

옴니채널 서비스가 고객충성도에 미치는 영향:
베트남 사용자를 중심으로

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The Effect of Omnichannel Services on Customer Loyalty
: Focused on Vietnamese Users

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Abstract

This research examined how elements in the omnichannel service environment affect customer loyalty in Vietnam, with a particular focus on the mediating effect of customer experience. The study analyzed 252 valid responses from a total of 280 collected through an online survey, using PL-SEM in R Software version 4.4.1. Results indicate that synchronization, seamlessness, usage proficiency, and innovativeness have a positive effect on utilitarian experience. Additionally, integrated interaction quality, usage proficiency, and innovativeness positively influence Hedonic Experience, which in turn significantly boosts customer loyalty. The findings offer practical guidance for developing omnichannel strategies in Vietnam's changing retail landscape.

Keywords: Customer Loyalty, Hedonic Experience, Omnichannel Services, Utilitarian Experience

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I. Introduction

The Fourth Industrial Revolution has ushered in a period of swift technological advancement, leading to the undeniable expansion of online shopping platforms. This growth is evidenced by the increasing array of customer options and innovative features available. E-commerce websites, social media platforms, and mobile apps provide consumers with unparalleled convenience and accessibility. Nonetheless, brick-and-mortar stores continue to play a crucial role in the shopping experience, satisfying customers' desires to physically interact with products and immerse themselves in the store environment (Piotrowicz and Cuthbertson, 2014). These factors underscore the potential for retailers to enhance customer experiences by leveraging the strengths of online channels while also integrating physical and digital environments to create a unified experience that surpasses the capabilities of single-channel or multi-channel approaches (Sopadjieva et al., 2017). This integration forms the basis of omnichannel serv-

ice, a strategy adopted by retailers seeking a competitive advantage.

Nielsen and FMI forecast 74.7 million U.S. households will be omnichannel shoppers by 2025 (Wiklund, 2020). Meanwhile, Vietnam boasts over 77.93 million internet users, with its digital economy generating an estimated revenue of \$166.4 billion in 2022, constituting 14.26% of the nation's GDP (Open Development Mekong, 2023). These figures highlight Vietnam's considerable potential for omnichannel market growth (Bual, 2024). The government's National Digital Transformation Program to 2025 aims to ensure that over 50% of the population has an electronic payment account by 2025, increasing to over 80% by 2030 (Open Development Mekong, 2023). Consequently, omnichannel retailing is expected to emerge as a dominant retail trend in Vietnam.

While numerous studies have explored the relationships between omnichannel services and customer behaviors across various countries, there is a dearth of comprehensive research on the omnichannel environment in Vietnam. Specifically, there is a lack of investigation into the interplay between omnichannel service characteristics, customer experience, and customer loyalty. This study aims to address this gap by examining the impact of omnichannel service characteristics on customer loyalty, with a particular focus on the mediating role of customer experience. To analyze the relationships and effects among the proposed variables, the research will employ open source R ver 4.4.1 for PL-SEM analysis. This methodology allows for a thorough examination of both direct and indirect influences within the model, providing statistical evidence to support the findings.

II. Literature Review

2.1 Omnichannel Service

Omnichannel service refers to a strategy that unifies various sales channels and customer touchpoints into a cohesive system, ensuring a consistent and synchronized customer experience across physical stores, websites, mobile apps, and social media platforms. In this approach, each channel operates in harmony rather than independently (Shi et al., 2020). Understanding the key features of omnichannel services is essential for comprehending customer behavior, as these

unique characteristics significantly affect customer perceptions, actions, and intentions (Melero et al., 2016).

Research has highlighted the importance of several key variables in omnichannel services, including synchronization (Jang, 2022), seamlessness (Shen et al., 2018), integrated interaction quality (Hossain et al., 2020), usage proficiency (Seo, 2023; Zhang, 2022), and innovativeness (Lee, 2020; Seo, 2023). These factors have been shown to have both direct and indirect effects on customer loyalty outcomes, underscoring their interrelated roles in improving customer experience and retention (Jang, 2022; Zhang, 2022). These findings emphasize the need to incorporate these variables into a comprehensive omnichannel strategy to gain long-term competitive advantages.

