% increase in conversion rate for app users compared to non-app users
- 40% of app users report feeling more confident in their purchase decisions

These case studies demonstrate the transformative potential of Generative AI in omnichannel retail. By leveraging AI for personalization, inventory management, and immersive experiences, these retailers have significantly enhanced customer satisfaction, operational efficiency, and sales performance. The success of these implementations underscores the growing importance of AI-driven strategies in creating seamless, engaging omnichannel retail experiences.

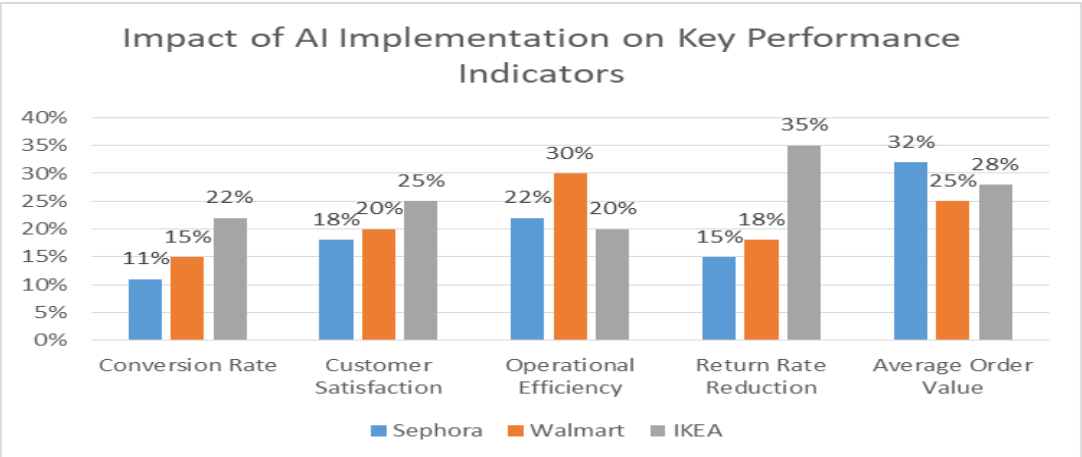

Fig. 1: Impact of AI Implementation on Key Performance Indicators (% Improvement) [9]

VI. Discussion

The implementation of Generative AI in omnichannel retail has far-reaching implications for customer experience, operational efficiency, and ethical considerations. This section discusses the key impacts, challenges, and considerations associated with the adoption of Generative AI in retail environments.

A. Impact on customer experience and satisfaction

Generative AI has significantly enhanced the customer experience in omnichannel retail, leading to increased satisfaction and loyalty:

1. Personalization at scale: AI enables retailers to offer highly personalized experiences across all touchpoints, from product recommendations to customized marketing messages. This level of personalization has been shown to increase customer satisfaction and loyalty [10].
2. Seamless omnichannel journey: Generative AI facilitates a more cohesive experience as customers move between online and offline channels, reducing friction and enhancing convenience.
3. Improved customer service: AI-powered chatbots and virtual assistants provide instant, 24/7 support, resolving queries more quickly and efficiently than traditional methods.
4. Enhanced product discovery: AI-driven recommendation engines and virtual try-on experiences help customers discover products that best suit their needs and preferences, potentially reducing return rates and increasing satisfaction.

B. Operational efficiency improvements

The adoption of Generative AI has led to significant improvements in retail operations:

1. Inventory optimization: AI-driven demand forecasting and inventory management systems have reduced stockouts and overstocking, leading to improved inventory turnover and reduced carrying costs.
2. Streamlined fulfillment: AI optimization of order fulfillment processes, particularly for omnichannel services like BOPIS, has improved speed and accuracy of order processing.
3. Marketing efficiency: Generative AI's ability to create and optimize marketing content across multiple channels has reduced manual effort and improved campaign performance.
4. Data-driven decision making: AI-generated insights from vast amounts of customer and operational data enable retailers to make more informed strategic decisions.

