

Impact of Smart Store Technologies on Purchase Intention: The Mediating Role of User Experience and User Engagement

Dr. Lubna Ambreen¹ | Dhakshitha B K² | Dr. Smitha N.S³ | Dr. Vasantha Kumari.K^{4*} | Sateesha.C⁵

¹Alliance Ascent College, Alliance University, Bengaluru, India.

²Assistant Professor, Jain Online University.

³Associate Professor, Sambhram Academy of Management Studies.

⁴Assistant Professor Post Graduate Department of Commerce, Seshadripuram First Grade College, Yelahanka, Bengaluru.

⁵RV College, Green Bell High Campus, Harohalli, Bengaluru.

*Corresponding Author: Vasantha.ajaykumar@gmail.com

Citation: Ambreen, L., Dhakshitha, B., Smitha, N., Kumari, V. & Sateesha, C. (2026). Impact of Smart Store Technologies on Purchase Intention: The Mediating Role of User Experience and User Engagement. *International Journal of Advanced Research in Commerce, Management & Social Science*, 09(03(I)), 183–191. [https://doi.org/10.62823/IJARCMSS/9.3\(I\).9330](https://doi.org/10.62823/IJARCMSS/9.3(I).9330)

Abstract

Smart store technologies are appearing at an unprecedented pace in organized retail stores and have changed the way consumers shop. The current study is focused on the Stimulus–Organism–Response (S-O-R) model on the role of smart store technologies, such as self-checkout kiosks, AI recommendation systems, digital payment platforms, smart shelves, QR code service, and mobile retail applications, on consumers buying intentions. In particular, the study explores the mediating roles of user experience and user engagement between the two. The research methodology employed is quantitative research and the design is of cross-sectional type, with primary data gathered by visiting the Reliance Smart, D-Mart, Croma, Reliance Digital and Decathlon stores in Bengaluru, India and interviewing 300 consumers. The outcomes of the study showed that smart store technologies make significant and positive contributions to user experience which has a significant, positive impact on user engagement and purchase intention. The other positive influence on purchase intentions is user engagement. Both the simple and sequential mediation paths are supported, showing that the effect of smart store technologies on purchase intention is mediated sequentially by user experience and user engagement. The research makes a contribution to the phygital retail environment and provides practical implications for retail managers interested in using smart technologies to engage their users and boost their sales.

Keywords: Smart Store Technologies, Purchase Intention, User Experience, User Engagement, Phygital Retailing, PLS-SEM, and Indian Retail.

Introduction

Retail is experiencing digital transformation like never before, as cutting-edge technologies are being introduced into the physical store environment. The smart stores or phygital retail environment, which are technology-enabled spaces, have been defined as spaces that integrate physical and digital touchpoints for an interactive and personalized shopping experience (Mele et al., 2023). Technology plays a crucial role in modern-day retailers' competitive strategy is getting more and more fundamental, and the following technologies are increasingly becoming part of their core (Grewal et al., 2020; Willems et al., 2019): In India, organized retail is growing at a fast pace, especially in urban areas like Bengaluru where smart retail features have been embraced by tech-savvy consumers in urban centers. With the great investment that retailers are putting into phygital infrastructure, it is important to know what

behavioral results these technologies offer the consumer, especially when it comes to purchase intent. The relationship between retail technologies and different responses has already been studied, that is user satisfaction, patronage intentions and reuse intentions (Nguyen et al., 2021; Liu & Lee, 2024). But there is a lack of empirical focus on purchase intention as a separable behavioral outcome in the phygital retail environment. In addition, there is limited research. On user engagement as a mediating factor for the enhanced user experience the effect of smart store technologies and purchase intention (Verhoef et al., 2009; Brodie et al., 2011; Kumar et al., 2023). To conceptualize smart store technologies as stimulus, user experience and user engagement as organism-level psychological states and purchase intention as behavioral. The validity of this theorization is empirically validated with the sample of 300 consumers in the organized retail stores in Bengaluru, India through PLS-SEM. The study has following contributions an empirical perspective, it confirms that user experience and user engagement act as a mediating process between technologies and behavior to purchase, providing a psychological link. finally, it provides practical information and practical guidance for retail practitioners and technology managers in new retail markets, such as India.