In the case of Vietnam, omnichannel retailing requires unique characteristics, including a high penetration rate of mobile devices and an increase in online shopping among young customers (Nguyen, 2024). The application of digital payment systems and social network platforms, such as Zalo, Shopee, Instagram, and TikTok Shop, has further accelerated omnichannel integration in Vietnam. In this context, synchronization, seamlessness, and integrated quality play a crucial role in forming customer experience, while innovativeness and usage proficiency determine how effectively consumers engage with omnichannel services.

2.1.1 Synchronization

Different retail channels serve distinct purposes, offering consumers varying benefits and costs (Chatterjee, 2010). Synergy among channels enhances retailers' customer service by leveraging the strengths and compensating for the weaknesses of each channel (Chatterjee, 2010). Unlike traditional multichannel systems, in which each channel operates independently, omnichannel synchronization ensures that customer interactions across platforms are interconnected, allowing for seamless transitions (Lee and Lee, 2019). This synchronization also allows firms to deliver specialized benefits across multiple touchpoints simultaneously, thereby creating and transferring additional value to consumers during their decision-making process (Gallino and Moreno, 2014).

For instance, in a multichannel banking environment, customers may visit physical branches for personalized, human-assisted services, while simultaneously using online banking to gain real-time transactional benefits (Lee and Kim,

2010). Similarly, in the case of fashion retailing, shoppers can physically touch and try clothing in-store while using mobile applications to receive digital coupons and discounts in real time (Lee and Lee, 2019). This synchronization of channels enhances the overall customer experience by allowing seamless integration of physical and digital interactions, improving convenience, personalization, and engagement in omnichannel retailing.

2.1.2 Seamlessness

In omnichannel service, seamlessness refers to the uninterrupted transition between different channels (Shen et al., 2018). When omnichannel integration is seamless, consumers experience minimal disruptions, leading to higher engagement and satisfaction (Van Nguyen et al., 2022).

Research has identified seamlessness as a crucial element in omnichannel service. A study by Riaz et al. (2021) revealed that seamlessness significantly influences customer experience, particularly in the fashion retail sector. Ahmed and ul Hassan (2021) noted that smooth interactions across channels improve both practical and enjoyable aspects of shopping. While technological and operational advancements drive the need for seamless experiences, obstacles in these areas can diminish seamlessness and negatively impact customer satisfaction (Mirzabeiki and Saghiri, 2020).

To deliver a seamless experience, retailers must effectively integrate their various platforms (Fedorko et al., 2018). Improved information systems and synchronized product information across online and offline channels enhance accessibility and convenience for customers (Lehrer and Trenz, 2022). By reducing shopping effort, seamless omnichannel experiences lead to increased customer engagement and loyalty (Gao et al., 2021).

2.1.3 Integrated Interaction Quality

Integrated interaction quality refers to a retailer's ability to provide a seamless service experience across multiple channels (Zhang et al., 2018). This concept is multidimensional and consists of service composition quality and integrated interaction quality (Shen et al., 2018).

Integrated interaction quality, which is a key component of channel integration quality, ensures consistency in cross-channel interactions. It encompasses con-

tent consistency, uniformity of information provided across different channels, and process consistency, which refers to the similarity in service processes, employee discretion, and waiting times across channels (Sousa and Voss, 2006). Maintaining content consistency supports seamless service transitions across channels, enabling customers to switch channels effortlessly (Majrashi and Hamilton, 2015). Additionally, process consistency ensures that customers perceive a uniform service experience regardless of the channel used, reinforcing service reliability and reducing friction in omnichannel interactions (Sousa and Voss, 2006). In summary, a high level of integrated interaction enhances customer experience, as well as satisfaction, in omnichannel services (Nguyen et al., 2022; Tran et al., 2022) by providing a consistent experience through various channels.

2.1.4 Usage Proficiency

Usage Proficiency refers to a customer's capability to effectively utilize and navigate multiple retail channels in an omnichannel setting. It encompasses a consumer's aptitude and self-assurance in handling various shopping platforms, both digital and physical, to enhance their overall shopping experience (Rose et al., 2012). Rose et al. proposed that higher Usage Proficiency correlates with an improved cognitive experiential state during online shopping. Novak et al. (2000) evaluated proficiency using six criteria, including statements like "I am highly skilled at using the Web," "I am knowledgeable about good search techniques," and "I know how to locate what I seek online." These findings suggest that a consumer's Usage Proficiency in an omnichannel environment can be characterized as their familiarity with omnichannel features, skill in product discovery, and ease of interaction across multiple channels.

