



## **Factors Affecting Artificial Intelligence for the Customer Support Systems in the Online Retail Sector Organizations: A Review Approach**

**Dr. Shazia Hashmat\***

Assistant Professor, Department of Communication and Media Studies

E-mail: [shazia.hashmat@fjwu.edu.pk](mailto:shazia.hashmat@fjwu.edu.pk)

DOI: <https://10.71145/rjsp.v3i1.98>

### **Abstract**

Artificial Intelligence in the online retail sector is not a new phenomenon. However, during and after the Covid-19 pandemic, along with the dependency on online shopping, integration of Artificial Intelligence for the customer support services has also increased. Based on the diffusion of innovation theory, this article has reviewed literature witnessing the factors affecting the Artificial Intelligence for the customer support services in the online retail sector organizations. It is found that, the integration of Artificial Intelligence for the customer support services is widely based on the features including relative advantage, transparency, and value creation. These services are accompanied by chatbots and Natural Language Processing (NLP) systems that add more value to the presence of Artificial Intelligence for the customer support purposes. Notably, these services are accompanied by problem-solving, quick response to the customers' queries, and providing them with the most suitable solutions. Consequently, the online retail sector organizations are widely preferring aligning their customer support systems with the Artificial Intelligence technology to attain customer satisfaction and loyalty in a best possible manner. The article concludes that Artificial Intelligence (AI) is transforming the customer support experience in the online retail sector and is crucial for businesses looking to stay ahead in a highly competitive market. Finally, the study limitations and recommendations for the future research are discussed.

**Keywords:** Artificial Intelligence, Customer Support Services, Chatbots, Online Retail, Diffusion of Innovation

### **Introduction**

Technology plays a crucial role in online retail, enabling retailers to reach a larger customer base, streamline operations, and personalize the shopping experience for consumers (Grewal et al., 2020). Riegger with his team argued that one of the most significant benefits of technology in online retail is the ability to reach a global customer base (Riegger et al., 2021). Online retail allows businesses to sell their products and services to customers worldwide. This increased accessibility is made possible by technologies such as e-commerce platforms, digital payment systems, and logistics and fulfilment solutions. Shankar's team further stated that technology helps online retailers streamline their operations, making it easier to manage inventory, process orders, and track customer data (Shankar et al., 2021). As a result, these organizations enjoy cost savings and increased efficiency, which can help retailers remain competitive in the market. Riar stated that technology enables online retailers to personalize the shopping experience for their customers

(Riar et al., 2021). Here Bonetti cited an example of the use of data analytics and machine learning that are helping retailers to gain insights into consumer behaviour and preferences, which can be used to tailor the shopping experience to individual customers (Bonetti et al., 2018). This includes personalized product recommendations, targeted marketing campaigns, and customized pricing and promotions. According to Roggeveen & Sethurama, as today, more and more consumers use their smartphones to shop online, retailers are investing in mobile-optimized websites and apps to ensure a seamless shopping experience on any device (Roggeveen & Sethuraman, 2020). Additionally, these online stores also have various products and services available regardless of geographical barriers. Customers can access these stores and buy what they find more consistent and suitable to their needs. Chen noted, technology plays a vital role in online retail. It enables retailers to reach a larger customer base, streamline operations, and personalize the consumer shopping experience (Chen et al., 2022). This allows online retailers to compete effectively in the market and meet the growing demands of their customers (Chiu et al., 2021).

Similarly, these online retail stores update their systems and integrate more technology-enabled solutions to improve customer service (Savastano, 2019). An example can be cited from the integration and use of Artificial Intelligence by these online stores, providing better services, customer support, and even the implemented recommendation systems adding more value to the role of technology in the online retail sector organizations (Andrade & Tumelero, 2022). As noted by Qin, Artificial Intelligence (AI) is increasingly important in customer support in the retail sector (Qin et al., 2022). Artificial Intelligence-powered tools and technologies are helping organizations improve the customer experience, reduce costs, and increase efficiency. According to (M.-H. Huang & Rust, one of the keyways that Artificial Intelligence (AI) is used in customer support is through chatbots and virtual assistants (M.-H. Huang & Rust, 2018). These tools use natural language processing (NLP) and machine learning to understand and respond to customer queries, providing quick and accurate answers to common questions. This allows retailers to provide instant customer support without requiring human staff to be always available. Besides, Artificial Intelligence (AI) also analyses customer data, including browsing and purchase history, to provide personalized recommendations and targeted marketing messages to individual customers. This can help retailers increase sales and customer loyalty by providing customers with products and services tailored to their specific needs and preferences (Buhalis & Moldavska, 2021). Ping also cited an example of Artificial Intelligence (AI) in customer support systems which provides an automated customer service (Ping et al., 2019). Self-service kiosks and interactive voice response (IVR) systems are being developed to help customers resolve issues and make purchases without human assistance. Thus, Savastano argued that Artificial Intelligence (AI) is increasingly important in customer support in the retail sector as it helps organizations to improve the customer experience, reduce costs, and increase efficiency, by automating repetitive tasks, providing personalized recommendations and reducing the need for human assistance (Savastano, 2019).

