

Beyond Seamless Shopping: Unveiling the Pathways from Retail Innovation to Omnichannel Loyalty through Customer Value, Technology Readiness and Switching Resistance

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Abstract

This study explores the impact of retail innovation on enhancing omnichannel customer experience and loyalty, with particular emphasis on the mediating roles of perceived value and trust, and the moderating effects of technological readiness and switching cost. Anchored in the Stimulus–Organism–Response (S–O–R) framework, a conceptual model is developed and tested within the context of Indonesia’s dynamic retail sector. A cross-sectional survey of 240 omnichannel retail consumers was conducted, and the data were analysed using Partial Least Squares Structural Equation Modelling. The findings reveal that retail innovation significantly enhances perceived value, integration quality, and customer engagement. Technological readiness positively moderates these relationships, suggesting that digitally capable consumers respond more favourably to retail innovations. Conversely, the relationship between customer engagement and switching cost is non-significant, indicating that emotional involvement alone may not deter switching behaviour. Instead, functional convenience and perceived friction appear more influential. This study extends the S–O–R model by incorporating contextual moderators and highlights cultural nuances influencing consumer decision-making in emerging markets. From a practical perspective, the findings suggest that retailers should complement emotionally engaging strategies with efforts to reduce channel-switching barriers and align innovations with consumer readiness. These insights offer valuable guidance for building sustainable customer loyalty through locally attuned omnichannel strategies.

Keywords: retail innovation, omnichannel experience, perceived value, customer engagement, technological readiness, switching cost

1. Introduction

The contemporary retail environment has been significantly reshaped by technological advancements, redefining how retailers engage with consumers and manage multi-channel operations. Retail innovation—defined as the strategic integration of technologies across various channels—has become a central driver of omnichannel experiences, fostering consumer engagement and enhancing loyalty (Cloughton, 2020; Pantano et al., 2022). Rather than merely implementing novel technologies, retailers now strive to offer seamless customer journeys by integrating digital and physical platforms—an approach that Tueanrat et al. (2021) describe as the architecture of connected touchpoints underpinning omnichannel strategy.

In Indonesia, retailers such as Uniqlo, MAP Club, and Alfamart demonstrate the practical implementation of digital tools, including self-checkout kiosks and mobile loyalty applications, to create unified shopping experiences. Nevertheless, despite considerable investment in

innovation, consumer loyalty remains relatively stagnant. This disparity suggests that while innovation enhances operational efficiency and accessibility, it does not inherently secure emotional engagement or long-term commitment (Alexander & Kent, 2022; Anshu et al., 2022).

Trust and perceived value have emerged as key mediating variables in this context. According to Erjavec & Manfreda (2022), trust strengthens consumer confidence in digital channels, while perceived value—both utilitarian and hedonic—plays a vital role in satisfaction and customer retention (Ameen et al., 2020). The effectiveness of such innovations is also heavily influenced by consumers' technological readiness; tech-savvy users are more inclined to embrace and benefit from omnichannel features, whereas others may experience apprehension or resistance (Chang & Chen, 2021; Nikhashemi et al., 2021). Compounding this dynamic are switching costs—psychological, procedural, and financial—which may deter consumers from trying new channels or departing from familiar ones. High switching costs can result in passive loyalty or even disengagement if the innovations fail to meet expectations in terms of usability and value (Richards & Liaukonytė, 2023; Shakir Goraya et al., 2022).

This study, therefore, investigates how retail innovation shapes the omnichannel customer experience and loyalty, with a particular emphasis on the mediating roles of trust and perceived value, and the moderating effects of technological readiness and switching costs. Focusing on Indonesia as a dynamic emerging market, this research provides context-specific insights into the development of customer-centric omnichannel strategies aimed at fostering sustainable loyalty. Although numerous studies have explored the contributions of retail innovation and omnichannel strategies to consumer outcomes, several critical gaps remain. First, existing literature often examines individual aspects—such as technological implementation or channel integration—in isolation, without fully accounting for their interactions with consumer perceptions of value and trust (Anshu et al., 2022; Erjavec & Manfreda, 2022). Second, most empirical studies are rooted in developed markets, leaving the unique characteristics of emerging economies like Indonesia under-investigated (Alexander & Kent, 2022).

