Customer Happiness through Customer Experience in the RTA Furniture Retail Industry Based on Omnichannel Marketing (An Empirical Study on the Millennial Generation and Gen-Z in Indonesia)

L. Lisnawati[1], and S. Sulastri[2]

[1,2] Universitas Pendidikan Indonesia, Bandung, Indonesia
lisnawati@upi.edu

Abstract. This study investigates the influence of omnichannel marketing on customer happiness through customer experience in the Ready-To-Assemble (RTA) furniture retail industry, focusing on Millennials and Gen-Z in Indonesia. Using a quantitative survey method with 420 respondents and analyzed through SEM-PLS, the research examines how omnichannel dimensions—such as integration, personalization, and accessibility—shape customer experiences across digital and physical channels. The findings reveal that omnichannel marketing significantly impacts customer experience, which in turn strongly influences customer happiness. Customer experience acts as a partial mediator, emphasizing its critical role in translating marketing strategies into emotional outcomes. These results highlight the importance of designing seamless and personalized omnichannel experiences to meet the expectations of younger consumers. Retailers are encouraged to adopt integrated systems and consistent service delivery to enhance emotional engagement and drive long-term satisfaction. The study contributes to the growing body of knowledge on omnichannel strategy and its psychological impact on consumer well-being in emerging markets.

Keywords: Customer Experience, Customer Happiness, Gen-Z, Millenials, Omnichannel Marketing, RTA Furniture.

1 Introduction

The rapid advancement of digital technology and the evolving behavior of modern consumers have prompted significant transformation within the retail industry. One of the most notable shifts is the adoption of omnichannel marketing strategies, where brands integrate multiple touchpoints—both online and offline—to deliver seamless, personalized, and consistent customer experiences. Amid this shift, the Ready-To-Assemble (RTA) furniture industry has experienced substantial growth, particularly among the Millennial and Generation Z cohorts, who value both convenience and immersive shopping experiences that transcend physical and digital boundaries[1-6].

R. Hurriyati et al. (eds.), *Proceedings of the 9th Global Conference on Business, Management and Entrepreneurship (GCBME 2024)*, Advances in Economics, Business and Management Research 342,
https://doi.org/10.2991/978-94-6463-817-2_82

The RTA furniture industry, exemplified by global brands such as IKEA, relies on an experience-based retail model that emphasizes not only product quality and design but also how customers discover, evaluate, purchase, and assemble furniture themselves. In this context, Customer Experience (CX) has become a critical dimension in shaping consumer perceptions and satisfaction. Customer experience is no longer confined to physical store visits but includes the entire customer journey—from online browsing and social media interaction to purchase decision-making and post-purchase services. When these experiences are designed strategically using an omnichannel approach, they have the potential to enhance not only customer satisfaction but also customer happiness.

Customer happiness refers to an affective state that extends beyond traditional customer satisfaction. It encompasses deeper emotional responses such as delight, fulfillment, and long-term contentment. In today's highly competitive and choice-saturated retail environment, generating customer happiness is seen as a strategic differentiator. Happy customers are not only more likely to make repeat purchases but also to become vocal advocates for a brand [7-10]. As such, achieving customer happiness has become a primary goal for many forward-thinking retailers.

However, achieving this emotional outcome is not simply a matter of offering high-quality products or competitive prices. Retailers must understand how omnichannel customer journeys contribute to consumers' perceptions and emotional states. This is particularly relevant for Millennials and Gen-Z consumers, who are digital natives with high expectations for fluid, on-demand, and interconnected experiences [11-13]. These consumers routinely switch between platforms—browsing products on mobile apps, checking reviews on social media, and completing purchases in physical stores or vice versa. If this journey is disjointed, it creates friction and undermines both customer satisfaction and happiness.

In Indonesia, the relevance of this omnichannel shift is increasingly evident. With more than 210 million internet users and a growing middle class, the potential for omnichannel retail in the RTA furniture sector is significant. According to the 2023 Google Temasek e-Conomy report, over 70% of Indonesian consumers research products online before making offline purchases. This hybrid behavior underscores the importance of channel synergy rather than isolated optimization of digital or physical touchpoints.