Recent research has also demonstrated that Usage Proficiency can influence the connection between customer perceptions and loyalty in omnichannel settings. Ji (2023) emphasized the moderating role of Usage Proficiency in the relationships between customer perceptions and loyalty within omnichannel retail environments. In essence, Usage Proficiency plays a vital role in omnichannel retailing by enabling consumers to fully leverage the integrated shopping ecosystem, potentially leading to enhanced satisfaction, improved efficiency, and enduring loyalty.

2.1.5 Innovativeness

Innovativeness refers to a company's ability to deliver creative, novel, and impactful ideas and services to consumers and to enhance customer experience (Lee, 2020). In omnichannel retailing, innovativeness reflects the degree to which a new product or service is adopted across various shopping channels (Seo, 2023). This characteristic is particularly critical in omnichannel environments, where technological advancements, such as AI-driven personalization, virtual try-ons, and frictionless checkout systems, shape consumer trust and behaviors (Nguyen et al., 2023).

Innovativeness plays a vital role in customer experience by influencing how consumers adopt convenience, make purchases, and value (Rogers, 2010). Research suggests that innovative retail strategies enhance customer satisfaction, as they signal a brand's commitment to meeting evolving consumer needs (Cho, 2019; Sang, 2019; Seo, 2023). Moreover, customers with a higher propensity for innovation tend to embrace new retail formats, actively seek engaging experiences, and respond positively to brands that incorporate technology-driven enhancements (Seo, 2023). This alignment between a retailer's innovativeness and consumer preferences strengthens the customer experience and fosters long-term loyalty (Lee, 2020).

2.2 Experience

The importance of customer experience in fostering customer relationships and establishing enduring competitive advantages is well-documented (Lemon and Verhoef, 2016). It encompasses the emotional and responsive reactions customers have when interacting with companies, their offerings, and brands (Lemon and Verhoef, 2016). Customer experience, which spans cognitive, emotional, and social aspects, stems from both direct and indirect interactions throughout the purchasing journey (Zhang, 2022). Pine and Gilmore (2011) further characterize it as the time customers spend engaging with company-organized activities designed to attract them.

This research focuses on utilitarian and hedonic experiences, two fundamental aspects of customer experience that encompass both the practical and emotional facets of shopping. This approach is informed by Olsen and Tuu's research,

which indicates that young Vietnamese consumers, the target demographic of this study, exhibit dual expectations, valuing both functionality and enjoyment. The relevance of these elements has been underscored in various studies, including those conducted by Holbrook and Hirschman (1982) and Voss et al. (2003).

2.2.1 Utilitarian Experience

According to Żymkowska (2018), consumers depend on the provision of information to make well-informed choices following authentic experiences with content, devices, and platforms. Tueanrat et al. (2021) highlight the significance of convenience and cost reduction in these consumer interactions.

The concept of cost saving relates to the economic value that customers pursue, which influences their shopping choices (Thakur, 2018). It is associated with obtaining price reductions and discounts (Thakur, 2016) and serves as a motivating factor for online and mobile shopping due to the potential for financial savings (Hsiao, 2009). Consumers tend to prioritize affordability over pleasure-driven satisfaction (Terblanche and Boshoff, 2006), which aligns with theories of rational decision-making.

2.2.2 Hedonic Experience

The concept of hedonic experience encompasses the emotional and sensory satisfaction customers obtain from their shopping activities. This includes emotions such as excitement, pleasure, and joy. Babin et al. (1994) suggest that interactive and engaging elements of shopping, such as personalization, immersive technology, and entertaining retail environments, significantly influence the hedonic experience. Holbrook and Hirschman (1982) characterized hedonic experience as consumer behavior linked to the multisensory, fantasy, and emotional aspects of product interaction during consumption.

In the context of omnichannel service, the hedonic experience is often amplified through creative features, tailored suggestions, and smooth transitions between channels, which enhance the enjoyment of shopping. Research, such as that conducted by Schramm-Klein et al. (2011), indicates that positive hedonic experiences foster stronger emotional bonds with brands, resulting in increased customer loyalty.