Furthermore, research seldom incorporates moderating variables such as technological readiness and switching costs in models connecting retail innovation to customer loyalty. Despite growing recognition of their importance in shaping consumer behaviour and channel adoption, these factors remain under-theorised in the omnichannel literature (Nikhashemi et al., 2021; Richards & Liaukonytė, 2023). This limits both theoretical development and practical application in designing responsive omnichannel strategies. To address these gaps, this study proposes an integrative framework that examines the influence of retail innovation on omnichannel customer experience and loyalty, mediated by trust and perceived value, and moderated by technological readiness and switching costs. By grounding the research in the Indonesian context, the study aims to contribute meaningful insights for both scholars and practitioners navigating the evolving omnichannel retail landscape.

2. Literature Review

2.1 Stimulus–Organism–Response (S–O–R) theory

The Stimulus–Organism–Response (S–O–R) theory offers a robust framework for examining the impact of retail innovation on customer engagement and loyalty within omnichannel contexts. Retail innovation serves as the stimulus—comprising technological advancement, cross-channel integration, and novel service strategies—which influences consumers’ internal evaluations and behaviours. As Lim et al. (2022) suggest, different retail formats may moderate this interaction, emphasising the need to tailor innovation to specific consumer environments.

The organism component reflects internal cognitive and emotional responses. Here, perceived value is pivotal, as consumers assess the trade-off between the benefits and costs of retail innovations. Higher perceived value enhances engagement and strengthens loyalty (Alexander & Kent, 2022). Technological readiness further moderates this process; consumers with higher readiness are more receptive to innovations, enhancing the perceived shopping experience (Gao & Huang, 2021).

Within the response phase, channel switching costs act as a boundary condition. High switching costs may deter engagement with new innovations, potentially weakening loyalty gains (Nguyen et al., 2022). Finally, favourable perceptions and readiness lead to increased engagement and long-term brand loyalty. In sum, the S–O–R theory contextualises how retail innovation translates into consumer engagement and loyalty, highlighting the mediating and moderating roles of value, readiness, and switching costs.

2.2 Retail Innovation (RI)

Retail innovation (RI) has become pivotal in shaping consumer perceptions and experiences in contemporary retail environments. It encompasses the application of advanced technologies—such as artificial intelligence, self-service kiosks, and digital loyalty programmes—to enhance the customer journey and increase perceived value (Cloughton, 2020; Pantano et al., 2022). Effective RI strategies enrich both functional and emotional dimensions of value, thereby improving customer satisfaction and engagement (Youssef et al., 2022). Within Indonesia’s fast-evolving retail landscape, RI serves as a strategic tool for enhancing the omnichannel customer experience. Additionally, it supports real-time personalisation, agile service delivery, and responsiveness to rapidly shifting consumer expectations (Grewal et al., 2021).

Furthermore, RI contributes to deeper levels of customer engagement by enabling personalised and interactive retail platforms (Alexander & Kent, 2022; Ameen et al., 2020). When deployed effectively, innovation aligns with evolving customer needs, cultivating emotional attachment and encouraging participatory behaviours (Pilawa et al., 2022). Innovations that improve convenience, entertainment, and control further enhance the cognitive, emotional, and behavioural facets of customer engagement (Gao & Huang, 2021).

H1: Retail Innovation has a positive effect on Perceived Value.

H2: Retail Innovation has a positive effect on Customer Engagement.

2.3 Omnichannel Integration Quality (OIQ)

Omnichannel integration quality refers to the degree of coherence and synchronisation across retail touchpoints that enables a seamless, consistent shopping experience. High OIQ increases customer empowerment and reduces friction, thereby improving perceived value (Mencarelli et al., 2021; Quach et al., 2022). It also facilitates smoother transitions between channels and ensures consistent brand interactions, which enhance overall satisfaction (Alexander & Kent, 2022). Moreover, effective integration enhances consumers' sense of control and mitigates uncertainty, promoting more favourable evaluations of service quality and perceived value (Verhoef et al., 2023).

Superior omnichannel experiences additionally drive customer engagement by offering seamless, relevant, and contextually rich interactions across online and offline environments (Gao & Huang, 2021; Zhang et al., 2024). When service processes are integrated, content is consistent, and functionalities are reciprocal across channels, customers are more inclined to build lasting relationships with the retailer (Erjavec & Manfreda, 2022).

H3: Omnichannel Customer Experience has a positive effect on Perceived Value.

H4: Omnichannel Customer Experience has a positive effect on Customer Engagement.

2.4 Perceived Value (PV) and Customer Engagement (CE)

Perceived value (PV) represents the consumer's evaluation of the benefits received relative to the costs incurred in a retail interaction. It incorporates both utilitarian and hedonic aspects, influenced by the overall shopping experience (Mencarelli et al., 2021; Molinillo et al., 2021). Higher PV has been associated with increased consumer engagement, manifested through stronger emotional connections and proactive behavioural involvement (Hollebeek et al., 2020). Empirical studies affirm that when consumers perceive value as fair and rewarding, they develop deeper psychological commitment and display participative behaviours (Lin et al., 2022).