### **Study Objectives**

Artificial Intelligence (AI) is considered as an important part of customer support and sometimes, customer management systems in the online retail sector organizations. Despite, the Artificial Intelligence (AI) in the retail sector is not a new phenomenon, during and after the Covid-19 a greater reliance on the online retail stores is seen. Consequently, this research is aimed to discuss and highlight the factors that may contribute to a greater preference being given to the Artificial Intelligence (AI) in the retail sector organizations worldwide. Based on the theory of diffusion of innovation, the researchers have discussed the relevant phenomenon. In this regard, the primary research questions involve:

**RQ1:** How does competitive advantage affect the Artificial Intelligence (AI) integration in the online retail stores for customer support purposes?

**RQ2:** How does transparency affect the Artificial Intelligence (AI) integration in the online retail stores for customer support purposes?

**RQ3:** How does Value Creation affect the Artificial Intelligence (AI) integration in the online retail stores for customer support purposes?

## **Methodology**

According to Andrade & Tumelero (Andrade & Tumelero, 2022), the diffusion of Artificial Intelligence is one of the leading concepts today. Although this diffusion is observed in diverse fields, its role in retail sector organizations remains comparatively prominent. Especially when talking about its adoption and integration, several factors are attributed to improving its value. As a result, despite many studies that have focused on the relevant phenomenon, synthesizing some of the prominent studies under the Diffusion of Innovation theory is the reason that current research is novel. This study is based on a review of the existing literature to provide empirically witnessed results and a conclusion. More specifically, the researchers implied the applied descriptive review method (Mazouz et al., 2019a). The primary focus is to highlight the three factors under the Uses and Gratification theory, magnifying the application of Artificial Intelligence in online retail sector organizations. However, from the epistemological viewpoint, we can consider it based on a pragmatic approach that will help the readers empirically witness the conclusion (Al-Shibly et al., 2019).

## **Diffusion of Innovation- Artificial Intelligence**

The Diffusion of Innovation theory is a widely accepted framework for understanding how new ideas, technologies, and practices spread within a social system (Al-Jabri & Sohail, 2012). The theory was developed by Everett Rogers in 1962 and proposed that the adoption of an innovation follows a bell-shaped curve, with early adopters leading the way, followed by the majority of people who tend to adopt later, and finally, the laggards who resist change (Sartipi, 2020). In the context of Artificial Intelligence (AI), Huang and his team argued that the Diffusion of Innovation theory can be applied to understand the adoption of Artificial Intelligence -based technologies in various industries (A. Huang et al., 2021). As Artificial Intelligence-based technologies evolve and mature, early adopters' experiment with them to gain a competitive advantage and improve their operations. However, Kai & Brock stated that, most organizations are still in the early stages of adoption and are evaluating the potential benefits and risks associated with implementing Artificial Intelligence-based technologies (Kai & Brock, 2019).

According to Tussyadiah, one of the critical factors influencing the adoption of Artificial Intelligence-based technologies is the perceived relative advantage of the technology (Tussyadiah, 2020). Organizations that perceive a high relative advantage of the technology are more likely to adopt it, while those who perceive a low relative advantage are less likely to adopt it. Additionally, the complexity of the technology, the trialability of the technology, and the compatibility of the technology with existing practices also play a role in the adoption process. Hentzen further noted that the Diffusion of Innovation theory also helps to understand the different levels of adoption and usage of Artificial Intelligence-based technologies within an organization (Hentzen, 2021). Some departments or teams may be early adopters and fully embrace the technology, while others may need guidance and support to change. Understanding these different adoption and usage levels can help organizations develop effective strategies for implementing and scaling Artificial Intelligence-based technologies across the organization. Therefore, the Diffusion of Innovation theory provides a useful framework for understanding the adoption of Artificial Intelligence-based

technologies in different industries and organizations (Di Vaio et al., 2020). The relevant theory can be used to identify the key factors that influence the adoption process and the different levels of adoption and usage within an organization to further indicate the strategies for successfully implementing and scaling Artificial Intelligence-based technologies (Jabeen et al., 2022).

