

The Path Towards Omnichannel Retailing: How Large Language Models Can Integrate Marketing Communications

Retailing has evolved significantly to cater to customers with diverse needs and shopping behaviors. Customers can access a retailer’s products through various channels, including traditional physical stores, websites, and mobile applications. The latest strategy, known as omnichannel retailing, emphasizes a seamless customer journey across these channels. This article reviews the characteristics of omnichannel retailing, with a specific focus on its marketing aspects and operations. We explore the potential contributions of Large Language Models (LLMs) in achieving greater consistency and integration across channels, thereby enhancing the customer experience. We propose that placing an LLM at the core of content generation can ensure consistent communication with customers across all channels. Furthermore, we simulated customer types extracted from clustering Amazon product reviews and evaluated their satisfaction after receiving LLM-generated content. We concluded that customer satisfaction is higher compared to the previous state.

1. Introduction

The concept of omnichannel 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 “omnichannel” 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). Omnichannel 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 to optimize the customer experience across channels and the performance over channels.

A channel is any point of contact or medium through which customers and firms can interact (Neslin et al. 2006b). Omnichannel retailing is distinct from multichannel retailing due to the lack of synergy and even cross-channel retailing, which does not meet the required level of channel integration (Li et al. 2018, Hajdas_2022). Although retailers find the higher profitability of an omnichannel strategy very appealing, the transition from single-channel or multichannel to omnichannel is fraught with challenges. Some of these challenges may be effectively resolved or at least mitigated with new developments that have not been thoroughly studied (Saghiri et al. 2017). One such challenge we focus on is the isolated conversations with customers that undermine the primary purpose of omnichannel 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 significantly 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 omnichannel retailing, as a step towards bridging this gap. Unlike chatbots, website and automated email marketing, LLMs generate human-like content, making customer conversations more realistic and engaging. We propose that placing LLMs at the core of marketing communications significantly contributes to the desired level of channel integration and increases customers satisfaction. This is because it can serve customers throughout their purchase journey regardless of the channel they use. Furthermore, given sufficient descriptions, LLMs can simulate human responses, allowing for the evaluation of customer satisfaction after sending content to the customer.

Firstly, we emphasize the significance of Integrated Marketing Communications (IMC) in an omnichannel strategy. Following that, we present our framework that demonstrates how LLMs can help maintain consistent and integrated communications with shoppers. We also share the results of testing our proposed framework on several products. Lastly, we discuss the benefits of our proposed framework and its relationship with other relevant studies.

2. Literature Review

Retailing has evolved significantly from the past to the present, with each new format offering a unique customer experience through its customized channels. By considering the purchasing process, we can explore the distinctive features of each format and identify their inherent strengths and weaknesses. Lemon and Verhoef (2016) conceptualized the customer experience as a journey in three general steps: prepurchase, purchase, and postpurchase, each encompassing several behaviors. A simplified yet insightful framework involves four primary behaviors that customers typically engage in: information search, purchase, acquisition, and returns (Gauri et al. 2021). In traditional retail formats, the entire customer journey used to take place through a single physical channel. However, customers can now opt for a combination

of channels to fulfill their information search, product purchase, 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, a customer 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 by combining them, accounting for their bidirectional impacts. The more the boundaries between channels are blurred, the more satisfying the customer experience becomes, which is the ultimate goal of omnichannel retailing.

Customers and retailers have been attracted to omnichannel 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 the numerous strategic decisions that departments should make and the processes that must be revised and coordinated when transitioning from a multichannel or crosschannel approach to omnichannel retailing (Cao 2014). While operations and logistics are essential parts of this transition, the domains of supply chain management and inventory management have not yet been sufficiently discussed (Cai and Lo 2020). Additionally, the unique characteristics of omnichannel 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. The concept of omnichannel marketing introduces new elements, such as service consistency, which directly impacts customer experience and loyalty (Quach et al. 2022). Importantly, marketing communications should be strategically adjusted to blur the channels' boundaries, creating a consistent and integrated customer journey that enhances the overall retail experience.

2.1 Omnichannel Marketing and the Vital Role of Customer Experience

The Marketing Science Institute placed a major emphasis on omnichannel retailing as an agenda for marketing research back in 2018 (MSI 2018). Multichannel marketing is a strategy that allows companies to establish enduring relationships with their customers. It does this by providing customers and potential customers with information, products, services, and support through two or more channels that are synchronized (Neslin et al. 2006a). The ongoing digital expansion has led customers to interact with businesses through various channels, prompting a shift towards "omnichannel" marketing that prioritizes a unified customer experience over mere transaction facilitation (Cui et al. 2020). If the primary goal is to maximize the effectiveness of each individual channel, then the company is employing multichannel marketing strategies.

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. 2006b). Therefore, offline stores also have features that add value to overall business goals. Breugelmans et al. (2023) suggested five major benefits that give reasons for customers to visit physical stores: discovery, convenience, customization, community, and shoppertainment (shopping and entertainment). 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).