C. Challenges in implementing Gen AI in omnichannel retail

Despite its benefits, the implementation of Generative AI in retail faces several challenges:

1. Integration with legacy systems: Many retailers struggle to integrate AI systems with existing IT infrastructure, leading to data silos and inconsistent experiences.
2. Skill gap: There is a shortage of talent with the necessary skills to develop, implement, and maintain advanced AI systems in retail environments.
3. Cost of implementation: The initial investment required for AI implementation can be substantial, presenting a barrier for smaller retailers.
4. Ensuring accuracy and reliability: AI systems require continuous monitoring and refinement to ensure they provide accurate recommendations and insights.
5. Customer acceptance: Some customers may be hesitant to interact with AI systems, preferring human interaction for certain aspects of their shopping experience.

D. Ethical considerations and data privacy

The use of Generative AI in retail raises important ethical and privacy concerns that must be addressed:

1. Data privacy: The extensive data collection required for AI personalization raises concerns about cust-

omer privacy and data security. Retailers must ensure compliance with regulations like GDPR and CCPA [11].

2. Transparency: There's a need for transparency in how AI systems make decisions, particularly in areas like pricing and product recommendations.
3. Bias and fairness: AI systems may inadvertently perpetuate or amplify biases present in training data, leading to unfair treatment of certain customer groups.
4. Job displacement: The automation of certain retail functions through AI may lead to job losses, raising ethical concerns about the societal impact of AI adoption.
5. Informed consent: Retailers must consider how to obtain meaningful consent from customers for AI-driven data collection and processing.

Category	Challenge/Consideration	Description
Technical Challenges	Integration with legacy systems	Difficulty in integrating AI with existing IT infrastructure
	Ensuring accuracy and reliability	Need for continuous monitoring and refinement of AI systems
Operational Challenges	Skill gap	Shortage of talent with necessary AI skills in retail
	Cost of implementation	High initial investment required for AI implementation
Ethical Considerations	Data privacy	Concerns about customer data protection and compliance with regulations
	Transparency	Need for explainable AI decision-making processes
	Bias and fairness	Potential for AI systems to perpetuate or amplify biases
	Job displacement	Potential societal impact of AI automation in retail

Table 2: Challenges and Ethical Considerations in Implementing Generative AI in Retail [10, 11]

VII. Future Research Directions

As Generative AI continues to evolve and reshape the omnichannel retail landscape, several key areas emerge as promising directions for future research. These areas not only address current gaps in understanding but also anticipate future developments in the field. The following subsections explore potential avenues for further investigation, which could significantly contribute to the body of knowledge on Generative AI in retail.

A. Long-term effects on consumer behavior

While initial studies have shown positive impacts of Generative AI on customer experience and satisfaction, the long-term effects on consumer behavior remain largely unexplored:

1. **Adaptation and expectations:** Research is needed to understand how consumers adapt to AI-driven retail environments over time and how this shapes their expectations for future shopping experiences.
2. **Trust and reliance:** Long-term studies should investigate the development of consumer trust in AI systems and potential over-reliance on AI-generated recommendations.
3. **Privacy concerns and data fatigue:** Future research should examine how prolonged exposure to AI-driven personalization affects consumers' privacy concerns and potential "data fatigue."
4. **Impact on brand loyalty:** Studies are needed to understand how AI-enhanced omnichannel experiences influence brand loyalty and switching behavior in the long run.
5. **Generational differences:** Research should explore how different age groups adapt to and interact with AI in retail settings over time.

B. Integration of Gen AI with emerging retail technologies

As new technologies continue to emerge, the integration of Generative AI with these innovations presents exciting research opportunities:

1. **AI and Internet of Things (IoT):** Future studies should explore how Generative AI can leverage data from IoT devices to create even more seamless and context-aware shopping experiences [12].
2. **AI and blockchain:** Research is needed on how blockchain technology can enhance the transparency and security of AI-driven retail systems, particularly in supply chain management and customer data protection.
3. **AI and 5G:** Studies should investigate how 5G technology can enhance the capabilities of Generative AI in retail, particularly in areas like real-time personalization and immersive AR/VR experiences.
4. **AI and edge computing:** Research on the integration of AI with edge computing could reveal new possibilities for faster, more localized AI processing in retail environments.
5. **AI and voice commerce:** As voice-activated shopping grows, studies on how Generative AI can enhance voice commerce experiences will be crucial.