### **Competitive Advantage**

Artificial Intelligence (AI) in online retail provides customers with innovative solutions to their problems and questions. Through advanced technologies such as natural language processing (NLP) and machine learning, online retailers can understand and respond to customer queries in a more personalized and effective way (C. Li et al., 2020). According to Song et al (Song et al., 2022), one of the crucial aspect is that Artificial Intelligence (AI) is being used in online retail is through chatbots and virtual assistants. These tools use natural language processing (NLP) and machine learning to understand and respond to customer queries, providing quick and accurate answers to common questions. This allows retailers to provide support to customers without the need for human staff to be always available. In their study, Daqar & Smoudy explored the impact of Artificial Intelligence (AI) on enhancing customer experience in the Palestinian retail sector (Daqar & Smoudy, 2019). The researchers focused on using Artificial Intelligence (AI) technologies such as natural language processing, machine learning and chatbots to improve customer support and provide personalized customer recommendations. Results revealed a significant positive effect of natural language processing (NLP) and Machine learning (ML) on customer experiences. The respondents indicated positive experiences during the search and decision-making and showed satisfaction regarding the aftersales services. Guha further noted that, Artificial Intelligence (AI) also analyses customer data, including browsing and purchase history, to provide personalized recommendations and targeted marketing messages to individual customers (Guha et al., 2021). This can help retailers increase sales and customer loyalty by providing customers with products and services tailored to their specific needs and preferences.

To further validate these propositions, Pantano & Pizzi examined the impact of Artificial Intelligence (AI) on online customer assistance by analyzing chatbot patents in the United Kingdom (Pantano & Pizzi, 2020). The study employed the method of chatbots' patent analysis to identify the trends and developments in the field of AI-powered chatbots for customer service. Results revealed that, a large number of online retailers in the UK are preferring chatbot agents to improve their customer support services. These chatbots are rapidly drawing interferences and using the customers' data and search keywords to further manipulate and provide the best possible solutions that are relevant to their needs. According to Buhalis & Moldavska, Artificial Intelligence (AI) has transformed the automated customer services. Self-service kiosks and interactive voice response (IVR) systems are being developed to help customers resolve issues and make purchases without human assistance (Buhalis & Moldavska, 2021),. This can reduce costs and improve the efficiency of customer service operations.

Ughulu emphasized using Artificial Intelligence (AI) to start, automate and scale businesses for Entrepreneurs in Turkey to add more value and innovativeness to their services (Ughulu, 2022). The researcher employed a literature review approach to understand the potential of Artificial Intelligence (AI) in helping entrepreneurs worldwide to start, automate and scale their online retail businesses. Findings revealed that the potential use cases of Artificial Intelligence (AI) implementation in the entrepreneurial online retail sector organizations indicate the automation of customer support services that further aim to improve the online customer experiences. As a result, entrepreneurs prefer implementing Artificial Intelligence (AI) in their online retail stores to ensure maximum customer support, customer satisfaction, and customer loyalty. Thus, Kreutzer & Sirrenberg stated that online retail Artificial Intelligence (AI) provides customers with innovative

solutions to their problems and questions (Kreutzer & Sirrenberg, 2020). It helps retailers to understand and respond to customer queries in a more personalized and effective way. It provides customers with products and services tailored to their specific needs and preferences. This ultimately helps online retailers to increase their sales and customer loyalty.

### **Trialability**

According to Luo and his team, transparency in online retail customer support is important because it helps to build trust and credibility with customers (Luo et al., 2019). When customers know they can rely on a retailer to provide accurate and timely responses to their inquiries, they are more likely to return to that retailer for future purchases. Additionally, transparent customer support also reduces customer complaints and negative reviews, which may damage a retailer's reputation. Transparency in customer support can also help retailers to identify patterns and common issues, which can be addressed proactively, thus improving overall customer satisfaction. As a result, today, Artificial Intelligence has contributed much to improving the transparency in online customer support systems.

A study conducted by Ameen investigated how implementing artificial intelligence (AI) in shopping has enhanced customer experience in the United Kingdom (Ameen et al., 2021). The data was gathered by using online surveys for customers of different cosmetic brands. Results revealed that, trust and perceived sacrifice play a significant role in mediating the effects of perceived convenience, personalization, transparency, and Artificial Intelligence-enabled service quality on customer experience. Additionally, the study also found that relationship commitment has a direct effect on AI-enabled customer experience. According to Felzmann, Artificial intelligence (AI) has enabled transparency in online retail customer support by providing customers with more accurate and efficient responses to their inquiries (Felzmann et al., 2019). This is done through natural language processing (NLP) and machine learning (ML) algorithms that can understand and interpret customer queries in a way that mimics human communication. B. Li cited an example of how Artificial intelligence (AI) is used in online retail customer support as chatbots (B. Li et al., 2017). This Artificial intelligence (AI)-enabled systems can interact with customers in real time, answering their questions and providing relevant information. This can significantly improve the customer experience, as they can quickly get the information, they need without waiting for a human customer service representative to become available. As noted by Schmidt, the use of artificial intelligence (AI) in assistive technology to aid human decision-making has become prevalent (Schmidt et al., 2020). The Artificial intelligence (AI) in assistive technology often reaches accuracy levels similar to or even better than human experts.

