

# The Path Toward Omni-channel Retailing: How Large Language Model Facilitates Marketing Processes

Retailing has evolved in numerous ways to cater to customers with diverse needs and shopping behaviors. The products offered by a retailer can be accessed through various channels, such as traditional physical stores, websites, or mobile applications. However, the latest strategy, known as omni-channel retailing, emphasizes the customer journey rather than individual channels. This article reviews the characteristics of omni-channel retailing, focusing specifically on its unique marketing aspects and operations. We then explore the potential contributions of Large Language Models (LLMs) in achieving greater consistency and integration across channels, ultimately enhancing the customer experience. *findings...*

## 1. Introduction

The concept of omni-channel retailing has been prevalent for some time. However, recent technological advancements and emerging tools have led to its wider adoption by retailers. Over a decade ago, the term “omni-channel” emerged as a method of interaction with retailers, aiming to provide customers with a consistent experience across all channels (Rigby 2011). The primary goal is to treat channels as interconnected touchpoints, enabling consumers to enjoy a seamless experience within an ecosystem (Shen et al. 2018). Omni-channel management is another related concept that must be considered. The definition Verhoef, Kannan, and Inman (2015) has suggested is accepted by many scholars; it is the synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels are optimized.

A channel is any point of contact or medium through which a customer and a firm can interact (Neslin et al. 2006). The goal is to create a shopping journey that provides customers with a seamless experience across offline and online channels (Bhatnagar and Ghose 2004). Omni-channel retailing is distinct from multi-channel retailing due to the lack of synergy, and even cross-channel retailing, which does not meet the required level of integration [Li et al. (2018);

Hajdas\_2022]. However, the transition from single-channel or even multi-channel to omni-channel is fraught with challenges. Some of these challenges may be effectively resolved or at least mitigated with new developments that have not been fully studied (Saghiri et al. 2017). One such challenge, which we focus on, is the issue of isolated conversations with customers that undermine the main purpose of omni-channel retailing.

The advent of Large Language Models (LLMs), a subset of generative artificial intelligence, has caused significant disruptions in recent years, with more changes anticipated. Businesses, particularly marketing teams, can greatly benefit from artificial intelligence (AI) due to its wide range of applications. However, 64% of marketers lack sufficient knowledge, indicating that there is still a long way to go in fully utilizing AI in marketing (Zwegers 2023). In this article, we aim to illuminate the capabilities of LLMs, particularly in the sphere of omni-channel retailing, as a step towards bridging this knowledge gap. Unlike chatbots and automated email marketing, LLMs generate human-like content, making conversations with customers more realistic and engaging. We propose that placing LLMs at the core of marketing communications significantly contributes to the desired level of channel integration. Furthermore, given sufficient descriptions, LLMs can simulate human responses, allowing for the evaluation of customer satisfaction before sending content to the actual customer.

First, we provide a concise literature review to clarify the aspects of omni-channel retailing and marketing. Next, we highlight the importance of Integrated Marketing Communications (IMC) in an omni-channel strategy. Subsequently, we illustrate how LLMs can contribute to consistent and integrated communications with shoppers, and present the results of testing on several products. Finally, we conclude by discussing the benefits of our proposed framework and its relationship with other relevant studies.

## 2. Literature Review

Retailing has evolved into various forms from the past to the present. Each new format, with its customized channels, served customers with its unique experience. Considering the purchasing process allows us to explore the distinctive features of each format and identify their inherent strengths and weaknesses. One simplified yet insightful framework involves four major steps that customers typically follow: information search, purchase, acquisition, and returns (Gauri et al. 2021). In traditional retail formats, the entire customer journey used to take place at one physical channel. Nowadays, however, customers can opt for a combination of channels to fulfill their information search, product purchase, and acquisition, or even product return (Kim and Lee 2008). For example, some customers prefer to search offline and buy online, a practice widely known as showrooming (Ailawadi and Farris 2017), or choose products to buy online and collect them at specific locations, known as click-and-collect (Weltevreden 2008). Even more complex, one can place an order in one channel (e.g., on a smartphone), receive the order via another channel (e.g., home delivery), and return it in case of an error through a third channel (e.g., a physical store) (Kembro, Norrman, and Eriksson 2018). Each channel

has its own merits, and retailers would benefit from harnessing the advantages and mitigating the disadvantages of each.

Customers and retailers have been attracted to omni-channel retailing (Hajdas, Radomska, and Silva 2022) along with researchers as the number of papers covering the topic has risen sharply (Cai and Lo 2020). Researchers attempt to explain numerous strategic decisions that departments should make, and processes have to be revised and coordinated when transitioning from a multi-channel or cross-channel to an omni-channel retailing (Cao 2014). Operations and logistics are essential parts of this transition, but the domains of supply chain management and inventory management have not been discussed sufficiently yet (Cai and Lo 2020). Additionally, the unique characteristics of omni-channel retailing require innovations in warehouse operations as well (Kembro, Norrman, and Eriksson 2018). In this article, however, our focus will be on those aspects that directly affect customers’ perceptions. Marketing omni-channel comprises of new features that must be taken into account, such as service consistency across channels in order to create an integrated customer journey.