H5: Perceived Value has a positive effect on Customer Engagement.

2.5 Technological Readiness (TR)

Technological readiness (TR) reflects an individual's tendency to adopt and effectively use technological tools. It plays a moderating role in the relationship between retail innovation and omnichannel experience (Ameen et al., 2020; Cloughton, 2020). Consumers with higher TR are better positioned to appreciate the benefits of technology-enabled services, thereby experiencing heightened satisfaction and engagement (Pantano et al., 2022). Those with strong technological self-efficacy tend to find innovative services more accessible and enjoyable, which further motivates their engagement with omnichannel offerings (Chang & Chen, 2021).

H6a: Technological Readiness moderates the relationship between Retail Innovation and Omnichannel Customer Experience.

H6b: Technological Readiness moderates the relationship between Retail Innovation and

Customer Engagement.

2.6 Channel Switching Cost (CSC)

Channel Switching Cost (CSC) encompasses the perceived monetary, psychological, and procedural costs associated with moving between different retail channels. High CSC can reduce customers' willingness to engage with new channels, even when they hold positive perceptions of the retailer's offerings (Richards & Liaukonytė, 2023). CSC moderates the relationships between perceived value and customer engagement, as well as between omnichannel experience and engagement. Increased switching friction may inhibit active consumer engagement (Tueanrat et al., 2021). Nonetheless, when perceived value is high, CSC can act as a constraint-based loyalty mechanism that sustains customer commitment despite barriers (Adapa et al., 2020).

H7a: Channel Switching Cost moderates the relationship between Perceived Value and Customer Engagement.

H7b: Channel Switching Cost moderates the relationship between Omnichannel Customer Experience and Customer Engagement.

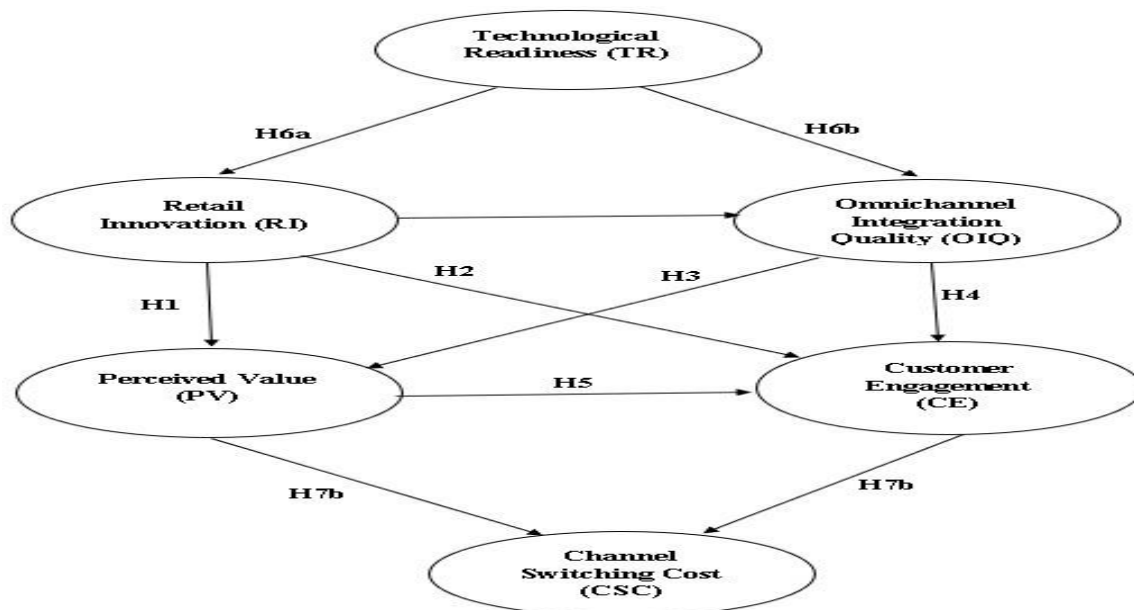


Figure 1. Conceptual Model

3. Research Method

3.1 Research Design

This study adopts a quantitative, explanatory research design to examine the influence of retail innovation on omnichannel customer experience and loyalty. It further investigates the mediating roles of perceived value and trust, as well as the moderating effects of technological readiness and switching cost. A cross-sectional survey approach was employed, utilising a

structured questionnaire based on a five-point Likert scale. The measurement items were adapted from previously validated sources (Apyradhi et al., 2024). The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), an appropriate technique for testing complex models involving both mediation and moderation effects (Hair et al., 2024).