Mogaji & Nguyen also highlighted the role of Artificial intelligence (AI) in analyzing customer feedback or reviews. Retailers can use natural language processing and machine learning algorithms to extract insights from customer feedback and reviews (Mogaji & Nguyen, 2017). These reviews can help retailers to identify patterns and common issues and then take action to address them. Regarding suggestions and decision-making, Zhang noted that Artificial intelligence (AI) also enables retailers to provide personalized customer recommendations based on their browsing and purchase history leading to improved customer experience and increased sales (Zhang, 2021). Thus, Cheng & Jiang argued that Artificial intelligence (AI) has enabled online retail customer support transparency by making it more efficient, accurate, and personalized (Cheng & Jiang, 2021). This ultimately benefits the customer and the retailer.

### **Value Creation**

According to Cao, value creation in customer support services is critical in online retail as it directly impacts customer satisfaction, loyalty, and retention (Cao, 2021). Providing excellent

customer support in the highly competitive online retail market can be a crucial differentiator for businesses and lead to increased sales and revenue. Nöjd argued that one of the main ways online retailers can create value in customer support services is by providing quick and efficient customer assistance (Nöjd et al., 2020). This can include providing accurate and relevant information, solving problems quickly, and handling complaints effectively. Moriuchi stated that online retailers can create value by offering a wide range of support options, such as live chat, phone, email, and social media, to meet the diverse needs of customers (Moriuchi et al., 2021). As a result, today, Artificial intelligence (AI) is increasingly used in online customer support to enhance value creation for retailers and customers (Bag et al., 2021). Kasilingam further cited an example of chatbots, which are computer programs designed to simulate conversation with human users. Chatbots can be integrated into a company's website or mobile applications (Kasilingam, 2020). These chatbots provide customers with quick and convenient access to information and assistance. According to Nichifor & Trifan, one of the main advantages of using chatbots in online customer support is that they are readily available that assist customers at any time (Nichifor & Trifan, 2021). These chatbots are useful for retailers and e-commerce platforms that operate globally. Arajuo & Casais noted that chatbots could handle multiple customer interactions simultaneously, which reduces wait times and improve overall customer satisfaction (Arajuo & Casais, 2019). An empirical study by Bassano the conceptualization of technology as an operant resource and the role of Artificial Intelligence (AI) in value co-creation processes (Bassano et al., 2020). The study framework was based on Service Science, the Viable Systems Approach, and the Variety Information Model. Results showed that, different types of AI technology correspond to different levels of co-creation. Further, Artificial Intelligence-enabled chatbots, with their client profiling capacity, achieve unity in a luxury goods context, thus interpreting customer expectations. Riikkinen highlighted Natural Language Processing (NLP) as an important aspect of chatbots regarding value creation in online customer services. As noted, chatbots understand natural language, which means that customers conversationally interact with them, just like a human customer service representative (Riikkinen et al., 2018). Natural Language Processing (NLP) makes the customer support experience more human-like and less frustrating for customers. Additionally, chatbots can be trained to recognize and respond to specific customer inquiries, which can improve the accuracy and efficiency of the customer support process. In their study, Lalicic & Weismayer aimed to understand the relationship between consumers' values and their attitudes toward using artificial intelligence (AI)-enabled travel service agents (chatbots) (Lalicic & Weismayer, 2021). The results obtained from the mixed-method approach show personalized experiences and intuitive response mechanisms were prominent determinants of consumers' intent to use Artificial intelligence-enabled travel service agents. As a result, these two factors were responsible for value creation leading to improved customer experiences. Jiang also investigated the impact of artificial intelligence in the retail industry on consumer behavior, and how the social characteristics of anthropomorphic intelligent services (chatbots) influence consumer behavioral intentions (Jiang et al., 2022). The findings reveal that the social presence of chatbots has a direct and positive impact on retailer experience innovativeness and intimacy, and that retailer experiential innovativeness, intimacy, and sense of empowerment mediate the influence of the social presence of chatbots on consumers' behavioral intentions. Additionally, the communication styles in the low-level social presence are very conducive for promoting the relationships between social presence and experiential innovativeness, whereas formal communication styles can play a key role in promoting relationships when the level of social presence is improved.