## **2.1 Omni-channel Marketing and the Role of Communication**

The Marketing Science Institute placed a major emphasis on omni-channel retailing as an agenda for marketing research back in 2018 (MSI 2018). Adding a new channel, whether online or offline, contributes to the bottom line, as demonstrated by an empirical study (Wang and Goldfarb 2017). Wang and Goldfarb (2017) highlights the complementary effect of online and offline channels, despite their potential substitution effect in distribution. It emphasizes that opening a physical store for a first-online retailer or an online one for first-offline retailer becomes a strategic initiative in a competitive market. Retailers that initially established brick-and-mortar stores (e.g., Walmart, Target, and Kroger) aim to protect their market shares by launching and integrating their own online channels (Jindal et al. 2021). The complementary effect also increases the willingness-to-pay of customers looking for expressive durable goods (goods that, unlike functional goods, cannot be assessed and compared before purchase and have higher uncertainties) in an omni-channel retailer compared to a pure online retailer (Chatterjee and Kumar 2017).

As mentioned earlier, each channel offers distinct benefits for both customers and sellers. Quick delivery is one of the areas where online channels have an advantage over offline ones, but it is not the only one. More importantly, a larger assortment, competitive prices, and purchase convenience are the primary reasons why online retailers attract customers (Jindal et al. 2021). However, a customer is likely to interact with multiple channels throughout their purchasing journey, rather than relying on just one. For instance, customers typically progress through various stages, starting with need recognition, followed by information search, purchase, and finally after-sales service, using separate channels or combinations of them (Neslin et al. 2006). Therefore, offline stores also have features that add value to overall business goals. One study introduced the term “supercharging” to describe the valuable effects of customer-experience-focused offline brand stores with no inventory or instant fulfillment on customers’ purchasing

behavior. Supercharged customers, who have visited the store and had a positive brand experience, spend up to 60% more on average, make purchases more frequently, and have fewer returns (Bell, Gallino, and Moreno 2020).

On that basis, customer experience is a core marketing concept in omni-channel strategy that deserves attention in both research and practice. The quality of the overall experience is a key factor influencing customers' intent to shop and is crucial in determining the success of an omni-channel business (Saghiri et al. 2017). Customer experience can be defined as a multidimensional construct that encompasses customers' cognitive, emotional, behavioral, sensorial, and social responses to what a business offers at every touchpoint in purchasing process (Lemon and Verhoef 2016). Nowadays, customers interact more frequently and through myriad touchpoints with a firm, which complicates the customer journey (Lemon and Verhoef 2016). Nonetheless, service integration, which consists of service consistency and transparency, is found to have a direct relationship with several aspects of customer experience (such as flow, referring to involvement in a specific activity without realizing time, and perceived privacy risk), resulting in repeat purchasing (Quach et al. 2022).

Additionally, marketing communication is one of the potential contributors to complementary effects. The main contribution of the article lies in the detection of the mechanism through which marketing communications drive complementarity. In this context, a source of synergy is the way informative advertisements by stores generate more sales for the online channel (Wang and Goldfarb 2017).

### **2.1.1 Integrated Marketing Communications**

## **2.2 Technology as a Transition Facilitator**

### **2.2.1 Large Language Models**

## **3. Methodology**

## **4. Results**

## **5. Conclusion**

## **Technology**

Ailawadi, Kusum L., and Paul W. Farris. 2017. "Managing Multi- and Omni-Channel Distribution: Metrics and Research Directions." *Journal of Retailing* 93 (1): 120–35. <https://doi.org/10.1016/j.jretai.2016.12.003>.