2.3 Customer Loyalty

The concept of customer loyalty, initially recognized in the 1950s (Cunningham, 1956) as consistent brand purchasing behavior among consumers, has since become a crucial element in maintaining business viability and competitive edge (Kim, 2022). It is typically characterized as a deep emotional bond or connection to a brand (Jones, 1996) and the desire to continue buying or utilizing services (Oliver, 1999).

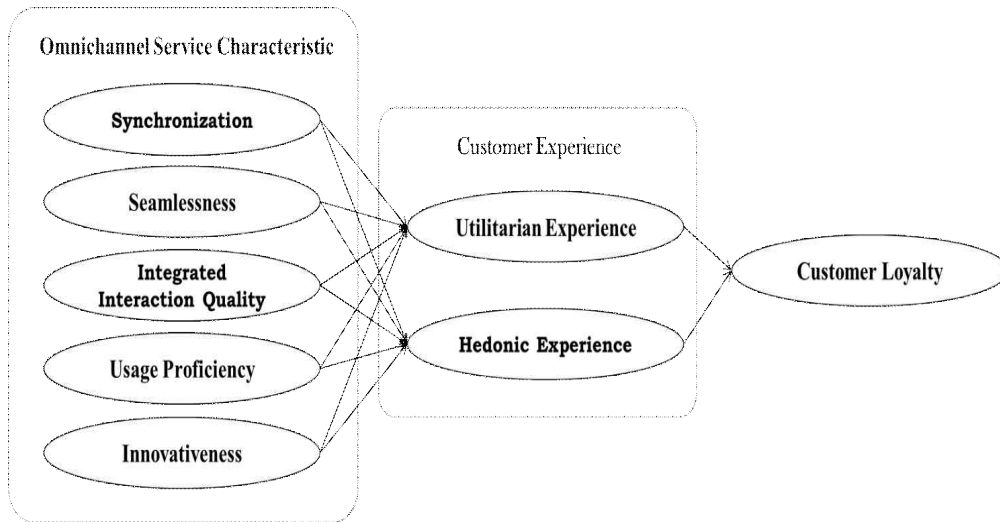
This research employs a dual-faceted approach to loyalty: the intention to repurchase and the willingness to recommend, a method also utilized in earlier research (Gronhold et al., 2000). The intention to repurchase signifies a logical commitment to ongoing engagement (Oliver, 1999), while the willingness to recommend represents an emotional and social endorsement (Zhang, 2022). In the context of omnichannel retailing, loyalty extends beyond a single channel, encompassing integrated retail environments where minimizing conversion obstacles enhances customer loyalty (Lee and Lee, 2019).

III. Research Methodology

3.1 Research Model

This study developed a framework <Figure 1> to examine the elements affecting customer experience and loyalty within an omnichannel service context. The research identified five key aspects of omnichannel service characteristics as independent variables: synchronization, seamlessness, integrated interaction quality, usage proficiency, and innovativeness. The customer experience, comprising utilitarian and hedonic dimensions, acts as a mediating factor between the independent variables and customer loyalty. In this model, customer loyalty is positioned as the dependent variable.

<Figure 1> Research Model



3.2 Research Hypothesis Setting

3.2.1 Relationship Between Omnichannel Service Characteristics and Practical Experience

To provide a cohesive retail experience across all channels, retailers must maintain consistent quality and service throughout the omnichannel shopping journey (Zhang, 2022). This requires an integrated system that enables customers to have a uniform experience across various platforms, ensuring uninterrupted service (Rigby, 2011). Given that customers often utilize both online and offline channels concurrently (Huré et al., 2017), this research anticipates that omnichannel service characteristics will play a crucial role in shaping customer experience.

Research indicates that consumers are more likely to interact with omnichannel services when their experience remains uninterrupted across different platforms (Shen et al., 2018). Moreover, increased integration in omnichannel interactions is expected to boost customers' perceived experiential value (Beck and Rygl, 2015). Previous studies have also demonstrated the positive effect of self-efficacy on customer experience, confirming its indirect impact on usage intentions (Zhang, 2022). Furthermore, novel approaches in service design, customer expe-

rience management, and promotional tactics have been shown to enhance both cognitive and emotional customer engagement in omnichannel settings (Lee, 2020). Finally, synchronization across channels has been found to facilitate purchasing decisions, thereby improving overall customer experience (Lee and Lee, 2019). Drawing from this theoretical background and previous research findings, the following research hypotheses are put forward.