## **Discussion**

The reviewed literature have extensively highlighted the factors affecting the Artificial Intelligence in the online retail industry in the light of diffusion of innovation theory. It is found that, the diffusion of Artificial Intelligence (AI) in the online retail industry has been vast and far-reaching. AI has enabled businesses to increase their efficiency and customer engagement and deliver a higher quality of customer service (Cao, 2021). According to Cheng & Jiang, Artificial Intelligence (AI) has enabled retail businesses to streamline operations and customer management (Cheng & Jiang, 2021). Artificial Intelligence-powered technologies such as chatbots and virtual assistants can respond to customer inquiries quickly and accurately, freeing up staff to focus on more significant tasks. Artificial Intelligence (AI) can also help companies better understand customer preferences and behavior, allowing them to develop better products and services.

Besides, the evidence from the current literature also indicated that Artificial Intelligence (AI) has allowed retail stores to increase customer engagement (Kasilingam, 2020). It is widely used to personalize customer experiences, tailor product recommendations, and provide more accurate product descriptions (Shankar et al., 2021). Further, Artificial Intelligence-powered recommendation engines also help customers find the right product and increase sales. Song further stated that, Artificial Intelligence (AI) has enabled businesses to provide a higher quality of customer service (Song et al., 2022). Artificial Intelligence-powered customer service chatbots handle simple inquiries and route customers to the right person if a more complex issue needs to be addressed. According to Zhang, Artificial Intelligence can also predict customer needs and address issues before they become a problem (Zhang, 2021). Bag, stated that chatbots can identify customer needs and provide suggestions based on the customer's input (Bag et al., 2021). These chatbots recommend products and services based on the customer's preferences or provide answers to common questions in these retail stores. Additionally, they provide personalized recommendations based on the customer's past purchases or interactions. Chatbots are becoming increasingly popular for retail stores to provide a better customer experience and increase customer satisfaction.

It is notable that customers also acknowledge using chatbots for customer support. Customers appreciate the convenience and immediacy of accessing support through a chatbot. It allows them to quickly get answers to their questions or resolve issues without having to wait on hold or navigate through phone menus. Additionally, the availability of chatbots is a benefit for customers who need assistance outside of regular retail business hours (C. Li et al., 2020). However, Upadhyay argued that the effectiveness of chatbots as a customer support tool depends on the implementation's quality and the customer's specific needs (Upadhyay et al., 2021). If a chatbot is well-designed and able to understand and respond to a wide range of customer inquiries, it can be a valuable resource for customers. But if the chatbot cannot provide helpful responses or if customers feel they are not getting the help they need, they may prefer to use other forms of customer support. Therefore, it is assumed that the diffusion of Artificial Intelligence (AI) in the online retail industry has been an immense success and has greatly improved customer experiences. With its ability to streamline operations, increase customer engagement, and provide better customer service, Artificial Intelligence (AI) has become an invaluable tool for online retail sector organizations (Hentzen, 2021).

## **Conclusion**

This research affirmed that role of Artificial Intelligence (AI) in upgrading and improving the customer support services in the worldwide retailer sector. We found that Artificial Intelligence (AI) has become an indispensable tool for customer support in the online retail sector. Artificial Intelligence-enabled chatbots and virtual assistants provide assistance to customers, improving

their experience and increasing customer satisfaction. They can handle simple queries and tasks such as product information, order status, and returns, freeing human agents to handle more complex issues. Additionally, the literature also witnessed that Artificial Intelligence (AI) also helps streamline and automate various processes such as ticket routing, prioritization, and resolution, thus reducing response times and increasing efficiency. It also helps provide personalized recommendations and offers, leading to increased sales and customer loyalty. Finally, the role of Artificial Intelligence (AI) in analyze customer behavior and feedback to identify areas for improvement and optimize the support process is also affirmed. Thus, this research concludes that Artificial Intelligence (AI) is transforming the customer support experience in the online retail sector and is crucial for businesses looking to stay ahead in a highly competitive market.

### **Limitations and Recommendations**

Although this research has extensively reviewed the theoretical literature affirming the diffusion of Artificial Intelligence for customer support services, it also contains some limitations. First, this study has adopted only three characteristics of the innovation, whereas the original theory specified a minimum of five characteristics. Second, this research does not contain any primary data, which limits its scope. Finally, the third limitation is that this study needs to be focused on a specific country or geographical region, which also narrows its scope. Thus, the researchers suggest more studies based on the role and effect of Artificial Intelligence on the consumer sector. Specifying the type of retail services and focusing on any specific region can further highlight in-depth findings of the relevant phenomenon.