- Bell, David R., Santiago Gallino, and Antonio Moreno. 2020. "Customer Supercharging in Experience-Centric Channels." *Management Science* 66 (9): 4096–4107. <https://doi.org/10.1287/mnsc.2019.3453>.
- Bhatnagar, Amit, and Sanjoy Ghose. 2004. "A Latent Class Segmentation Analysis of e-Shoppers." *Journal of Business Research* 57 (7): 758–67. [https://doi.org/10.1016/s0148-2963\(02\)00357-0](https://doi.org/10.1016/s0148-2963(02)00357-0).
- Cai, Ya-Jun, and Chris K. Y. Lo. 2020. "Omni-Channel Management in the New Retailing Era: A Systematic Review and Future Research Agenda." *International Journal of Production Economics* 229 (November): 107729. <https://doi.org/10.1016/j.ijpe.2020.107729>.
- Cao, Lanlan. 2014. "Business Model Transformation in Moving to a Cross-Channel Retail Strategy: A Case Study." *International Journal of Electronic Commerce* 18 (4): 69–96. <https://doi.org/10.2753/jec1086-4415180403>.
- Chatterjee, Patrali, and Archana Kumar. 2017. "Consumer Willingness to Pay Across Retail Channels." *Journal of Retailing and Consumer Services* 34 (January): 264–70. <https://doi.org/10.1016/j.jretconser.2016.01.008>.
- Gauri, Dinesh K., Rupinder P. Jindal, Brian Ratchford, Edward Fox, Amit Bhatnagar, Aashish Pandey, Jonathan R. Navallo, John Fogarty, Stephen Carr, and Eric Howerton. 2021. "Evolution of Retail Formats: Past, Present, and Future." *Journal of Retailing* 97 (1): 42–61. <https://doi.org/10.1016/j.jretai.2020.11.002>.
- Hajdas, Monika, Joanna Radomska, and Susana C. Silva. 2022. "The Omni-Channel Approach: A Utopia for Companies?" *Journal of Retailing and Consumer Services* 65 (March): 102131. <https://doi.org/10.1016/j.jretconser.2020.102131>.
- Jindal, Rupinder P., Dinesh K. Gauri, Wanyu Li, and Yu Ma. 2021. "Omnichannel Battle Between Amazon and Walmart: Is the Focus on Delivery the Best Strategy?" *Journal of Business Research* 122 (January): 270–80. <https://doi.org/10.1016/j.jbusres.2020.08.053>.
- Kembro, Joakim Hans, Andreas Norrman, and Ebba Eriksson. 2018. "Adapting Warehouse Operations and Design to Omni-Channel Logistics." *International Journal of Physical Distribution & Logistics Management* 48 (9): 890–912. <https://doi.org/10.1108/ijpdlm-01-2017-0052>.
- Kim, Jihyun, and Hyun-Hwa Lee. 2008. "Consumer Product Search and Purchase Behaviour Using Various Retail Channels: The Role of Perceived Retail Usefulness." *International Journal of Consumer Studies* 32 (6): 619–27. <https://doi.org/10.1111/j.1470-6431.2008.00689.x>.
- Lemon, Katherine N., and Peter C. Verhoef. 2016. "Understanding Customer Experience Throughout the Customer Journey." *Journal of Marketing* 80 (6): 69–96. <https://doi.org/10.1509/jm.15.0420>.
- Li, Yang, Hefu Liu, Eric T. K. Lim, Jie Mein Goh, Feng Yang, and Matthew K. O. Lee. 2018. "Customer's Reaction to Cross-Channel Integration in Omnichannel Retailing: The Mediating Roles of Retailer Uncertainty, Identity Attractiveness, and Switching Costs." *Decision Support Systems* 109 (May): 50–60. <https://doi.org/10.1016/j.dss.2017.12.010>.
- MSI. 2018. "2018-2020 Research Priorities: Marketers' Strategic Imperatives." Elsevier BV. <https://www.msi.org/articles/marketers-top-challenges-2018-2020-research-priorities>.

- Neslin, Scott A., Dhruv Grewal, Robert Leghorn, Venkatesh Shankar, Marije L. Teerling, Jacquelyn S. Thomas, and Peter C. Verhoef. 2006. "Challenges and Opportunities in Multichannel Customer Management." *Journal of Service Research* 9 (2): 95–112. <https://doi.org/10.1177/1094670506293559>.
- Quach, Sara, Mojtaba Barari, Dann Vit Moudrý, and Ken Quach. 2022. "Service Integration in Omnichannel Retailing and Its Impact on Customer Experience." *Journal of Retailing and Consumer Services* 65 (March): 102267. <https://doi.org/10.1016/j.jretconser.2020.102267>.
- Rigby, Darrell K. 2011. "The Future of Shopping." 2011. <https://www.oresky.eu/wp-content/uploads/2016/09/The-Future-of-Shopping.pdf>.
- Saghiri, Soroosh, Richard Wilding, Carlos Mena, and Michael Bourlakis. 2017. "Toward a Three-Dimensional Framework for Omni-Channel." *Journal of Business Research* 77 (August): 53–67. <https://doi.org/10.1016/j.jbusres.2017.03.025>.
- Shen, Xiao-Liang, Yang-Jun Li, Yongqiang Sun, and Nan Wang. 2018. "Channel Integration Quality, Perceived Fluency and Omnichannel Service Usage: The Moderating Roles of Internal and External Usage Experience." *Decision Support Systems* 109 (May): 61–73. <https://doi.org/10.1016/j.dss.2018.01.006>.
- Verhoef, Peter C., P. K. Kannan, and J. Jeffrey Inman. 2015. "From Multi-Channel Retailing to Omni-Channel Retailing." *Journal of Retailing* 91 (2): 174–81. <https://doi.org/10.1016/j.jretai.2015.02.005>.
- Wang, Kitty, and Avi Goldfarb. 2017. "Can Offline Stores Drive Online Sales?" *Journal of Marketing Research* 54 (5): 706–19. <https://doi.org/10.1509/jmr.14.0518>.
- Weltevreden, Jesse W. J. 2008. "B2c e-Commerce Logistics: The Rise of Collection-and-Delivery Points in the Netherlands." *International Journal of Retail & Distribution Management* 36 (8): 638–60. <https://doi.org/10.1108/09590550810883487>.
- Zwegers, Romain. 2023. "Long Road Ahead for Broad Application and Understanding of AI in Marketing." <https://www.ama.org/marketing-news/long-road-ahead-for-broad-application-and-understanding-of-ai-in-marketing/>.