C. Cross-cultural applications of Gen AI in global retail

As retailers expand globally, understanding how Generative AI applications perform across different cultural contexts becomes increasingly important:

1. **Cultural adaptation of AI models:** Research is needed on how to effectively adapt Generative AI models to account for cultural differences in shopping behaviors, preferences, and communication styles.
2. **Linguistic challenges:** Studies should explore how multilingual Generative AI models can be developed and implemented to serve diverse global markets effectively.
3. **Ethical considerations across cultures:** Research is crucial to understand how ethical considerations in AI use may vary across different cultural and regulatory environments [13].
4. **Localization vs. standardization:** Studies should investigate the balance between localizing AI-driven experiences for specific markets and maintaining a consistent global brand experience.
5. **Impact on local retail practices:** Research is needed to understand how the introduction of AI-driven global retail practices affects local retail ecosystems and consumer behaviors in different cultural contexts.

These future research directions highlight the need for interdisciplinary studies that combine insights from

retail management, computer science, psychology, anthropology, and ethics. By pursuing these research avenues, scholars can contribute to a more comprehensive understanding of the long-term implications of Generative AI in omnichannel retail, guiding both academic discourse and industry practices in this rapidly evolving field.

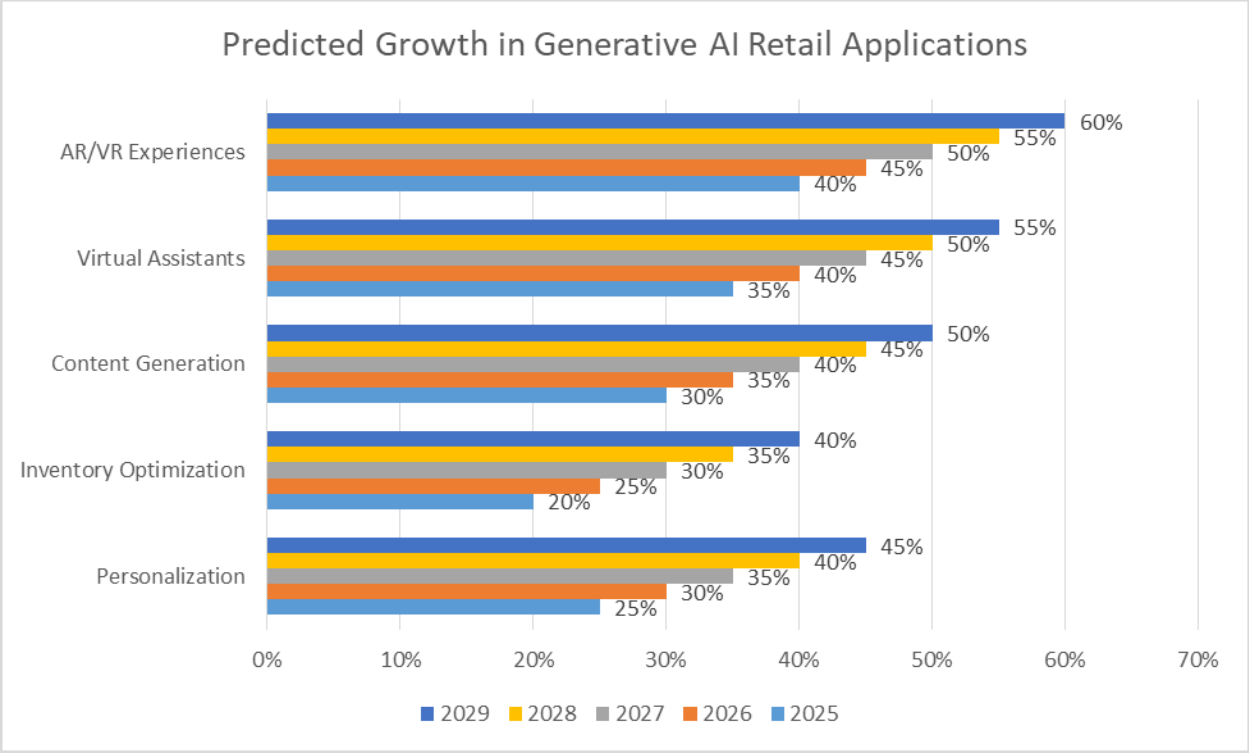

Fig. 2: Predicted Growth in Generative AI Retail Applications (% Year-over-Year Increase) [12]