### **References**

- Al-Jabri, I. M., & Sohail, M. S. (2012). *Mobile Banking Adoption: Application of Diffusion of Innovation Theory* (SSRN Scholarly Paper No. 2523623). <https://papers.ssrn.com/abstract=2523623>
- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2021). Customer experiences in the age of artificial intelligence. *Computers in Human Behavior*, *114*, 106548. <https://doi.org/10.1016/j.chb.2020.106548>
- Andrade, I. M. D., & Tumelero, C. (2022). Increasing customer service efficiency through artificial intelligence chatbot. *Revista de Gestão*, *29*(3), 238–251. <https://doi.org/10.1108/REG-07-2021-0120>
- Arajuo, T., & Casais, B. (2019). Customer Acceptance of Shopping-Assistant Chatbots | SpringerLink. In *Marketing and Smart Technologies* (Vol. 167, pp. 278–287). [https://link.springer.com/chapter/10.1007/978-981-15-1564-4\\_26](https://link.springer.com/chapter/10.1007/978-981-15-1564-4_26)
- Bag, S., Srivastava, G., Bashir, M. M. A., Kumari, S., Giannakis, M., & Chowdhury, A. H. (2021). Journey of customers in this digital era: Understanding the role of artificial intelligence technologies in user engagement and conversion. *Benchmarking: An International Journal*, *29*(7), 2074–2098. <https://doi.org/10.1108/BIJ-07-2021-0415>
- Bassano, C., Barile, S., Saviano, M., Pietronudo, M. C., & Cosimato, S. (2020). AI technologies & value co-creation in luxury context. *Hawaii International Conference on System Sciences 2020 (HICSS-53)*. [https://aisel.aisnet.org/hicss-53/da/service\\_science/4](https://aisel.aisnet.org/hicss-53/da/service_science/4)
- Bonetti, F., Warnaby, G., & Quinn, L. (2018). Augmented Reality and Virtual Reality in Physical and Online Retailing: A Review, Synthesis and Research Agenda. In T. Jung & M. C. tom Dieck (Eds.), *Augmented Reality and Virtual Reality: Empowering Human, Place and Business* (pp. 119–132). Springer International Publishing. [https://doi.org/10.1007/978-3-319-64027-3\\_9](https://doi.org/10.1007/978-3-319-64027-3_9)



- Buhalis, D., & Moldavska, I. (2021). Voice assistants in hospitality: Using artificial intelligence for customer service. *Journal of Hospitality and Tourism Technology*, 13(3), 386–403. <https://doi.org/10.1108/JHTT-03-2021-0104>
- Cao, L. (2021). Artificial intelligence in retail: Applications and value creation logics. *International Journal of Retail & Distribution Management*, 49(7), 958–976. <https://doi.org/10.1108/IJRDM-09-2020-0350>
- Chen, J., Fan, T., Gu, Q., & Pan, F. (2022). Emerging technology-based online scheduling for instant delivery in the O2O retail era. *Electronic Commerce Research and Applications*, 51, 101115. <https://doi.org/10.1016/j.elerap.2021.101115>
- Cheng, Y., & Jiang, H. (2021). Customer–brand relationship in the era of artificial intelligence: Understanding the role of chatbot marketing efforts. *Journal of Product & Brand Management*, 31(2), 252–264. <https://doi.org/10.1108/JPBM-05-2020-2907>
- Chiu, C. L., Ho, H.-C., Yu, T., Liu, Y., & Mo, Y. (2021). Exploring information technology success of Augmented Reality Retail Applications in retail food chain. *Journal of Retailing and Consumer Services*, 61, 102561. <https://doi.org/10.1016/j.jretconser.2021.102561>
- Daqar, M. A. M. A., & Smoudy, A. K. A. (2019). THE ROLE OF ARTIFICIAL INTELLIGENCE ON ENHANCING CUSTOMER EXPERIENCE. *International Review of Management and Marketing*, 9(4), 22–31. <https://doi.org/10.32479/irmm.8166>
- Di Vaio, A., Palladino, R., Hassan, R., & Escobar, O. (2020). Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review. *Journal of Business Research*, 121, 283–314. <https://doi.org/10.1016/j.jbusres.2020.08.019>
- Felzmann, H., Villaronga, E. F., Lutz, C., & Tamò-Larrieux, A. (2019). Transparency you can trust: Transparency requirements for artificial intelligence between legal norms and contextual concerns. *Big Data & Society*, 6(1), 2053951719860542. <https://doi.org/10.1177/2053951719860542>
- Grewal, D., Noble, S. M., Roggeveen, A. L., & Nordfalt, J. (2020). The future of in-store technology. *Journal of the Academy of Marketing Science*, 48(1), 96–113. <https://doi.org/10.1007/s11747-019-00697-z>
- Guha, A., Grewal, D., Kopalle, P. K., & Haenlein, M. (2021). *How artificial intelligence will affect the future of the retailing—ScienceDirect*. 97(1). <https://www.sciencedirect.com/science/article/abs/pii/S0022435921000051>
- Hentzen, J. K. (2021). *Artificial intelligence in customer-facing financial services: A systematic literature review and agenda for future research | Emerald Insight*. 40(6). <https://www.emerald.com/insight/content/doi/10.1108/IJBM-09-2021-0417/full/html>
- Huang, A., Chao, Y., de la Mora Velasco, E., Bilgihan, A., & Wei, W. (2021). When artificial intelligence meets the hospitality and tourism industry: An assessment framework to inform theory and management. *Journal of Hospitality and Tourism Insights*, 5(5), 1080–1100. <https://doi.org/10.1108/JHTI-01-2021-0021>
- Huang, M.-H., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 21(2), 155–172. <https://doi.org/10.1177/1094670517752459>
- Jabeen, F., Zaidi, S. A., & Dhaheri, M. H. A. (2022). *Automation and artificial intelligence in hospitality and tourism*. 77(4). <https://www.emerald.com/insight/content/doi/10.1108/TR-09-2019-0360/full/html>
- Jiang, K., Qin, M., & Li, S. (2022). *Chatbots in retail: How do they affect the continued use and purchase intentions of Chinese consumers?* <https://doi.org/10.1002/cb.2034>