Despite the growing importance of omnichannel strategies, empirical studies investigating their impact on customer happiness via customer experience, particularly in the RTA furniture sector and within the Indonesian context, remain limited. Most existing research focuses either on technological adoption or customer satisfaction, without delving deeper into emotional outcomes such as happiness. There is a need for comprehensive studies that bridge the gap between operational omnichannel practices and psychological consumer responses.

Theoretically, this study draws upon the Stimulus-Organism-Response (S-O-R) framework[14-17], which posits that external stimuli (e.g., omnichannel marketing elements like personalization, channel integration, and service consistency) influence internal states (i.e., customer experiences—cognitive, emotional, and behavioral), which in turn produce behavioral or emotional responses (e.g., customer happiness). Applying this model helps explain the psychological mechanisms through which retail strategies affect consumer well-being.

This study seeks to fill the aforementioned research gap by examining how omnichannel marketing strategies influence customer happiness through customer experience, with a focus on Millennial and Gen-Z consumers in Indonesia. These generational cohorts are chosen not only for their size but also for their pivotal role in shaping the future of consumer markets. Millennials (born 1981–1996) and Gen-Z (born 1997–2012) are known for prioritizing experience over ownership, valuing brand authenticity, and expecting seamless cross-channel interaction.

To examine this phenomenon empirically, this study adopts a quantitative research approach, utilizing Structural Equation Modeling – Partial Least Squares (SEM-PLS) to analyze data collected from 420 respondents who have purchased RTA furniture via omnichannel channels. The model examines how key dimensions of omnichannel marketing—such as channel consistency, integration, personalization, and accessibility—affect customer experience, and how experience, in turn, shapes emotional outcomes like happiness.

The theoretical contribution of this study lies in expanding the existing body of knowledge on omnichannel marketing by introducing customer happiness as a meaningful and underexplored outcome. While prior studies have acknowledged the role of omnichannel in driving convenience and satisfaction, few have investigated its potential in fostering long-term emotional fulfillment. Additionally, by focusing on a developing market context like Indonesia, this research adds geographic and cultural diversity to a field dominated by studies from Western economies.

Moreover, this study aims to elevate the discussion on the evolution of customer satisfaction towards emotional loyalty. In an age where product features are easily replicated, brands can differentiate themselves by creating emotionally resonant experiences that build strong, affective bonds with customers. As the boundary between online and offline retail blurs, emotion-driven experiences will increasingly define competitive advantage.

Based on the aforementioned context, the following research questions are formulated:

1. How does omnichannel marketing influence customer experience in the RTA furniture industry among Millennial and Gen-Z consumers in Indonesia?
2. How does customer experience mediate the relationship between omnichannel marketing and customer happiness?

By addressing these questions, this study endeavors to uncover the mechanisms by which marketing strategy can enhance not just functional outcomes, but also the emotional well-being of modern consumers.

2 Methods

This study employed a quantitative, explanatory research design to investigate the effect of omnichannel marketing on customer happiness through the mediating role of customer experience in the RTA (Ready-To-Assemble) furniture retail industry. The

research adopts a cross-sectional approach using a survey method, as it is appropriate for capturing perceptions and behavioral tendencies at a single point in time.

The target population comprises Millennial and Generation Z consumers in Indonesia who have purchased RTA furniture through omnichannel platforms (e.g., combining online browsing and offline purchases, or vice versa). Respondents were selected using purposive sampling, with the following inclusion criteria:

a. Aged between 18–44 years (Gen-Z: 18–27, Millennials: 28–44),
b. Residing in urban areas across Indonesia (e.g., Jakarta, Bandung, Surabaya),
c. Having purchased RTA furniture in the last 12 months,
d. Engaging in at least two different retail channels (e.g., e-commerce, physical store, mobile app, or social media).

A total of 420 valid responses were collected, exceeding the minimum sample size requirement for Structural Equation Modeling using the 10-times rule (Hair et al., 2021), where the minimum sample is 10 times the number of indicators for the most complex construct.

Data were collected using a structured online questionnaire, distributed through social media platforms, community forums, and customer networks of major furniture retailers. All items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement scales were adapted from validated instruments in previous studies and contextualized for the RTA furniture retail environment.

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. This technique is appropriate for complex models with multiple latent variables and mediating relationships, especially when the data distribution is non-normal. The analysis involved two main stages:

a. Measurement model assessment (validity and reliability), including factor loading, composite reliability (CR), average variance extracted (AVE), and discriminant validity.
b. Structural model assessment, including path coefficients, R^2, f^2 effect sizes, and mediation analysis using bootstrapping (5000 subsamples).