H1 : Omnichannel service characteristics positively affect utilitarian experience.

H1-1 : Synchronization positively affects utilitarian experience.

H1-2 : Seamlessness positively affects utilitarian experience.

H1-3 : Integrated interaction quality positively affects utilitarian experience.

H1-4 : Usage proficiency positively affects utilitarian experience.

H1-5 : Innovativeness positively affects utilitarian experience.

H2 : Omnichannel service characteristics positively affect hedonic experience.

H2-1 : Synchronization positively affects hedonic experience.

H2-2 : Seamlessness positively affects hedonic experience.

H2-3 : Integrated interaction quality positively affects hedonic experience.

H2-4 : Usage proficiency positively affects hedonic experience.

H2-5 : Innovativeness positively affects hedonic experience.

3.2.2 Relationship Between Customer Experiences and Customer Loyalty

Studies have shown that customer experience plays a crucial role in influencing shopping behavior, including factors such as purchase quantity, time spent shopping, customer satisfaction, and the likelihood of returning (Lee and Lee, 2019). Positive cognitive experiences, such as encountering a wide range of product colors, receiving high-quality service, and enjoying convenient shopping conditions, contribute to favorable customer attitudes and loyalty (Ho and Neol, 2011). Additionally, emotional experiences and attitudes towards stores affect the intention to revisit (Kim, 2011), while experiences in brand stores reinforce brand loyalty (Shin and Lee, 2011).

Customer loyalty develops through consistent positive interactions with a company, resulting in emotional attachment and long-term commitment (Verhoef et al., 2009). Satisfactory experiences across multiple channels enhance customer

loyalty, with variations observed among different types of retail businesses (Lee and Lee, 2019). Improved integration between channels strengthens loyalty in omnichannel settings and enhances relationships with companies (Andrea et al., 2011). Based on these findings, the following hypotheses are put forward.

H3 : Utilitarian experience positively affects customer loyalty.

H4 : Hedonic experience positively affects customer loyalty.

3.3 Operational Definition of Variables

This research examines various elements linked to omnichannel service, including synchronization, seamlessness, integrated interaction quality, usage proficiency, and innovativeness. The purpose of this section is to establish clear operational definitions for these variables. Providing precise definitions is crucial for ensuring respondents comprehend the context and significance of the variables utilized in this investigation. By offering well-defined explanations, the study aims to improve the precision and pertinence of the survey responses. The operational definitions, which were carefully formulated based on a comprehensive review of existing literature, are thoroughly presented in <Table 1>.

<Table 1> Variables and Their Operational Definition

Observed Variable	Operational Definition	Reference
Synchronization	The extent to which omnichannel retailing services provide information simultaneously across various channels.	Lee and Lee (2019), Jang (2022)
Seamlessness	The extent to which consumers can seamlessly navigate between integrated online and offline channels when using omnichannel retailing services.	Shen et al. (2018), Schoutteet et al. (2017)
Integrated Interaction Quality	The degree to which service quality is provided by configuring consistent services and processes in interactions across channels.	Zhang et al. (2019), Hossain et al. (2020)

Usage Proficiency	The anticipated level at which desired products can be effectively utilized across various channel environments.	Ji (2023)
Innovativeness	The extent to which it can consistently generate or deliver innovative products or services with ease.	Seo (2023), Robertson (1967)
Utilitarian Experience	The extent to which a customer has utilized omnichannel retail services with virtually no limitations on cost or service availability.	Zhang (2022), Tueanrat et al. (2021)
Hedonic Experience	The extent to which a customer experiences enjoyment or emotional satisfaction when interacting with or discovering a novel product through an integrated multi-channel retail service.	Tueanrat et al. (2021), Babin et al. (1994)
Customer Loyalty	The extent to which they are likely to purchase omnichannel retailing services repeatedly and recommend products to others.	Jones (1996), Zeithaml et al. (1996), Olive (1999)

IV. Data Analyses and Results

4.1 Data Collection and Analysis Methods

This research focused on omni-channel services in Vietnam, with data collection occurring through an online survey from September 7, 2024 to September 21, 2024. Out of 280 responses, 252 questionnaires were deemed valid and used for analysis, after eliminating insincere answers. To evaluate the research model and test hypotheses, the study employed structural equation analysis using PLS-SEM, implemented via open source R version 4.4.1.