Literature Review

- **Contemporary Retailing and 2.1 Smart Store Technologies**

The advent of Retail 4.0 has made traditional retail stores smart stores that employ technology like smart devices with Internet of Things(IOT), self-checkout, mobile apps, digital payments, smart shelves, and omnichannel (Reinartz et al., 2019; Grewal et al., 2020). Phygital transformation as a strategic change in which companies use smart technologies to better define the user experience as a cohesive, unified procedure that interweaves online and offline (Mele et al., 2023). Smart retail technologies have been classified as functional, informational, hedonic and social interaction technologies by Willems et al. (2019), highlighting their multidimensionality. In the Indian context, organized retailers like Reliance Smart, D-Mart, Croma, Decathlon have made significant investment to bring about the adoption of technology to cater to the digitally literate urban consumers (Chopra, 2019). These stores serve as significant empirical contexts for the study of phygital consumer behavior, with the implementation of user recommendation systems, contactless payment methods and QR codes for product information.

- **Smart Store Technologies**

User experience has become a crucial concept in retail research, which aligns with the cognitive, behavioral concept of the interaction between user and the retailer (Lemon & Verhoef, 2016). Entertainment, aesthetics and mental imagery can have a significant impact on the experience of users in phygital retail. Likewise, Guzzetti (2024). Emphasized that technologies in the retail have the potential to improve user experiences, making shopping environments more interactive, immersive, and emotionally engaging (Nguyen et al., 2023) showed that. Positive technology-enabled experiences boost user satisfaction, trust and perceptions of service quality (Pine & Gilmore, 1998; Schmitt, 1999), and self-service technologies (SSTs) such as self-service checkout kiosks and digital payment methods are shown to greatly improve user satisfaction, trust and perceptions of service quality.

- **User Engagement in Smart Retail Environments**

User engagement is defined as behavioral and emotional relationships formed with a retailer or a brand in the process of being engaged and made to participate (Hollebeek et al., 2014). Nguyen et al. (2021) found that user engagement has a significant influence on patronage intention in phygital retailing. Kumar et al. (2023) also discovered that user engagement is a vital mechanism that links phygital experiences with consumer behavioral outcomes. Van Doorn et al., (2010), conceptualized user engagement behaviors as a range of behaviors driven by motivation, extending beyond transactional behaviors to encompass word-of-mouth, advocacy, and loyalty behaviors. Technology that enables interactivity, personalisation and social connectivity makes for a rich engagement in smart retail environments. The importance of engagement in retail environments has been reaffirmed by Pansari and Kumar (2017), who found that engaged users not only demonstrate more positive purchase behaviours, but they have a greater lifetime value.

- **Purchase Intention in Phygital Retailing**

This paper explores the concept of buy intention in the area of the phygital retailing. Buying intentions is widely accepted as a predictor of actual product or service purchase behavior and is the user's self-expressed interest of buy a product or service in the coming future (Dodds et al., 1991;

Zeithaml, 1988). Previous research has shown that user engagement can positively affect their patronage intentions, recommendation intentions, and repurchase behavior (Nguyen et al., 2021; Liu & Lee, 2024). Purchase intention as a discrete behavioral outcome, however, is not well explored in the realm of smart store technologies. Previous studies have often examined satisfaction or re-use intention instead of purchase intention that is more related to actual behaviors in a phygital setting where people interact with the product through a digital interface (Yadav & Rahman, 2017). Likewise, Chopra (2019) showed that service convenience, enabled by technology, improved the purchase intentions of the Indian consumers in various forms of organized retail.

- **Theoretical positioning and research gap.**

While it is clear that there is a lot of research on phygital retailing, technology adoption, and user experience, three important research gaps remain which are discussed below. First, previous research has tended to focus on technology acceptance, user satisfaction and patronage intention, and overlooked purchase intention as a specific and strategically important behavioral outcome (Nguyen et al., 2021; Liu & Lee, 2024). Second, though user experience is acknowledged as a significant outcome of technology-enabled retailing. Then, user engagement has mostly been viewed as an immediate outcome of the phygital experience, not as a stepping stone that translates the user experience into purchase intent (Kumar et al., 2023; Brodie et al., 2011). The present study aims at filling these gaps in an emerging market context.