Participation in this study was voluntary. Respondents provided informed consent before completing the questionnaire. All data were anonymized and used strictly for academic purposes.

3 Result and Discussion

Descriptive data is utilized to provide an overview of the data obtained from the conducted research. The presented information includes the maximum value, minimum value, mean, and standard deviation.

Table 1. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE
Omnichannel Marketing	0.872	0.904	0,623

Customer Experience	0.889	0,923	0.677
Customer Happiness	0.863	0,905	0,703

Table 1. describe that All constructs have Cronbach's Alpha values above 0.7, indicating good internal consistency reliability. The Composite Reliability (CR) values also exceed the standard threshold of 0.7, suggesting that the indicators reliably reflect their latent variables. Furthermore, the Average Variance Extracted (AVE) values are above 0.5 for all constructs, confirming acceptable levels of convergent validity. This means that each construct explains more than 50% of the variance in its indicators.

Table 2. Discriminant Validity (Fornell-Lacher Criterion)

Construct	OM	CX	CH
Omnichannel Marketing (OM)	**0.789**		
Customer Experience (CX)	0.621	**0,923**	
Customer Happiness (CH)	0.533	0,905	**0,703**

Based on Table 2 it is explained that the diagonal values (in bold) represent the square root of AVE for each construct and are greater than the inter-construct correlations. For example, Customer Happiness has a square root of AVE of 0.838, which is greater than its correlation with Customer Experience (0.662) and Omnichannel Marketing (0.533). This supports the discriminant validity, indicating that the constructs are empirically distinct and not overlapping.

Table 3. Path Coefficients and Hypothesis Testing

Hypothesis	Path	Coefficient (β)	t-Statistic	p-value	Result
H1: OM → CX	Supported	0.621	11.324	0.000	Significant
H2: CX → CH	Supported	0.662	13.212	0.000	Significant
H3: OM → CH (direct effect)	Not Supported	0.084	1.542	0.124	Not Significant
H4: OM → CX → CH (indirect effect)	Supported	0.411	8.232	0.000	Significant (Mediated)

Table 3 shows that the results The structural model assessment revealed several important insights regarding the hypothesized relationships among the constructs. First, Omnichannel Marketing (OM) was found to have a significant positive influence on Customer Experience (CX), as indicated by a path coefficient of $\beta = 0.621$, with a t-value of 11.324 and $p < 0.001$. This supports Hypothesis 1 (H1) and suggests that the implementation of integrated omnichannel strategies—such as seamless coordination between online and offline touchpoints—significantly enhances the overall customer experience.

In addition, Customer Experience showed a strong and significant effect on Customer Happiness (CH) ($\beta = 0.662$, $t = 13.212$, $p < 0.001$), confirming Hypothesis 2

(H2). This finding highlights the critical role of memorable, convenient, and emotionally satisfying experiences in fostering positive emotional outcomes and long-term satisfaction among consumers.

However, the direct effect of Omnichannel Marketing on Customer Happiness (H3) was not statistically significant ($\beta = 0.084$, $t = 1.542$, $p = 0.124$), indicating that simply providing omnichannel access is not sufficient to directly increase customer happiness without mediating factors.

Interestingly, the indirect path from Omnichannel Marketing to Customer Happiness via Customer Experience was found to be significant ($\beta = 0.411$, $t = 8.232$, $p < 0.001$), thereby supporting Hypothesis 4 (H4). This confirms that Customer Experience fully mediates the relationship between Omnichannel Marketing and Customer Happiness, emphasizing that the true value of omnichannel strategies is realized only when they effectively enhance the customer's journey and perception.

Taken together, these results reinforce the importance of focusing not merely on technological integration, but on how such integration improves the subjective experience of consumers, particularly Millennials and Gen-Z shoppers in the context of the RTA furniture retail industry.

Table 4. R-Square (R^2) Value

Endogenous Variable	R^2	Interpretation
Customer Experience	0.386	Moderate
Customer Happiness	0.551	Moderate to Substantial

The results of the R-Square Value for Customer Experience (0.386) indicates that 38.6% of its variance is explained by Omnichannel Marketing. Meanwhile, Customer Happiness has an R^2 of 0.551, suggesting that over half of its variance is explained by the combined effects of Omnichannel Marketing and Customer Experience. These are considered moderate to substantial levels of predictive power.