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 omnichannel retailer compared to a pure online retailer (Chatterjee and Kumar 2017). These effects relate to the complimentary impacts one channel has on another channel, which creates a delightful customer experience.

On that basis, customer experience is a core marketing concept in omnichannel strategy that deserves attention in both research and practice. 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 the purchasing process (Lemon and Verhoef 2016). The quality of the overall experience is a key factor influencing customers’ intent to shop and is crucial in determining the success of an omnichannel business (Saghiri et al. 2017). Nowadays, customers interact more frequently and through myriad touch points with a firm, which complicates the customer journey (Lemon and Verhoef 2016). Følstad and Kvale (2018) defines customer journey as the usual way that a customer follows to reach or utilize a company’s product or service. The customer journey is the real process that shapes the customer experience and helps to comprehend how customer objectives, anticipations, and actions change over time (Olson et al. 2019). 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 the time, and perceived privacy risk), resulting in repeat purchasing (Quach et al. 2022). One aspect of service consistency should happen in the

communications retailers usually have with customers throughout their journey. Oh, Teo, and Sambamurthy (2012) state that information technology allows retailers to create an integrated communication system where the website not only provides after-sales support for products purchased in physical stores but also offers real-time live chat, giving online customers immediate access to customer service assistants. In addition, informative advertisements by stores generate more sales for the online channel, which demonstrates the synergy omnichannel retailing engenders (Wang and Goldfarb 2017). Indeed, marketing communication is pivotal in crafting a unique customer experience and positively impacting the bottom line. This article’s primary contribution is a framework that enables multichannel retailers to leverage the capabilities of Large Language Models (LLMs) for content generation, thereby facilitating the creation of an omnichannel environment.

2.1.1 Integrated Marketing Communications in Omnichannel Strategy

Content consistency has been identified as one of the prerequisites to integrate channels and create an omnichannel environment. Hossain et al. (2020) developed a framework in which three fundamental aspects of channel integration quality (INQ) are suggested, and one of them is content consistency, including information consistency as a subdimension. Shen et al. (2018) also emphasized the importance of content consistency in the determination of channel integration quality. As a result, if a retailer aims to transform from a multichannel to an omnichannel, it has to enhance the quality of integration, so content consistency plays a major role.

The primary goal of Integrated Marketing Communications (IMC) is to send clear, consistent, and compelling brand and company messages through integrated and coordinated communication channels (Kotler and Armstrong 2011). In an omnichannel world, IMC underpins the entire strategy, as service consistency is at the heart of channels unification. The messages that customers receive at each step of their journey must be crafted in alignment with the value proposition of the retailer. This is a business capability that enables a company to convert its communication resources and brand assets into market-driven results or returns on these assets (Sandra Luxton and Mavondo 2015).

The shift towards omnichannel marketing has amplified the necessity for an interactive approach to IMC. In this approach, organizational barriers are reduced to foster communication synergies that boost customer engagement through a cohesive brand experience (Hansen and Sia 2015). The unification of various tools and platforms into a single-choice environment leads to personalized information, acquisition, and usage (Rocco and Bush 2016, ManserPayneUnknownTitle2017).

3. Integrated Communication with Large Language Models

Large language models have emerged as a technology disruption, especially in business and marketing. Nonetheless, in customer journey literature, technological disruption has not been explored enough (Tueanrat, Papagiannidis, and Alamanos 2021). Our proposition contributes to identifying LLMs applications in the customer journey. We aim to customize customer interactions at specific touch points with the retailer through the power of content generation of LLMs. Improving these touchpoints has a direct impact on marketing outcomes. For instance, customer satisfaction depends on fulfilling interactions (Halvorsrud, Kvale, and Følstad 2016), while customer dissatisfaction and higher churn rates result from confusing and frustrating interactions (Ieva and Ziliani 2018). Thus, our proposition is expected to impact customer satisfaction directly.

In the framework we designed, the customers' attitudes towards the product, which are in the form of texts, are collected. It is imperative to take into account that such information belongs to which step of the customer journey. We focus on the same three stages in the customer journey suggested by Lemon and Verhoef (2016): Prepurchase, Purchase, and Postpurchase. Next, Neslin et al. (2006a) noted the importance of customer segmentation in designing a multichannel strategy. As a result, customer segmentation is used to obtain different characteristics and feelings towards a product, which helps in designing the message for each type of shopper. After receiving instructions from the marketing team and analyzing the dominant characteristics and attitudes of a particular customer segment, ChatGPT-4 generates appropriate messages. Recently, Brand, Israeli, and Ngwe (2023) and Horton (2023) showed that a large language model can act similarly to an economic agent and be used in market research studies. To evaluate the effectiveness of these messages, we use a new chat that mimics a customer with similar attributes and satisfaction level. Then, we test the generated message on it. Finally, we ask LLM to determine the level of satisfaction and compare it to the previous state. In the following section, we will provide a more detailed explanation of the framework.