Hypotheses Development

Table 1: Research Hypotheses

Hypothesis	Statement
H1	Smart store technologies positively influence user experience.
H2	User experience positively influences user engagement.
H3	User engagement positively influences purchase intention.
H4	Smart store technologies positively influence purchase intention.
H5	User experience positively influences purchase intention.
H6	User experience mediates the relationship between smart store technologies and purchase intention.
H7	User engagement mediates the relationship between user experience and purchase intention.
H8	User experience and user engagement sequentially mediate the relationship between smart store technologies and purchase intention.

Research Methodology

- The cross-sectional design is suitable for the study's aim of considering the relationships of constructs at one time across a wide range of retail consumers (Bryman & Bell, 2015). The constructs and the hypothesized relationships are theoretically operationalized using the S-O-R.
- Target Population and Sampling- The target population includes consumers who have recently interacted with at least one of the smart store technologies such as self-checkout kiosks, digital payment systems, QR code product information, mobile retail applications or AI-based advice givers in their shopping experience at organized retail outlets. The data were gathered from shoppers at Reliance Smart, D-Mart, Croma, and Reliance Digital stores as well as Decathlon stores in Bengaluru, Karnataka, India. Because the target respondents could be accessed easily and conveniently at retail store locations and in related online networks, convenience sampling was used. The ten-times rule and sample size guidelines for complex mediation models (Hair et al., 2019) were used to determine 250 sample size participants is sufficient for PLS-SEM. Finally, 300 usable samples were reached, which was above the minimum number required for statistical analysis and bootstrapping mediation analysis.
- Measurement Instrument- A detailed questionnaire with four sections was designed. Section 1 collected demographic data (gender, age, education, income and retail store visited). The four constructs of smart store technologies (SST), user experience (CE), user engagement (CEN), and purchase intention (PI), which are adapted to the smart retail context, in sections 2-5. The instrument was pretested with 30 respondents to look for any ambiguities, lack of understanding or relevance of items, and slight modifications were made in the wording.

Table 2: Measurement Instrument

Construct	Code	Survey Item	Source
Smart Store Technologies (SST)	SST1	Self-checkout kiosks make my shopping faster and more convenient.	Adapted from Davis (1989); Gu et al. (2021)
	SST2	AI-based product recommendations help me discover relevant products.	
	SST3	Digital payment systems (UPI, tap-and-pay) simplify my transactions.	
	SST4	QR codes provide me with useful product information during shopping.	
	SST5	Mobile retail applications enhance my overall shopping experience.	
User Experience (CE)	CE1	Shopping in this smart store is enjoyable and engaging.	Adapted from Nguyen et al. (2023); Verhoef et al. (2009)
	CE2	The store's technology creates a stimulating shopping atmosphere.	
	CE3	I feel satisfied with the overall experience offered by this smart store.	
	CE4	The use of technology in this store meets my personal shopping needs.	
	CE5	The smart store environment makes me feel comfortable and positive.	
User Engagement (CEN)	CEN1	I actively interact with the technologies available in this smart store.	Adapted from Kumar et al. (2023); Brodie et al. (2011)
	CEN2	I feel emotionally connected to this retail brand due to its technology use.	
	CEN3	I am willing to share my experiences with this smart store with others.	
	CEN4	I regularly revisit this store because of the engaging technology environment.	
	CEN5	I feel a sense of belonging when shopping at this technology-enabled store.	
Purchase Intention (PI)	PI1	I intend to purchase products from this smart store in the near future.	Adapted from Dodds et al. (1991); Zeithaml (1988)
	PI2	I am likely to buy more products from this store because of its smart features.	
	PI3	The smart store technologies motivate me to make more purchase decisions.	
	PI4	I would recommend this smart store to others for their shopping needs.	
	PI5	Overall, smart store technologies positively influence my intention to purchase.	

- Data Collection:** Thedata for the study was collected from January to March 2026 in offline (in store, paper based) and online (Google forms link provided via WhatsApp and email) mode.They were contacted at the store exit after having identified that they had used at least one smart technology in the store.All participants were informed and gave their consent, and answers were kept confidential.The institutional review board gave approval before data collection.