Table 5. Effect Size (f^2)

Endogenous Variable	f^2	Interpretation
OM → CX	0.63	Large
CX → CH	0.77	Large

Base on Table 5. both relationships show large effect sizes, indicating that the presence of Omnichannel Marketing has a strong effect on Customer Experience, and Customer Experience significantly influences Customer Happiness.

Table 6. Predictive Relevance (Q^2)

Endogenous Variable	Q^2
Customer Experience	0.29
CX → CH	0.42

Table 6. mean that Since all $\mathbf{Q}^2$ values are greater than zero**,** the model demonstrates adequate predictive relevance. In particular, Customer Happiness exhibits a Q^2 of 0.42, which is considered high, showing that the model can predict out-of-sample observations effectively.

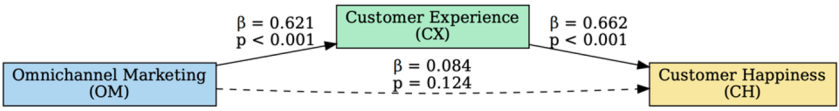

Figure 1. Model Structure.

The structural equation model in Figure 1. presented in this study demonstrates the interrelated effects of Omnichannel Marketing, Customer Experience, and Customer Happiness within the context of the RTA (Ready-To-Assemble) furniture retail industry in Indonesia. The model shows that Omnichannel Marketing (OM) has a strong and significant influence on Customer Experience (CX) ($\beta = 0.621$, $p < 0.001$), confirming that the integration, personalization, and seamless coordination between online and offline retail channels play a crucial role in shaping how customers perceive and evaluate their shopping journey. This is particularly relevant for Millennials and Gen-Z, who expect fluid transitions between channels and value convenience, control, and emotional connection throughout their experience.

Further, Customer Experience significantly affects Customer Happiness (CH) ($\beta = 0.662$, $p < 0.001$), suggesting that when customers have a satisfying, engaging, and emotionally rewarding interaction with the brand, they are more likely to feel fulfilled and happy. These findings support the view that customer experience is not merely a transactional factor but a psychological and emotional bridge that links operational strategies to emotional outcomes.

Interestingly, the direct effect of Omnichannel Marketing on Customer Happiness is not statistically significant ($\beta = 0.084$, $p = 0.124$), indicating that customer happiness cannot be achieved solely through omnichannel features unless those features lead to positive experiences. This confirms a full mediation model, in which Customer Experience fully mediates the relationship between Omnichannel Marketing and Customer Happiness [19-24]. In essence, the value of omnichannel strategies is not realized unless they result in meaningful experiences for the customer.

The model aligns with the Stimulus-Organism-Response (S-O-R) theoretical framework, where omnichannel marketing acts as the external stimulus, customer experience serves as the internal processing mechanism, and customer happiness emerges as the emotional response [25-28]. The Stimulus-Organism-Response (S-O-R) framework serves as a valuable model for understanding how external stimuli influence internal processes and subsequent behavioral responses across various contexts. This implies that businesses must not only invest in omnichannel infrastructure but also ensure that these investments translate into cohesive and emotionally resonant experiences [29-35]. For practitioners, this means prioritizing experience design, personal engagement, and consistency across all channels to achieve not just satisfaction but lasting customer happiness.

4 Conclusion

Customer experience is a key pathway through which omnichannel marketing enhances customer happiness, especially in the Ready-To-Assemble (RTA) furniture industry. To appeal to Millennials and Gen-Z—digital-native consumers—retailers must deliver consistent, integrated, and emotionally engaging experiences across all channels, both online and offline. This includes seamless transitions between platforms, quick responses, and personalized, relevant interactions. Younger consumers expect a smooth experience when browsing, selecting, and purchasing products, along with responsive after-sales service. By combining digital technologies, interactive content, and compelling storytelling, retailers can significantly elevate the overall customer experience. This approach not only fosters loyalty but also creates a deeper sense of emotional satisfaction. Therefore, an omnichannel strategy focused on delivering exceptional customer experiences is essential to meeting the expectations of new-generation consumers and building long-term customer happiness.