3.2 Sample and Data Collection

The target population of this study consists of consumers with prior experience in omnichannel shopping, specifically those who have interacted with both online and offline retail platforms. A non-probability purposive sampling technique was adopted to ensure the selection of respondents possessing relevant digital and physical retail exposure. Eligibility criteria included individuals aged 18 and above, residing in urban areas of Indonesia, and having completed purchases through both online and offline channels within the preceding six months.

Data collection was conducted using a structured online questionnaire distributed via social media platforms and consumer communities between January and March 2025. A total of 240 valid responses were obtained. This sample size exceeds the recommended threshold for Partial Least Squares Structural Equation Modelling (PLS-SEM), which is well-suited for analysing models with complex mediation and moderation relationships (Hult et al., 2021).

As shown in Table 1, the sample predominantly comprised female respondents (54.17%), with the 26–35 age group representing 50%. In terms of occupation, 58.33% were professionals, while 41.67% were students. Most respondents held a bachelor's degree (58.33%), and monthly spending was largely concentrated between IDR 1–3 million (50%). Overall, the demographic profile reflects digitally literate and economically active consumers, well-aligned with the objectives of this omnichannel retail study.

Table 1. Attributes of Review Respondents

Respondent Attributes	Categories	Frequency (N)	Percentage (%)
Gender	Male	110	45,83
	Female	130	54,17
Age	18–25	70	29,17
	26–35	120	50
	36 and above	50	20,83
Occupation	Student	100	41,67
	Professional	140	58,33
Education	High School	60	25
	Bachelor's Degree	140	58,33
	Postgraduate	40	16,67
Monthly Spending	< IDR 1 million	40	16,67
	IDR 1–3 million	120	50
	> IDR 3 million	80	33,33

Shopping Channel Experience	Online	100	41,67
	Offline	140	58,33

Source: Researcher's Data Processing (2026)

3.3 Measurement of Constructs

All constructs in this study were measured using multi-item scales adapted from previously validated research, with each item assessed on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Retail Innovation (RI) was measured using four items capturing aspects of technological adoption, process innovation, and customer interaction strategies (Alexander & Kent, 2022; Cui et al., 2022; Youssef et al., 2022). Omnichannel Integration Quality (OIQ) comprised five items assessing perceptions of consistency, channel alignment, and seamless service delivery across platforms (Gao & Huang, 2021; Prassida & Hsu, 2022; Quach et al., 2022). Perceived Value (PV) was operationalised through three items reflecting both utilitarian and hedonic benefits derived from retail innovations (Adapa et al., 2020; Cloughton, 2020; Dastane et al., 2020). Customer Engagement (CE) was measured using four items covering cognitive, emotional, and behavioural dimensions of consumer involvement (Algharabat et al., 2020; Meyer-Waarden et al., 2023; Pangarkar et al., 2022). Technological Readiness (TR) was assessed using four items representing consumers' confidence, optimism, and willingness to adopt new retail technologies (Ameen et al., 2020; Nikhashemi et al., 2021). Lastly, Channel Switching Cost (CSC) was measured with four items addressing perceived effort, time investment, psychological discomfort, and financial burden associated with switching between retail channels (Mencarelli et al., 2021; Nguyen et al., 2022).

3.4 Data Analysis Method

This study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) as the primary analytical technique due to its appropriateness for examining complex models involving both mediation and moderation, as well as its robustness in handling non-normal data and moderate sample sizes (Hair et al., 2024). Data analysis was conducted using SmartPLS 4.0, which supports reflective measurement models. A two-step analytical procedure was applied: first, the measurement model was evaluated through assessments of indicator reliability, internal consistency, convergent validity (AVE), and discriminant validity (Fornell–Larcker and HTMT); second, the structural model was assessed via path coefficients, R^2 , f^2 , Q^2 , and significance using 5,000 bootstrap resamples (Hair et al., 2019). Moderation effects of technological readiness and switching cost were tested using product indicators, while mediation effects of perceived value and trust were examined via indirect effect procedures following current PLS-SEM guidelines.