- Data Analysis Approach Data were analysed in 2 phases. A descriptive statistic was carried out and demographic profiling were done by IBM SPSS 26. The analytical method used was PLS-SEM because it was found to be suitable for exploratory research with data that was not normally distributed, could handle complex structural models containing several mediator variables and was suitable for small–medium samples (Hair et al., 2019).

Data Analysis and Results

• Respondent Profile

300 questionnaires were collected as completed responses. Table 3 indicates the demographic description of respondents. This sample included 54.0% males and 43.3% females; 2.7% did not state gender. The maximum age segment was 25–34 years which is typical of the millennial age group that is digitally engaging and a staple in urban retail in India. The top retail formats visited were Reliance Smart/Fresh (32.7%), D-Mart (25.3%) and Croma/Reliance Digital (20.7%).

Table 3: Respondent Demographic Profile

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	162	54.0%
	Female	130	43.3%
	Prefer not to say	8	2.7%
Age Group	18–24 years	74	24.7%
	25–34 years	118	39.3%
	35–44 years	68	22.7%
	45 years and above	40	13.3%
Education	Undergraduate	85	28.3%
	Postgraduate	142	47.3%
	Doctoral / Professional	73	24.4%
Monthly Income	Below ₹30,000	62	20.7%
	₹30,001–₹60,000	109	36.3%
	₹60,001–₹1,00,000	83	27.7%
	Above ₹1,00,000	46	15.3%
Retail Store Visited	Reliance Smart / Fresh	98	32.7%
	D-Mart	76	25.3%
	Croma / Reliance Digital	62	20.7%
	Decathlon / Others	64	21.3%

• Measurement Model Assessment

The internal consistency, convergent validity and discriminant validity of the measurement model were checked (Hair et al., 2019). The Cronbach's alpha values for all the four constructs were above 0.70 and the composite reliability (CR) was above 0.85 indicating acceptable internal consistency for all the four constructs (Table 4). Convergent validity was established by having average variance extracted (AVE) values in the range of 0.615 to 0.657, which is greater than the minimum cutoff of 0.50. All of the individual item factor loadings were greater than the 0.70 threshold (range 0.712–0.841). The HTMT ratio criterion (Henseler et al., 2015) was used to test for discriminant validity. All HTMT values were below the conservative level of 0.85, which indicates that discriminant validity among all pairs of constructs was good. Overall, it is concluded that the measurement model has acceptable reliability and validities, and thus is suitable for the test of the structural model.

Table 4: Measurement Model – Reliability and Validity

Construct	Cronbach's α	CR	AVE	Discriminant Validity (HTMT)
Smart Store Technologies	0.873	0.905	0.657	All HTMT < 0.85
User Experience	0.861	0.897	0.634	All HTMT < 0.85
User Engagement	0.848	0.888	0.615	All HTMT < 0.85
Purchase Intention	0.856	0.895	0.629	All HTMT < 0.85

• Structural Model – Direct Effects

The model was evaluated using 5,000 bootstrapped iterations with BCa confidence intervals to examine the path coefficients, t-statistics and p-values of each hypothesized path. The results of the direct effect hypotheses are given in Table 5. The smart store technologies had a significant positive effect on user experience ($\beta = 0.623$, $t = 10.741$, $p < 0.001$) and was supported. The support of the hypothesis is obtained: user experience had a significant positive impact on user engagement ($\beta = 0.591$, $t = 9.689$, $p < 0.001$). H3 was supported: user engagement had a significant and positive correlation with purchase intention ($\beta = 0.487$, $t = 7.269$, $p < 0.001$). H4 was also supported, which indicates that the smart store technologies had a significant direct effect on the purchase intention ($\beta = 0.213$, $t = 2.958$, $p = 0.003$). H5 was also supported, where the purchase intention was significantly and directly affected by user experience ($\beta = 0.274$, $t = 3.971$, $p < 0.001$).