4.2 Demographic Analysis

The demographic characteristics of this study are as follows in <Table2>. The sample comprised 174 women (69.1 %) and 78 men (31.0 %). Most participants were in their 20s (79.0%), followed by those in their 30s (14.3%), teens (3.6%), and 40s (3.2%), with a majority being young and female. This skewed distribution likely reflects the demographic profile of digital shoppers in Vietnam but may also limit the generalizability of the findings. As for occupation, 56.0% were office workers, 11.9% self-employed, 14.3% students, and 13.9% in other occupations. Income distribution was concentrated in the 10–20 million range (34.1%), followed by those earning between 20–30 million VND (21.4%), 10–20 million VND (15.1%), and 5–10 million (14.7%) though it may not fully reflect Vietnam’s overall income levels, as the survey may have primarily attracted middle-income consumers.

<Table 2> Demographic Characteristics of the Sample

Classification		Frequency	Percentage	Classification		Frequency	Percentage
Gender	Female	174	69.1	Occupation	Company employee	141	56.0
	Male	78	31.0		Self-employed	30	11.9
Total		252	100.0		Student	36	14.3
Age	10s	9	3.6		Housewife	2	0.8
	20s	199	79.0		Unemployed	8	3.2
	30s	36	14.3		Other	35	13.9
	Income (VND)	40s	8	3.2	Under 5 millions	37	14.7
					5millions~10millions	38	15.1
				10millions~20millions	86	34.1	
				20millions~30millions	54	21.4	
				Above 30millions	37	14.7	

4.3 Reliability and Validity Analysis Results

The assessment of reliability can be categorized into two types: internal consistency reliability and indicator reliability. Internal consistency reliability is considered satisfactory when the Cronbach's α coefficient is 0.7 or above, indicating that the internal reliability of each variable has been established (Nunnally and Bernstein, 1994). This form of reliability analysis is used to determine the dependability of measurement items for each variable. The evaluation can be based on both Cronbach's alpha and DG-rho values. Cronbach's alpha ranges from 0 to 1, with values closer to 1 indicating better reliability of the variable (Hair et al., 2014). DG-rho serves as an internal reliability evaluation index in the reflection index model, with a threshold of 0.7 or higher signifying internal reliability (Sanchez, 2013). All variables in the reliability assessment had Cronbach's alpha values above 0.8, as shown in <Table 3>. Similarly, the DG-rho values were found to be above 0.8, confirming that internal consistency reliability was achieved.

<Table 3> Results of Reliability Evaluation

Observed Variable	MVs	C.alpha	DG.rho	eig.1st
Synchronization	4	0.851	0.899	2.766
Seamlessness	5	0.865	0.903	3.250
Integrated Interaction Quality	6	0.832	0.878	3.291
Usage Proficiency	4	0.861	0.907	2.836
Innovativeness	6	0.910	0.930	4.138
Utilitarian Experience	6	0.881	0.910	3.766
Hedonic Experience	6	0.821	0.871	3.182
Customer Loyalty	5	0.872	0.908	3.321

The external model validity in PLS-SME's structural equation model encompasses both concentrated and discriminant validity. Discriminant validity is considered effective when a variable's mean variance extraction value exceeds 0.5 (Chin, 1998). Additionally, discriminant validity is established when the square root of each variable's AVE value surpasses the correlation with other variables. According to <Table 4>, this study's sample measurements met all indicator levels, thus confirming discriminant validity.