4. Finding and Discussion

4.1 Assessing measurement model

Table 2 presents the results of the reflective measurement model assessment. All constructs satisfy the required thresholds for reliability and validity. Indicator loadings exceed 0.79,

demonstrating strong item reliability. Cronbach's Alpha and Composite Reliability (CR) values are above 0.863 and 0.907, respectively, indicating good internal consistency. The Average Variance Extracted (AVE) ranges from 0.671 to 0.918, confirming convergent validity. For instance, "Retail Innovation" shows excellent psychometric properties ($\alpha = 0.932$, CR = 0.951, AVE = 0.831). Similarly, constructs such as "Perceived Value" and "Channel Switching Cost" exhibit high reliability (CR > 0.96) and strong convergent validity (AVE > 0.89).

Table 2. Results of Assessing Measurement Model

Construct / Item	Loadings	Alpha	CR	AVE
Retail Innovation (RI)		0.932	0.951	0.831
We adopt advanced technologies to enhance customer experience.	0,941			
Our store improves service delivery to meet needs.	0,924			
Innovative campaigns are used to attract and retain customers.	0,925			
Our retail climate supports innovation.	0,854			
Omnichannel Integration Quality (OIQ)		0.879	0.911	0.671
Our channels are integrated for a seamless journey.	0,855			
Offers and messages are consistent across channels.	0,818			
Transaction processes vary little across channels.	0,813			
Our retail system reliably supports customers online and offline.	0,820			
Channel transitions are seamless and integrated.	0,790			
Perceived Value (PV)		0.956	0.971	0.918
The retailer's omnichannel innovations offer great value.	0,960			
I value the retailer's interactive omnichannel features.	0,956			
The retailer's innovative services justify their cost.	0,959			
Customer Engagement (CE)		0.935	0.953	0.837
I often engage in multichannel promotions.	0,924			
I research the brand before purchasing.	0,918			
I feel excited engaging with the brand across channels.	0,944			
I recommend the brand based on multichannel experiences.	0,870			
Technological Readiness (TR)		0.863	0.907	0.708
New digital technologies enhance my shopping experience.	0,831			
I enjoy early adoption of retailers' digital innovations.	0,864			

New digital retail systems often overwhelm me.	0,848			
I worry about the security of new retail technologies.	0,822			
Channel Switching Cost (CSC)		0.96 1	0.9 72	0.89 6
Channel switching takes too much time.	0,935			
Shifting between sales channels requires too much effort.	0,947			
Switching channels during retailer interactions frustrates me.	0,952			
Channel switching discourages me from exploring new channels.	0,952			

Source: Researcher's Data Processing (2026)

Table 3 assesses discriminant validity using the Fornell–Larcker criterion, which stipulates that the square root of AVE for each construct (not shown) should exceed its correlations with other constructs. However, certain inconsistencies emerge. For instance, the correlation between Perceived Value (PV) and Customer Engagement (CE) reaches 1.003, indicating potential multicollinearity or conceptual overlap. Similarly, the correlation between Technological Readiness (TR) and Channel Switching Cost (CSC) is notably high at 0.946. While some values, such as between CE and RI (0.580), remain acceptable, these elevated correlations suggest possible construct redundancy, warranting further examination via revised indicators or alternative methods such as HTMT.

Table 3. Result of Discriminant Validity

Variable	CSC	CE	OIQ	PV	RI	TR
Channel Switching Cost (CSC)						
Customer Engagement (CE)	0,512					
Omnichannel Integration Quality (OIQ)	0,594	0,761				
Perceived Value (PV)	0,499	1,003	0,748			
Retail Innovation (RI)	0,620	0,580	0,905	0,550		
Technological Readiness (TR)	0,946	0,748	0,784	0,724	0,728	

Source: Researcher's Data Processing (2026)

Table 4 summarises the structural model assessment, incorporating effect size (f^2), coefficient of determination (R^2), and predictive relevance (Q^2). The R^2 values indicate strong explanatory power for Customer Engagement (0.904), Omnichannel Integration Quality (0.723), and Perceived Value (0.513), while Q^2 values (e.g., CE = 0.749; OIQ = 0.474) confirm predictive relevance. Retail Innovation shows a large effect on OIQ ($f^2 = 0.810$), with Technological Readiness also exerting a moderate influence ($f^2 = 0.184$). An exceptionally high effect from Perceived Value to CE ($f^2 = 4.048$) suggests potential overestimation. Meanwhile, other paths display minimal effects, prompting reconsideration of construct relationships and model specification.