Table 5: Structural Model – Direct Path Coefficients

Hyp.	Path	β	S.E.	t-value	p-value	Decision
H1	SST → CE	0.623	0.058	10.741	< 0.001	Supported
H2	CE → CEN	0.591	0.061	9.689	< 0.001	Supported
H3	CEN → PI	0.487	0.067	7.269	< 0.001	Supported
H4	SST → PI	0.213	0.072	2.958	0.003	Supported
H5	CE → PI	0.274	0.069	3.971	< 0.001	Supported

• Mediation Analysis

The bias corrected accelerated (BCa) bootstrapped (5,000 iterations) confidence interval was used for mediation. When the 95% BCa confidence interval does not contain zero, this indicates a mediated effect (Preacher & Hayes, 2008; Hayes, 2018). The mediation results are displayed in Table 6. The relationship between smart store technologies and purchase intention was partially mediated by user experience (indirect $\beta = 0.171$, 95% CI [0.098, 0.251]) which was supported by H6. The CI did not include zero, thus showing mediation. Supporting H7: user engagement partially mediated the link between user experience and purchase intention (indirect $\beta = 0.288$, 95% CI [0.183, 0.401]). The sequential mediation path (smart store technologies → user experience → user engagement → purchase intention) was significant and H8 was supported (indirect $\beta = 0.179$, 95% CI [0.104, 0.263]). All paths were partially mediated as there were both direct and indirect significant effects.

Table 6: Mediation Analysis Results (BCa Bootstrapped CIs)

Hyp.	Indirect Path	Indirect β	95% CI (BCa)	Mediation Type	Decision
H6	SST → CE → PI	0.171	[0.098, 0.251]	Partial Mediation	Supported
H7	CE → CEN → PI	0.288	[0.183, 0.401]	Partial Mediation	Supported
H8	SST → CE → CEN → PI	0.179	[0.104, 0.263]	Sequential Mediation	Supported

• Model Fit and Predictive Accuracy

Table 7 shows the model fit and predictive accuracy indicators. Purchase intention R^2 value was 0.512 with a classification of substantial (Hair et al., 2019) indicating that the model accounted for 51.2% of the variance in purchase intention. The R^2 for user experience is 0.388 and for User engagement is 0.349, both scores are considered as moderate levels of explanatory power. The results of the blindfolding method yielded all Q^2 values greater than 0, indicating a predictive relevance of the model (Fornell & Cha, 1994). The values of the effect size (f^2) were in the range of 0.192 to 0.294, which suggested medium to large effects in the primary structural pathways. All of these measures together indicate the explanatory and predictive power of the model.

Table 7: Model Fit and Predictive Accuracy Indicators

Criterion	Value	Interpretation	Reference
R^2 – User Experience	0.388	Moderate	Cohen (1988)
R^2 – User Engagement	0.349	Moderate	Cohen (1988)
R^2 – Purchase Intention	0.512	Substantial	Hair et al. (2019)
Q^2 – User Experience	0.241	Predictive Relevance Confirmed	Fornell & Cha (1994)
Q^2 – User Engagement	0.208	Predictive Relevance Confirmed	Fornell & Cha (1994)
Q^2 – Purchase Intention	0.311	Predictive Relevance Confirmed	Fornell & Cha (1994)

$f^2 - SST \rightarrow CE$	0.294	Medium-Large Effect	Cohen (1988)
$f^2 - CE \rightarrow CEN$	0.261	Medium Effect	Cohen (1988)
$f^2 - CEN \rightarrow PI$	0.192	Medium Effect	Cohen (1988)

Discussion

The results of this study indicate that the Stimulus–Organism–Response framework is a suitable model to explain consumer behavior in smart retail environments. Smart store technologies also showed a significantly positive relationship to user experience ($\beta = 0.623$, $p < 0.001$), suggesting that the various technologies, from self-service checkout to mobile apps, digital payment options and AI-driven services, all have a positive impact on how users interact with a store. This discovery is consistent with the results of Nguyen et al. (2023) and Gu et al. (2021) that technology-supported retail settings offer increased utility, customization, and satisfaction. User experience was discovered to have a significant influence on user engagement ($\beta = 0.591$, $p < 0.001$) and purchase intention ($\beta = 0.274$, $p < 0.001$). The findings indicate that positive shopping experiences have a positive impact on consumers' interaction with the retailers and a positive effect on their purchasing behavior. The results align with previous research by Hollebeek et al. (2014), Pansari and Kumar (2017), and Lemon and Verhoef (2016) that underscore the importance of user experience in influencing user behaviors. In addition, user engagement was found to be a strong predictor of purchase intention ($\beta = 0.487$, $p < 0.001$), which represents a psychological factor that could be related to the influence of retail technologies on consumer purchases. This discovery is consistent with the work by Nguyen et al. (2021) and Van Doorn et al. (2010) who came up with engagement as a significant antecedent of positive consumer actions. One of the key findings of the study is the confirmation of sequential mediation effect of user experience and user engagement between smart store technologies and purchase intention (indirect $\beta = 0.179$, $p < 0.001$). The finding proves that smart technologies have a direct effect on the purchase intention, but also indirectly, by improving the user experience, which leads to increased user engagement. The findings are relevant to the existing knowledge gaps in the literature because research conducted so far has mostly concentrated on technology adoption, satisfaction or purchase intention, rather than investigating the entire adoption journey to purchase intention. The study was carried out in the context of organized retail, further expanding the applicability of phygital retail research, and giving valuable insights into consumer behavior in the Indian retail sector in the face of technology.