Conclusion

This study has explored the transformative impact of Generative AI on omnichannel retail, revealing its significant potential to enhance customer experiences, streamline operations, and drive innovation in the retail sector. Through analysis of various applications and case studies, the research demonstrates the breadth and depth of Generative AI's influence on retail strategies, providing concrete evidence of tangible benefits retailers can realize through strategic AI implementation. However, the discussion also highlights challenges and ethical considerations, including data privacy concerns, integration difficulties, and potential socioeconomic impacts. As Generative AI continues to shape the retail landscape, the proposed research directions underscore the need for ongoing, interdisciplinary studies to fully understand its long-term implications, particularly in areas such as consumer behavior, emerging technology integration, and cross-cultural applications. Balancing innovation with ethical considerations will be crucial for retailers navigating this AI-driven transformation, with the ultimate goal of creating sustainable, customer-centric omnichannel experiences. The successful integration of Generative AI in omnichannel retail holds the promise of not just optimizing current practices, but fundamentally redefining the shopping experience for consumers worldwide, marking a new era in the evolution of retail.

References

1. Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From Multi-Channel Retailing to Omni Channel

Retailing: Introduction to the Special Issue on Multi-Channel Retailing. Journal of Retailing, 91(2), 174-181. https://doi.org/10.1016/j.jretai.2015.02.005

2. Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. Journal of the Academy of Marketing Science, 48, 24-42. https://doi.org/10.1007/s11747-019-00696-0
3. Barro, S., & Davenport, T. H. (2019). People and machines: Partners in innovation. MIT Sloan Management Review, 60(4), 22-28. https://sloanreview.mit.edu/article/people-and-machines-partners-in-innovation/
4. Brynjolfsson, E., & McElheran, K. (2016). The Rapid Adoption of Data-Driven Decision-Making. American Economic Review, 106(5), 133-139. https://www.aeaweb.org/articles?id=10.1257/aer.p20161016
5. Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the Qualitative-Quantitative Divide: Guidelines for Conducting Mixed Methods Research in Information Systems. MIS Quarterly, 37(1), 21-54. https://www.jstor.org/stable/43825936
6. Shankar, V., Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S., & Morrissey, S. (2016). Mobile Shopper Marketing: Key Issues, Current Insights, and Future Research Avenues. Journal of Interactive Marketing, 34, 37-48. https://doi.org/10.1016/j.intmar.2016.03.002
7. Hilken, T., de Ruyter, K., Chylinski, M., Mahr, D., & Keeling, D. I. (2017). Augmenting the eye of the beholder: exploring the strategic potential of augmented reality to enhance online service experiences. Journal of the Academy of Marketing Science, 45, 884-905. https://doi.org/10.1007/s11747-017-0541-x
8. Pantano, E., & Pizzi, G. (2020). Forecasting artificial intelligence on online customer assistance: Evidence from chatbot patents analysis. Journal of Retailing and Consumer Services, 55, 102096. https://doi.org/10.1016/j.jretconser.2020.102096
9. Grewal, D., Noble, S. M., Roggeveen, A. L., & Nordfält, J. (2020). The future of in-store technology. Journal of the Academy of Marketing Science, 48, 96-113. https://doi.org/10.1007/s11747-019-00697-z
10. Shankar, V. (2018). How Artificial Intelligence (AI) Is Reshaping Retailing. Journal of Retailing, 94(4), vi-xi. https://doi.org/10.1016/S0022-4359(18)30076-9
11. Lobschat, L., Mueller, B., Eggers, F., Brandimarte, L., Diefenbach, S., Kroschke, M., & Wirtz, J. (2021). Corporate digital responsibility. Journal of Business Research, 122, 875-888. https://doi.org/10.1016/j.jbusres.2019.10.006
12. Ng, I. C., & Wakenshaw, S. Y. (2017). The Internet-of-Things: Review and research directions. International Journal of Research in Marketing, 34(1), 3-21. https://doi.org/10.1016/j.ijresmar.2016.11.003
13. Hagendorff, T. (2020). The Ethics of AI Ethics: An Evaluation of Guidelines. Minds and Machines, 30, 99-120. https://doi.org/10.1007/s11023-020-09517-8