Table 4. Coefficient of Effect Size (f^2), Determination (R^2) and Predictive Relevance (Q^2)

Variable	f^2						R^2	Q^2
	CS C	CE	OIQ	PV	RI	T R		
Channel Switching Cost (CSC)							0,23 8	0,20 7
Customer Engagement (CE)	0,01 2						0,90 4	0,74 9
Omnichannel Integration Quality (OIQ)		0,00 6		0,50 0			0,72 3	0,47 4
Perceived Value (PV)	0,00 5	4,04 8					0,51 3	0,46 4
Retail Innovation (RI)		0,00 4	0,81 0	0,02 3			0,42 5	0,34 9
Technological Readiness (TR)			0,18 4		0,73 9			0,00 0

Source: Researcher's Data Processing (2026)

4.2 Evaluation of Structural Model

Figure 2 presents the structural model, displaying path coefficients alongside significance levels (p -values). Retail Innovation (RI) exerts a significant influence on Technological Readiness (TR), Perceived Value (PV), and Omnichannel Integration Quality (OIQ). Both RI and TR have strong effects on OIQ, which, in conjunction with PV, significantly predicts Customer Engagement (CE). CE emerges as the most strongly explained endogenous construct ($R^2 = 0.904$), shaped by OIQ, PV, and Channel Switching Cost (CSC). Additionally, PV has a notable impact on CSC. All structural paths are statistically significant ($p = 0.000$), and the model accounts for considerable variance in the core constructs, reflecting high levels of predictive accuracy and explanatory strength. Indicator loadings across constructs also demonstrate high reliability and robustness.

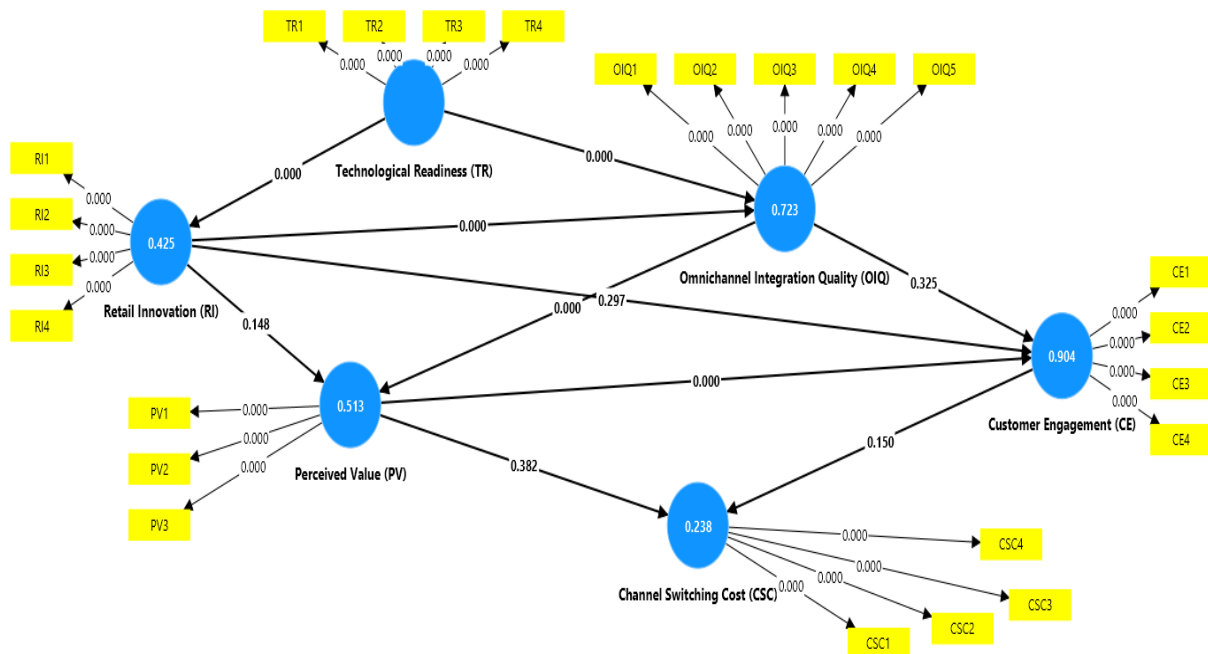


Figure 2. Bootstrapping Analysis

Table 5. Support for Study Hypotheses

Construct	Path	T statistics	P values
Retail Innovation (RI) -> Channel Switching Cost (CSC)	0,183	3,111	0,002*
Retail Innovation (RI) -> Customer Engagement (CE)	0,381	3,942	0,000*
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ)	0,625	10,012	0,000*
Retail Innovation (RI) -> Perceived Value (PV)	0,352	3,670	0,000*
Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE)	0,821	7,311	0,000*
Omnichannel Integration Quality (OIQ) -> Perceived Value (PV)	0,861	7,879	0,000*
Omnichannel Integration Quality (OIQ) -> Channel Switching Cost (CSC)	0,413	5,734	0,000*
Perceived Value (PV) -> Channel Switching Cost (CSC)	0,462	6,737	0,000*
Perceived Value (PV) -> Customer Engagement (CE)	0,895	23,118	0,000*
Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,308	1,439	0,150
Technological Readiness (TR) -> Channel Switching Cost (CSC)	0,242	4,803	0,000*
Technological Readiness (TR) -> Customer Engagement (CE)	0,493	10,569	0,000*

Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ)	0,706	15,197	0,000*
Technological Readiness (TR) -> Perceived Value (PV)	0,486	10,307	0,000*
Technological Readiness (TR) -> Retail Innovation (RI)	0,652	11,317	0,000*

* means significant at 5%

Table 5 presents the results of hypothesis testing, offering strong support for the majority of the proposed relationships within the model. All structural paths—except one—are statistically significant at $p < 0.05$. The relationship between Perceived Value (PV) and Customer Engagement (CE) exhibits the strongest effect ($\beta = 0.895$, $t = 23.118$), highlighting its substantial influence. Omnichannel Integration Quality (OIQ) significantly affects both PV ($\beta = 0.861$) and CE ($\beta = 0.821$), underscoring its pivotal role in shaping customer perceptions and behaviours.

Technological Readiness (TR) exerts strong influence across the model, particularly on OIQ ($\beta = 0.706$) and RI ($\beta = 0.652$), confirming its importance in facilitating innovation adoption. Retail Innovation (RI) also significantly predicts key constructs, especially OIQ ($\beta = 0.625$) and CE ($\beta = 0.381$). The only unsupported hypothesis is the path from CE to Channel Switching Cost (CSC), which is not statistically significant ($\beta = 0.308$, $p = 0.150$), indicating that engagement alone may not reduce switching intentions. Overall, the findings offer robust empirical validation of the structural model.

Table 6. Specific Indirect Effects

Construct	Path	T statistics	P values
Retail Innovation (RI) -> Perceived Value (PV) -> Channel Switching Cost (CSC)	-0,035	0,617	0,537
Retail Innovation (RI) -> Perceived Value (PV) -> Customer Engagement (CE)	-0,166	1,442	0,149
Retail Innovation (RI) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,011	0,655	0,513
Retail Innovation (RI) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	-0,051	0,914	0,361
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,010	0,662	0,508
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE)	0,482	6,297	0,000*
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE)	0,031	0,989	0,323
Retail Innovation (RI) -> Omnichannel Integration Quality	0,100	0,843	0,399

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(OIQ) -> Perceived Value (PV) -> Channel Switching Cost (CSC)			
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV)	0,538	6,446	0,000*
Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,148	1,432	0,152
Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,276	1,463	0,144
Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,015	0,644	0,520
Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,237	1,414	0,158
Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Channel Switching Cost (CSC)	0,161	0,845	0,398
Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE)	0,771	7,532	0,000*
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Channel Switching Cost (CSC)	0,065	0,858	0,391
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE)	0,020	0,991	0,322
Technological Readiness (TR) -> Retail Innovation (RI) -> Customer Engagement (CE)	0,023	0,996	0,319
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ)	0,408	8,749	0,000*
Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE)	0,015	0,880	0,379
Technological Readiness (TR) -> Retail Innovation (RI) -> Perceived Value (PV)	-0,121	1,501	0,133
Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV)	0,257	3,349	0,001*
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,097	1,434	0,152
Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Channel Switching Cost (CSC)	0,048	0,778	0,437

Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE)	0,230	3,310	0,001*
Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,005	0,556	0,578
Technological Readiness (TR) -> Retail Innovation (RI) -> Perceived Value (PV) -> Channel Switching Cost (CSC)	-0,023	0,640	0,522
Technological Readiness (TR) -> Retail Innovation (RI) -> Perceived Value (PV) -> Customer Engagement (CE)	-0,109	1,499	0,134
Technological Readiness (TR) -> Retail Innovation (RI) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,007	0,621	0,535
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV)	0,351	7,239	0,000*
Technological Readiness (TR) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,071	1,218	0,223
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	0,006	0,655	0,513
Technological Readiness (TR) -> Retail Innovation (RI) -> Omnichannel Integration Quality (OIQ) -> Perceived Value (PV) -> Customer Engagement (CE)	0,314	7,205	0,000*
Technological Readiness (TR) -> Retail Innovation (RI) -> Perceived Value (PV) -> Customer Engagement (CE) -> Channel Switching Cost (CSC)	-0,033	0,935	0,350