- Kai, J., & Brock, i-U. (2019). *Demystifying AI: What Digital Transformation Leaders Can Teach You about Realistic Artificial Intelligence*—, Florian von Wangenheim, 2019. 61. <https://doi.org/10.1177/1536504219865226>
- Kasilingam, D. L. (2020). Understanding the attitude and intention to use smartphone chatbots for shopping. *Technology in Society*, 62, 101280. <https://doi.org/10.1016/j.techsoc.2020.101280>
- Kreutzer, R. T., & Sirrenberg, M. (2020). Fields of Application of Artificial Intelligence—Customer Service, Marketing and Sales. In R. T. Kreutzer & M. Sirrenberg (Eds.), *Understanding Artificial Intelligence: Fundamentals, Use Cases and Methods for a Corporate AI Journey* (pp. 105–154). Springer International Publishing. [https://doi.org/10.1007/978-3-030-25271-7\\_4](https://doi.org/10.1007/978-3-030-25271-7_4)
- Lalicic, L., & Weismayer, C. (2021). Consumers' reasons and perceived value co-creation of using artificial intelligence-enabled travel service agents. *Journal of Business Research*, 129, 891–901. <https://doi.org/10.1016/j.jbusres.2020.11.005>
- Li, B., Hou, B., & Yu, W. (2017). *Applications of artificial intelligence in intelligent manufacturing: A review*. 18, 86–96.
- Li, C., Pan, R., Xin, H., & Deng, Z. (2020). Research on Artificial Intelligence Customer Service on Consumer Attitude and Its Impact during Online Shopping. *Journal of Physics: Conference Series*, 1575(1), 012192. <https://doi.org/10.1088/1742-6596/1575/1/012192>
- Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. Humans: The Impact of Artificial Intelligence Chatbot Disclosure on Customer Purchases. *Marketing Science*, 38(6), 937–947. <https://doi.org/10.1287/mksc.2019.1192>
- Mogaji, E., & Nguyen, N. P. (2017). *Managers' understanding of artificial intelligence in relation to marketing financial services: Insights from a cross-country study | Emerald Insight*. 40(6). <https://www.emerald.com/insight/content/doi/10.1108/IJBM-09-2021-0440/full/html>
- Moriuchi, E., Landers, V. M., Colton, D., & Hair, N. (2021). Engagement with chatbots versus augmented reality interactive technology in e-commerce. *Journal of Strategic Marketing*, 29(5), 375–389. <https://doi.org/10.1080/0965254X.2020.1740766>
- Nichifor, E., & Trifan, A. (2021). Artificial Intelligence in Electronic Commerce: Basic Chatbots and the Consumer Journey. *Amfiteatru Economic*, 23(56), 87–101.
- Nöjd, S., Trischler, J. W., Otterbring, T., Andersson, P. K., & Wästlund, E. (2020). Bridging the valuescape with digital technology: A mixed methods study on customers' value creation process in the physical retail space. *Journal of Retailing and Consumer Services*, 56, 102161. <https://doi.org/10.1016/j.jretconser.2020.102161>
- 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>
- Ping, N. L., Hussin, A. R. bin C., & Ali, N. binti M. (2019). Constructs for Artificial Intelligence Customer Service in E-commerce. *2019 6th International Conference on Research and Innovation in Information Systems (ICRIIS)*, 1–6. <https://doi.org/10.1109/ICRIIS48246.2019.9073486>
- Qin, M., Zhu, W., Zhao, S., & Zhao, Y. (2022). Is Artificial Intelligence Better than Manpower? The Effects of Different Types of Online Customer Services on Customer Purchase Intentions. *Sustainability*, 14(7), Article 7. <https://doi.org/10.3390/su14073974>
- Riar, M., Korbel, J. J., Xi, N., Zarnekow, R., & Hamari, J. (2021). *The Use of Augmented Reality in Retail: A Review of Literature*. <http://hdl.handle.net/10125/70689>