References

1. Jain, V. K. (2023). Digital Transformation in Retail. International Journal For Multidisciplinary Research, 5(2). https://doi.org/10.36948/ijfmr.2023.v05i02.23414
2. Nadeem, M. S. (2024). Omnichannel Strategies in Retail: Integrating Online and Offline Channels to Enhance Customer Experience. *International Journal of Science and Research*. https://doi.org/10.21275/es24309141013
3. Asmare, A. (2022). Omnichannel retailing strategy: a systematic review. *The International Review of Retail, Distribution and Consumer Research*, *32*(1), 59–79. https://doi.org/10.1080/09593969.2021.2024447
4. Yan, C. (2024). The Transformation of Retail Through Digitalization: Analyzing the Impact of Online-Offline Integration and Augmented Reality on Consumer Shopping Experience. *Advances in Economics, Management and Political Sciences*. https://doi.org/10.54254/2754-1169/114/2024bj0177
5. Yunita, D., Adam, M., Wahab, Z., Andriana, I., & Nailis, W. (2024). *Omni-channel strategy in the digital retail environment*. IntechOpen. https://doi.org/10.5772/intechopen.1005112
6. Lisnawati, L; Hurriyati, R., & Gaffar, V. (2021, September). Omnichannel customer experience: A literature review. In *5th Global Conference on Business, Management and Entrepreneurship (GCBME 2020)* (pp. 585-589). Atlantis Press.
7. Norton, D. W., Durgee, J. F., & VanDeVelde, J. (2010). Producing Customer Happiness: The Job to Do for Brand Innovation. *Design Management Review*, *21*(3), 6–15. https://doi.org/10.1111/J.1948-7169.2010.00073.X
8. Reena, R., & Dangi, H. K. (2023). *Emergence of Consumer Happiness: A Bibliometric Study*. https://doi.org/10.4108/eai.16-12-2022.2326239
9. Dutta, T. (2023). *Understanding Consumer Happiness: A Holistic Approach* (pp. 457–467). https://doi.org/10.1007/978-981-99-3493-5_20
10. Khan, S., & Hussain, M. (2012). Determinants of Consumer Happiness and its Role In Customer Loyalty. *Social Science Research Network*. https://doi.org/10.2139/SSRN.2269677
11. Marketing Mentality and it's Difference Between Millenials and Gen Z Consumers: Digital Marketing. (2023). *International Journal of Advanced Research in Science, Communication and Technology*, 474–480. https://doi.org/10.48175/ijarsct-11474