* means significant at 5%

Table 6 presents the analysis of specific indirect effects, examining the mediating roles of various constructs within the structural model. While several indirect paths were statistically non-significant ($p > 0.05$), a number of key mediation effects emerged. Notably, the pathway from Retail Innovation (RI) → Omnichannel Integration Quality (OIQ) → Perceived Value (PV) → Customer Engagement (CE) was significant ($\beta = 0.482$, $t = 6.297$, $p = 0.000$), providing strong support for a cascading mediational influence of RI on CE through OIQ and PV.

Another important finding is the significant indirect effect from Technological Readiness (TR) → RI → OIQ → PV ($\beta = 0.351$, $p = 0.000$), as well as the extended path via OIQ → PV → CE ($\beta = 0.230$, $p = 0.001$), indicating that TR impacts CE through a chain of mediating variables. The full mediation pathway—TR → RI → OIQ → PV → CE—also proved significant ($\beta = 0.314$, $p = 0.000$), highlighting a multi-layered influence.

Conversely, most indirect effects involving Channel Switching Cost (CSC) were non-significant, suggesting limited mediating influence on switching behaviour. Overall, these findings underscore the importance of mediated relationships in the formation of customer engagement and perceived value.

The findings of this study broadly validate the hypothesised relationships, reinforcing the conceptual framework based on the Stimulus–Organism–Response (S–O–R) model. Retail Innovation (RI) emerged as a key stimulus, exerting significant influence on Omnichannel Integration Quality (OIQ), Perceived Value (PV), and Customer Engagement (CE), underscoring its role in enhancing customer experience. Similarly, Technological Readiness (TR) demonstrated meaningful moderating effects, particularly in relation to OIQ and CE, consistent with prior research indicating that technology adoption is heavily shaped by consumers' readiness (Gao & Huang, 2021).

However, the non-significant relationship between CE and Channel Switching Cost (CSC) offers an important insight. Contrary to theoretical expectations, emotional engagement with a brand may not suffice to deter switching behaviour. In the Indonesian context, this finding can be interpreted through a pragmatic lens: customer loyalty often hinges more on convenience, trust, and service reliability than on emotional affinity (Alexander & Kent, 2022; Nguyen et al., 2022). Given Indonesia's dynamic and fragmented digital ecosystem, consumers may maintain brand loyalty while remaining willing to switch platforms when confronted with inefficiencies or friction.

This nuanced perspective enriches the literature by illustrating that high engagement does not necessarily equate to lower switching tendencies. Indonesian retailers must therefore look beyond emotional appeal, focusing instead on seamless service integration, reliable channel performance, and ease of use. These findings further emphasise the importance of incorporating technological readiness into digital strategy development. For practitioners, the results provide actionable insights into tailoring omnichannel strategies to reflect both psychological drivers and local market conditions in emerging economies.

5. Conclusion

This study confirms the pivotal role of retail innovation in shaping omnichannel experiences, perceived value, and customer engagement, supported by the S–O–R theoretical framework. While most relationships were significant, the unexpected non-significance between engagement and switching cost highlights a nuanced behavioural insight: emotional connection alone may not deter consumers from changing channels, particularly in Indonesia's pragmatic and convenience-driven market. These findings enrich current understanding by integrating structural outcomes, theoretical alignment, and cultural context. However, the study is limited by its cross-sectional design and reliance on self-reported data, which may not fully capture longitudinal behavioural shifts. Future research should consider experimental or longitudinal approaches, explore industry-specific differences, and incorporate additional cultural variables. These directions will advance theoretical precision and provide deeper insights into customer dynamics within evolving omnichannel ecosystems.

The findings offer several actionable insights for retail practitioners operating in omnichannel environments. First, investment in retail innovation should prioritise technologies that not only enhance operational efficiency but also create tangible value for customers, such as personalised interfaces, unified service experiences, and seamless channel integration. Second, firms must address technological readiness by educating and supporting consumers through intuitive digital features and onboarding support. Third, given that engagement alone does not prevent switching, retailers should reduce friction by simplifying channel transitions and ensuring consistent service quality. Lastly, omnichannel strategies must reflect local market dynamics—particularly in Indonesia—by combining emotional appeal with functional reliability. Retailers who align innovation with customer expectations and cultural behaviour are more likely to foster lasting loyalty and sustained engagement in a competitive retail landscape.

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