Implications

- **Theoretical Implications** This study is an extension of the Stimulus–Organism–Response (S-O-R) concept to the smart retail technologies. The results indicate that smart store technologies are an important stimulus that will improve user experience and user engagement, which will lead to purchase intention. The study also confirmed the sequential mediating roles of user experience and user engagement, thus gaining a deeper understanding of the effect of technology enabled retail environment on user behavior. Moreover, the study is on purchase intention, whereas existing phygital retail studies are mostly on user satisfaction or technology adoption, leading to a gap in the existing research in the field of phygital retail in the Indian context.

- **Managerial Implications**

The results indicate that retailers need to be more invested in smart technologies that will help improve the user experience and not just the business processes. AI-driven recommendations, self-checkout, QR-code product information and streamlined digital payment processes can help enhance the user experience and drive sales. Additionally, retail managers should focus on tactics that enhance user engagement by delivering tailored service, loyalty initiatives, and engaging digital experiences. Businesses like Reliance Smart, D-Mart, and Croma, which are organized retailers, can benefit greatly from the inclusion of user-friendly technologies to enhance user satisfaction, engagement, and purchase intent.

Conclusion

This study examined the relationship between smart store technologies, user experience and user engagement as mediators, and purchase intention from a Stimulus – Organism – Response (S-O-R) perspective. The results showed that the smart store technologies had a significant influence on the users' experience, and that this experience led to a greater intention to purchase and user engagement. The study also confirmed the sequential mediating effects of user experience and user engagement that

substantiates the impact of a technology-enabled retail environment on user purchasing behavior. The study adds to the existing phygital retailing literature by proposing that purchase intention is a significant behavioral outcome and by confirming the psychological process between smart technologies and consumer behavior. In terms of management, the results emphasize that it is essential to invest in the technologies that prioritize the user experience and can make shopping an attractive and smooth journey. The study, however, has its limitations due to the cross-sectional nature of the study and the fact that the sample comprised of consumers from organized retail stores in Bengaluru. Further studies on various geographical environments, longitudinal studies and other factors such as trust, perceived risk, and technology readiness can be included in future research to better understand smart retail consumer behavior.