12. Tang, Y. (2023). Shifting of Paradigm in Buying Behaviour of Digital Natives. *Advances in Business Strategy and Competitive Advantage Book Series*, 44–81. https://doi.org/10.4018/978-1-6684-6782-4.ch003
13. Stojanović, M., Projović, M., Živojinović, L., Barać, D., & Bogdanović, Z. (2020). *A Survey on Centennials' Expectations of Mobile Operators* (pp. 178–189). Springer, Singapore. https://doi.org/10.1007/978-981-15-1564-4_18
14. Kalaiarasan, S. M., Vafaei Zadeh, A., Hanifah, H., & Ramayah, T. (2024). Can we engage players with extended reality in gaming applications? A Stimulus-Organism-Response framework. *Entertainment Computing*, *50*, 100651. https://doi.org/10.1016/j.entcom.2024.100651
15. Mishra, M. K., Kesharwani, A., Gautam, V., & Sinha, P. (2022). Stimulus-Organism-Response (S-O-R) Model Application in Examining the Effectiveness of Public Service Advertisements. *International Journal of Business*, *27*(2). https://doi.org/10.55802/ijb.027(2).005
16. Ahmed, N., & Jannat, M. (2024). Unraveling the Dimensions of E-Servicescape and its Influence on E-Grocery Shopping Intention: Application of Stimulus-Organism-Response (S-O-R) Framework. *Journal of Business Research*. https://doi.org/10.53461/jujbr.v23i2.21
17. Han, H. (2023). Animal Ethics and Tourism: Deepening a Stimulus–Organism–Response (S-O-R) Framework. *Journal of Travel Research*, 004728752311750. https://doi.org/10.1177/00472875231175079
18. Kalaiarasan, S. M., Vafaei Zadeh, A., Hanifah, H., & Ramayah, T. (2024). Can we engage players with extended reality in gaming applications? A Stimulus-Organism-Response framework. *Entertainment Computing*, *50*, 100651. https://doi.org/10.1016/j.entcom.2024.100651
19. Le, A. N. H., & Nguyen-Le, X.-D. (2021). A moderated mediating mechanism of omnichannel customer experiences. *International Journal of Retail & Distribution Management*, *49*(5), 595–615. https://doi.org/10.1108/IJRDM-02-2020-0054
20. Simanjuntak, D. C. Y., & Purba, P. Y. (2020). *Peran Mediasi Customer Satisfaction dalam Customer Experience Dan Loyalitas Pelanggan*. *7*(2). https://doi.org/10.26905/JBM.V7I2.4795
21. Mokha, A. K., & Kumar, P. (2022). Examining the Interconnections Between E-CRM, Customer Experience, Customer Satisfaction and Customer Loyalty: A Mediation Approach. *Journal of Electronic Commerce in Organizations*, *20*, 1–21. https://doi.org/10.4018/jeco.292474
22. Gahler, M. R., Klein, J. F., & Paul, M. (2022). Customer Experience: Conceptualization, Measurement, and Application in Omnichannel Environments. *Journal of Service Research*, *26*(2), 191–211. https://doi.org/10.1177/10946705221126590
23. Ieva, M., & Ziliani, C. (2019). *Understanding the customer experience-loyalty link: A moderated mediation model*. *3*(3), 51–69. https://doi.org/10.3280/MC3-2019OA8501
24. Iguácel, F., Sese, J., & Verhoef, P. C. (2016). Recasting the customer experience in today's omnichannel environment. *Universia Business Review*, *50*(50), 18–37. https://doi.org/10.3232/UBR.2016.V13.N2.01
25. Mishra, M. K., Kesharwani, A., Gautam, V., & Sinha, P. (2022). Stimulus-Organism-Response (S-O-R) Model Application in Examining the Effectiveness of Public Service Advertisements. *International Journal of Business*, *27*(2). https://doi.org/10.55802/ijb.027(2).005
26. Ahmed, N., & Jannat, M. (2024). Unraveling the Dimensions of E-Servicescape and its Influence on E-Grocery Shopping Intention: Application of Stimulus-Organism-Response (S-O-R) Framework. *Journal of Business Research*. https://doi.org/10.53461/jujbr.v23i2.21

27. Han, H. (2023). Animal Ethics and Tourism: Deepening a Stimulus–Organism–Response (S-O-R) Framework. *Journal of Travel Research*, 004728752311750. https://doi.org/10.1177/00472875231175079
28. Chen, C. F., & V.g, G. (2022). Antecedents and outcomes of use experience of airport service robot: The stimulus-organism-response (S-O-R) framework. *Journal of Vacation Marketing*, 135676672211092. https://doi.org/10.1177/13567667221109267
29. Darvidou, K. (2024). Omnichannel Marketing in the Digital Age: Creating Consistent, Personalized and Connected Customer Experiences. *Technium Business and Management*, *10*, 34–54. https://doi.org/10.47577/business.v10i.11903
30. Blakeney, J. (2016). What are the benefits of creating an omnichannel brand experience? *Journal of Brand Strategy*. https://doi.org/10.69554/ujsn1488
31. *Omni-Channel Challenges and Opportunities for Profitable Customer Relationship* (pp. 204–226). (2022). IGI Global eBooks. https://doi.org/10.4018/978-1-6684-3430-7.ch011
32. Nadeem, M. S. (2024). Omnichannel Strategies in Retail: Integrating Online and Offline Channels to Enhance Customer Experience. *International Journal of Science and Research*. https://doi.org/10.21275/es24309141013
33. Indrawan, Y. W. (2024). Omnichannel Marketing Strategy to Enhance Customer Satisfaction and Loyalty in the Modern Retail Industry. *Deleted Journal*, *1*(6), 482–494. https://doi.org/10.59613/ztvgy652
34. Mateus, A. F. (2021). *Omnichannel Marketing and Consumer Behavior* (pp. 347–361). Springer, Singapore. https://doi.org/10.1007/978-981-33-4183-8_28
35. Banu, G., & P., G. (n.d.). *Omnichannel Retailing*. https://doi.org/10.4018/978-1-4666-9921-2.ch013.