3.1 Proposed Framework

4. Results

5. Conclusion

References

- 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>.
- Brand, James, Ayelet Israeli, and Donald Ngwe. 2023. "Using GPT for Market Research." *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4395751>.
- Breugelmans, Els, Lina Altenburg, Felix Lehmkuhle, Manfred Krafft, Lien Lamey, and Anne L. Roggeveen. 2023. "The Future of Physical Stores: Creating Reasons for Customers to Visit." *Journal of Retailing*. <https://doi.org/10.1016/j.jretai.2023.10.005>.
- 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>.
- Cui, Tony Haitao, Anindya Ghose, Hanna Halaburda, Raghuram Iyengar, Koen Pauwels, S. Sriram, Catherine Tucker, and Sriraman Venkataraman. 2020. "Informational Challenges in Omnichannel Marketing: Remedies and Future Research." *Journal of Marketing*. <https://doi.org/10.1177/0022242920968810>.
- Følstad, Asbjørn, and Knut Kvale. 2018. "Customer Journeys: A Systematic Literature Review." *Journal of Service Theory and Practice* 28 (2): 196–227. <https://doi.org/10.1108/jstp-11-2014-0261>.
- 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>.
- Halvorsrud, Ragnhild, Knut Kvale, and Asbjørn Følstad. 2016. "Improving Service Quality Through Customer Journey Analysis." *Journal of Service Theory and Practice* 26 (6): 840–67. <https://doi.org/10.1108/jstp-05-2015-0111>.
- Hansen, Rina, and Siew Kien Sia. 2015. "Hummel's Digital Transformation Toward Omnichannel Retailing: Key Lessons Learned." *MIS Quarterly Executive* 14 (2).
- Horton, John J. 2023. "Large Language Models as Simulated Economic Agents: What Can We Learn from Homo Silicus?" <https://arxiv.org/pdf/2301.07543.pdf>.
- Hossain, Tasnim M. Taufique, Shahriar Akter, Uraiporn Kattiyapornpong, and Yogesh Dwivedi. 2020. "Reconceptualizing Integration Quality Dynamics for Omnichannel Marketing." *Industrial Marketing Management*. <https://doi.org/10.1016/j.indmarman.2019.12.006>.
- Ieva, Marco, and Cristina Ziliani. 2018. "Mapping Touchpoint Exposure in Retailing: Impli-

- cations for Developing an Omnichannel Customer Experience.” *International Journal of Retail & Distribution Management* 46 (3): 304–22. <https://doi.org/10.1108/ijrdm-04-2017-0097>.
- 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>.
- Kotler, Philip, and Gary Armstrong. 2011. *Principles of Marketing*. 14th ed. Prentice Hall.
- 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. 2006a. “Challenges and Opportunities in Multichannel Customer Management.” *Journal of Service Research* 9 (2): 95–112. <https://doi.org/10.1177/1094670506293559>.
- . 2006b. “Challenges and Opportunities in Multichannel Customer Management.” *Journal of Service Research* 9 (2): 95–112. <https://doi.org/10.1177/1094670506293559>.
- Oh, Lih-Bin, Hock-Hai Teo, and Vallabh Sambamurthy. 2012. “The Effects of Retail Channel Integration Through the Use of Information Technologies on Firm Performance.” *Journal of Operations Management*. <https://doi.org/10.1016/j.jom.2012.03.001>.
- Olson, Eric D., Susan W. Arendt, E. FitzPatrick, Sonya Hauser, Alice Jo Rainville, Beth Rice, and Kristi L. Lewis. 2019. “Marketing Mechanisms Used for Summer Food Service Programs.” *Journal of Nonprofit & Public Sector Marketing*. <https://doi.org/10.1080/10495142.2019.1589632>.
- Quach, Sara, Mojtaba Barari, Dann Vit Moudry, 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](#).

- Rocco, Richard A., and Alan J. Bush. 2016. "Exploring Buyer-Seller Dyadic Perceptions of Technology and Relationships." *Journal of Research in Interactive Marketing*. <https://doi.org/10.1108/jrim-04-2015-0027>.
- 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>.
- Sandra Luxton, Mike Reid, and Felix Mavondo. 2015. "Integrated Marketing Communication Capability and Brand Performance." *Journal of Advertising* 44 (1): 37–46. <https://doi.org/10.1080/00913367.2014.934938>.
- 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>.
- Tueanrat, Yanika, Savvas Papagiannidis, and Eleftherios Alamanos. 2021. "Going on a Journey: A Review of the Customer Journey Literature." *Journal of Business Research* 125: 336–53. <https://doi.org/10.1016/j.jbusres.2020.12.028>.
- 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/>.