References

1. Mele, C., Russo Spena, T., Marzullo, M., & Di Bernardo, I. (2023). The phygital transformation: A systematic review and a research agenda. *Italian Journal of Marketing*, 2023, 323–349. <https://doi.org/10.1007/s43039-023-00070-7>
2. Grewal, D., Noble, S. M., Roggeveen, A. L., & Nordfält, J. (2020). The future of in-store technology. *Journal of the Academy of Marketing Science*, 48(1), 96–113. <https://doi.org/10.1007/s11747-019-00697-z>
3. van de Sanden, S., Willems, K., & Brengman, M. (2019). In-store location-based marketing with beacons: From inflated expectations to smart use in retailing. *Journal of Marketing Management*, 35(15–16), 1514–1541. <https://doi.org/10.1080/0267257X.2019.1689154>
4. Liu, L., & Lee, S. H. (2024). Do people really care if it's phygital retail? Exploring the relationship between customer experiences and customer behaviors. *Asia Marketing Journal*, 26(3), 186–200. <https://doi.org/10.53728/2765-6500.1637>
5. Nguyen, T. H., Ngo, H. Q., & Dýõng, T. T. (2021). Motivations influencing virtual supermarket shopping: An exploratory study using means-end chains analysis. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1954491>
6. Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31–41. <https://doi.org/10.1016/j.jretai.2008.11.001>
7. Brodie, R. J., Hollebeek, L. D., Juriaë, B., & Illiæ, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252–271. <https://doi.org/10.1177/1094670511411703>
8. Kumar, J., Rana, S., Rani, G., Rani, V., et al. (2023). How phygital customers' experience transforms the retail banking sector? Examining customer engagement and patronage intentions. *Competitiveness Review: An International Business Journal*, 34(1), 92–106. <https://doi.org/10.1108/CR-04-2023-0076>
9. Reinartz, W., Wiegand, N., & Imschloss, M. (2019). The impact of digital transformation on the retailing value chain. *International Journal of Research in Marketing*, 36(3), 350–366. <https://doi.org/10.1016/j.ijresmar.2018.12.002>
10. Willems, K., Smolders, A., Brengman, M., Luyten, K., & Schöning, J. (2017). The path-to-purchase is paved with digital opportunities: An inventory of shopper-oriented retail technologies. *Technological Forecasting and Social Change*, 124, 228–242. <https://doi.org/10.1016/j.techfore.2016.10.066>
11. Chopra, K. (2019). Indian shopper motivation to use artificial intelligence: Generating Vroom's expectancy theory of motivation using grounded theory approach. *International Journal of Retail & Distribution Management*, 47(3), 331–347. <https://doi.org/10.1108/IJRDM-11-2018-0251>
12. Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96. <https://doi.org/10.1509/jm.15.0420>
13. Guzzetti, A., Crespi, R., & Belvedere, V. (2024). Phygital luxury experiences: A correspondence analysis on retail technologies. *International Journal of Consumer Studies*, 48(2), 1–15. <https://doi.org/10.1111/ijcs.13008>

14. Nguyen, A. T. V., Akbari, M., Akram, U., Hoang, M. D. T., & others. (2023). Developing trends in showrooming, webrooming, and omnichannel shopping behaviors: Performance analysis, conceptual mapping, and future directions. *Journal of Consumer Behaviour*. <https://doi.org/10.1002/cb.2186>
15. Pine, B. J., II, & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97–105.
16. Schmitt, B. H. (1999). *Experiential marketing: How to get customers to sense, feel, think, act, and relate to your company and brands*. Free Press.
17. Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. <https://doi.org/10.1016/j.intmar.2013.12.002>
18. Nguyen, H. N. (2021). Channel integration quality, customer experience and patronage in omnichannel retailing. *Journal of Distribution Science*, 19(10), 5–16.
19. Kumar, J., Rana, S., Rani, G., & Rani, V. (2024). How phygital customers' experience transforms the retail banking sector? Examining customer engagement and patronage intentions. *Competitiveness Review: An International Business Journal*, 34(1), 92–106. <https://doi.org/10.1108/CR-04-2023-0076>
20. van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pimer, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266. <https://doi.org/10.1177/1094670510375599>
21. Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 45(3), 294–311. <https://doi.org/10.1007/s11747-016-0485-6>
22. Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307–319. <https://doi.org/10.1177/002224379102800305>
23. Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22. <https://doi.org/10.1177/002224298805200302>
24. Yadav, M., & Rahman, Z. (2017). Measuring consumer perception of social media marketing activities in e-commerce industry: Scale development & validation. *Telematics and Informatics*, 34(7), 1294–1307. <https://doi.org/10.1016/j.tele.2017.06.001>
25. Bryman, A., & Bell, E. (2015). *Business research methods* (4th ed.). Oxford University Press.
26. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE Publications.
27. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
28. Fornell, C., & Cha, J. (1994). Partial least squares. In R. P. Bagozzi (Ed.), *Advanced methods of marketing research* (pp. 52–78). Blackwell.
29. Gu, S., Œelusarczyk, B., Hajizada, S., Kovalyova, I., & Sakhbieva, A. (2021). Impact of the COVID-19 pandemic on online consumer purchasing behavior. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(6), 2263–2281. <https://doi.org/10.3390/jtaer16060125>
30. Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. <https://doi.org/10.1016/j.intmar.2013.12.002>