<Table 4> Results of Convergent Validity and Discriminant Validity Analysis

	SY	SC	II	UP	IN	UE	HE	CL	AVE
SY	0.831								0.691
SC	0.696	0.806							0.650
II	0.564	0.706	0.738						0.545
UP	0.588	0.689	0.613	0.842					0.709
IN	0.555	0.706	0.662	0.702	0.830				0.690
UE	0.666	0.725	0.586	0.656	0.682	0.792			0.628
HE	0.543	0.631	0.670	0.645	0.720	0.623	0.726		0.527
CL	0.646	0.679	0.556	0.692	0.713	0.721	0.690	0.815	0.664

* SY : Synchronization, SC : Seamlessness, II : Integrated Interaction Quality, UP : Usage Proficiency, IN : Innovativeness, UE : Utilitarian Experience, HE : Hedonic Experience, CL : Customer Loyalty

4.4 Path Analysis Results

To establish statistical significance, bootstrapping sampling is employed to analyze the path coefficient verified through path analysis in the PLS structural equation (Hair et al., 2014). This study utilized R ver 4.4.1 PLSPM Package to perform structural equation analysis, verifying the path coefficient's significance through 2,000 bootstrapping resamples.

The path coefficient represents the relationship between two variables' correlation value and standardized variable value. A path coefficient estimate ap-

proaching +1 indicates a statistically significant positive impact, while a value nearing -1 suggests a negative influence. The path coefficient's value is determined by the significant bootstrapping standard error, which is used to calculate the t_{value} . A t_{value} exceeding the threshold implies a significant coefficient value. For two-sided verification, a general threshold of 1.96 or higher is typically used, with 0.5 or more being considered significant (Hair et al., 2014). The study's path analysis results are presented in <Table 5>.

<Table 5> Results of Path Analysis

Hypothetical Path		Mean.Boot	Std.Error	t_value	p_value	Result	
H1	H1-1	SY → UE	0.260	0.082	3.088	0.002**	Adopted
	H1-2	SC → UE	0.274	0.072	3.853	0.000***	Adopted
	H1-3	II → UE	-0.003	0.063	-0.087	0.931	Rejected
	H1-4	UP → UE	0.144	0.071	2.061	0.040*	Adopted
	H1-5	IN → UE	0.241	0.083	2.953	0.003**	Adopted
H2	H2-1	SY → HE	0.084	0.058	1.433	0.153	Rejected
	H2-2	SC → HE	-0.007	0.074	-0.042	0.967	Rejected
	H2-3	II → HE	0.267	0.060	4.451	0.000***	Adopted
	H2-4	UP → HE	0.149	0.068	2.261	0.025*	Adopted
	H2-5	IN → HE	0.407	0.075	5.375	0.000***	Adopted
H3	UE → CL	0.472	0.055	8.654	0.000***	Adopted	
H4	HE → CL	0.395	0.056	7.032	0.000***	Adopted	

* SY : Synchronization, SC : Seamlessness, II : Integrated Interaction Quality, UP : Usage Proficiency, IN : Innovativeness, UE : Utilitarian Experience, HE : Hedonic Experience, CL : Customer Loyalty

* Significance Level : *p<0.05, **p<0.01, ***p<0.001

An analysis of omnichannel service characteristics and practical experience revealed significant impacts from Synchronization ($t=3.088$, $p=0.002$), Seamlessness ($t=3.853$, $p=0.000$), Usage Proficiency ($t=2.061$, $p=0.040$), and Innovativeness ($t=2.953$, $p=0.003$). Notably, smoothness and concurrency demonstrated substantial influence on the practical experience of omni-channel services. Conversely, innovativeness showed no effect on practical experience, suggesting that users don't perceive omni-channel shopping as innovative or practical due to their familiarity with various mobile and internet shopping platforms.

Examining the relationship between omni-channel service characteristics and hedonic experience, the study confirmed the significance of Integrated Interaction Quality ($t=4.451$, $p=0.000$), Usage Proficiency ($t=2.261$, $p=0.025$), and Innovativeness ($t=5.375$, $p=0.000$). Innovativeness and integrated interaction quality exhibited a strong influence, indicating their importance in users' pleasure-seeking experiences. However, simultaneity and seamlessness did not affect hedonic experience, implying that while users appreciate simultaneous access and smooth purchasing in omni-channel services, they don't derive pleasure from these features in the mobile shopping era, viewing them as standard offerings.