- Riegger, A.-S., Klein, J. F., Merfeld, K., & Henkel, S. (2021). Technology-enabled personalization in retail stores: Understanding drivers and barriers. *Journal of Business Research*, 123, 140–155. <https://doi.org/10.1016/j.jbusres.2020.09.039>
- Riikkinen, M., Saarijärvi, H., Sarlin, P., & Lähteenmäki, I. (2018). Using artificial intelligence to create value in insurance. *International Journal of Bank Marketing*, 36(6), 1145–1168. <https://doi.org/10.1108/IJBM-01-2017-0015>
- Roggeveen, A. L., & Sethuraman, R. (2020). Customer-Interfacing Retail Technologies in 2020 & Beyond: An Integrative Framework and Research Directions. *Journal of Retailing*, 96(3), 299–309. <https://doi.org/10.1016/j.jretai.2020.08.001>
- Sartipi, F. (2020). Diffusion of Innovation Theory in the Realm of Environmental Construction. *Journal of Construction Materials*, 1, 4–6. <https://doi.org/10.36756/JCM.v1.4.2>
- Savastano, M. (2019). *Technology adoption for the integration of online–offline purchasing: Omnichannel strategies in the retail environment | Emerald Insight*. 47(5). <https://www.emerald.com/insight/content/doi/10.1108/IJRDM-12-2018-0270/full/html>
- Schmidt, P., Biessmann, F., & Teubner, T. (2020). Transparency and trust in artificial intelligence systems. *Journal of Decision Systems*, 29(4), 260–278. <https://doi.org/10.1080/12460125.2020.1819094>
- Shankar, V., Kalyanam, K., Setia, P., Golmohammadi, A., Tirunillai, S., Douglass, T., Hennessey, J., Bull, J. S., & Waddoups, R. (2021). How Technology is Changing Retail. *Journal of Retailing*, 97(1), 13–27. <https://doi.org/10.1016/j.jretai.2020.10.006>
- Song, M., Xing, X., Duan, Y., Cohen, J., & Mou, J. (2022). Will artificial intelligence replace human customer service? The impact of communication quality and privacy risks on adoption intention. *Journal of Retailing and Consumer Services*, 66, 102900. <https://doi.org/10.1016/j.jretconser.2021.102900>
- Tussyadiah, I. (2020). A review of research into automation in tourism: Launching the Annals of Tourism Research Curated Collection on Artificial Intelligence and Robotics in Tourism. *Annals of Tourism Research*, 81, 102883. <https://doi.org/10.1016/j.annals.2020.102883>
- Ughulu, D. J. (2022). **The role of Artificial intelligence (AI) in Starting, automating and scaling businesses for Entrepreneurs.** *ScienceOpen Preprints*. <https://doi.org/10.14293/S2199-1006.1.SOR-PP5ZKWJ.v1>
- Upadhyay, N., Upadhyay, S., & Dwivedi, Y. K. (2021). Theorizing artificial intelligence acceptance and digital entrepreneurship model. *International Journal of Entrepreneurial Behavior & Research*, 28(5), 1138–1166. <https://doi.org/10.1108/IJEBr-01-2021-0052>
- Zhang, C. (2021). Intelligent Internet of things service based on artificial intelligence technology. *2021 IEEE 2nd International Conference on Big Data, Artificial Intelligence and Internet of Things Engineering (ICBAIE)*, 731–734. <https://doi.org/10.1109/ICBAIE52039.2021.9390061>