The study also explored the impact of experience on customer loyalty. Both utilitarian experience ($t=8.654$, $p=0.000$) and hedonic experience ($t=7.032$, $p=0.000$) were found to significantly affect customer loyalty. This finding underscores the crucial role of omni-channel service experiences in enhancing customer loyalty.

V. Conclusion

This study examines the impact of omnichannel retail services on customer loyalty. The findings identify four key factors influencing the utilitarian experience: Synchronization, Seamlessness, Usage Proficiency, and Innovativeness. While Usage Proficiency, Innovativeness, and Integrated Interaction Quality positively impact hedonic experience, synchronization and seamlessness do not. Furthermore, both hedonic and utilitarian experiences significantly impact customer loyalty, emphasizing the importance of both functional and emotional benefits in Vietnam's competitive market.

5.1 Theoretical Implication

This study offers a significant contribution to the understanding of omnichannel service environments. First, it expands prior research (Shi et al., 2020) by introducing Usage Proficiency and Innovativeness. Second, Innovativeness and Usage Proficiency positively influence both hedonic and utilitarian experiences, aligning with El Gendi (2017), and Zhang (2023). This is explained in the Vietnamese market where youth's tech-savviness and preference for innovation (Lee et al., 2023) find omnichannel services both useful and enjoyable. Fourth, while Synchronization and Seamlessness enhance the utilitarian experience, integrated interaction quality only affects the hedonic experience. Although this contrasts with the findings of Mirzabeiki & Saghiri (2020), who linked seamlessness to convenience and ease of use but aligns with Grönroos (1984), who emphasized its role in customer satisfaction. This is possibly due to Vietnam's collectivist culture, where social recommendation plays a key role (Dang et al., 2024).

5.2 Managerial Implication

This research yields several key insights for managers in omnichannel retail services. To boost customer loyalty, companies should focus on enhancing both hedonic and utilitarian aspects of the shopping experience.

First, strengthening both enjoyment and efficiency is crucial to meeting the dual expectations of Vietnam's young consumers (Olsen & Tuu, 2017), thus enhancing customer loyalty. Second, for hedonic experiences, retailers should improve integrated interaction quality, ensuring consistent brand messaging across channels. Enhancing usage proficiency through clear, user-friendly guidance also helps customers navigate omnichannel services smoothly, making promotions and benefits easily accessible. Third, for utilitarian-driven consumers, retailers should optimize real-time inventory synchronization and purchase history tracking. In Vietnam, where social commerce is popular, integrating direct purchases from platforms like Facebook and Zalo into centralized systems remains a challenge. Brands that address this effectively can gain a competitive edge.

By implementing these strategies, retailers can create a more compelling omnichannel experience, fostering long-term engagement and sustaining a competitive advantage in Vietnam's rapidly evolving retail landscape.

5.3 Limitations and Future Studies

Although this study has provided valuable insights, it still has several limitations that future research can address. First, its focus on Vietnam limits generalizability, as customer perceptions and behaviors of omnichannel retailing vary across cultural economic, and geographic contexts. Future studies should explore diverse regions for a global perspective. Second, the study is not industry-specific, despite differences in omnichannel retailing across sectors. Research on specific industries or cross-sector comparisons would provide more targeted recommendations. Third, the sample (252 respondents, mainly young females) may introduce bias. Future studies should use more balanced samples to enhance generalizability. Finally, the study lacks control variables like prior online shopping experience or technology familiarity, which may influence perceptions. Future research should include these factors for a deeper understanding of customer experience and loyalty.

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승실대학교 경영대학원에서 경영학 석사를 취득하였다. 주요 관심 분야는 서비스마케팅, 고객경험 등이다.

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승실대학교 대학원에서 경영학 박사를 취득하였으며 현재 (주)소올아이티에서 재직 중이다. 주요 연구 관심 분야는 AI 기술, 빅데이터 분석, IT 기반 경영전략 등이다.

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미국 University of Nebraska-Lincoln에서 경영학 박사학위를 취득하였으며, 프랑스 인시아드(INSEAD)에서 초빙연구원과 미국 Merrimack 대학에서 경영학부 교수를 역임한 후 현재 승실대학교 경영학부 교수로 재직 중이다. 주요 연구 분야는 운영 관리, 서비스 품질평가, IT 기반의 혁신전략 및 품질 4.0 등이다.