





# “Brand love and customer loyalty in digital banking: The mediating role of online brand experience and the moderating role of digital information overload”

**AUTHORS**  
Pham Thi Kim Thanh   
Nguyen Ha Thach   
Nguyen Thi Minh Thuy   
Luong Thi Thanh Viet   
Phan Thi Huyen   
Pham Thi Ngoc Dung 


**ARTICLE INFO**  
Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen and Pham Thi Ngoc Dung (2026). Brand love and customer loyalty in digital banking: The mediating role of online brand experience and the moderating role of digital information overload. *Banks and Bank Systems*, 21(2), 259–274. doi:[10.21511/bbs.21\(2\).2026.18](https://doi.org/10.21511/bbs.21(2).2026.18)

**DOI** [http://dx.doi.org/10.21511/bbs.21\(2\).2026.18](http://dx.doi.org/10.21511/bbs.21(2).2026.18)

**RELEASED ON** Monday, 29 June 2026

**RECEIVED ON** Wednesday, 31 December 2025

**ACCEPTED ON** Wednesday, 13 May 2026

**LICENSE**   
This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)


**JOURNAL** "Banks and Bank Systems"

**ISSN PRINT** 1816-7403

**ISSN ONLINE** 1991-7074

**PUBLISHER** LLC “Consulting Publishing Company “Business Perspectives”

**FOUNDER** LLC “Consulting Publishing Company “Business Perspectives”

  
NUMBER OF REFERENCES  
**58**

  
NUMBER OF FIGURES  
**1**

  
NUMBER OF TABLES  
**6**

© The author(s) 2026. This publication is an open access article.



## BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10,  
Sumy, 40022, Ukraine  
[www.businessperspectives.org](http://www.businessperspectives.org)

Type of the article: Research Article

Received on: 31<sup>st</sup> of December, 2025

Accepted on: 13<sup>th</sup> of May, 2026

Published on: 29<sup>th</sup> of June, 2026

© Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung, 2026

Pham Thi Kim Thanh, MSc, Lecturer, Faculty of Accounting and Auditing, University of Finance – Marketing, Vietnam.

Nguyen Ha Thach, Ph.D., Faculty of Business Administration, Industrial University of Ho Chi Minh City, Vietnam. (Corresponding author)

Nguyen Thi Minh Thuy, MSc, Lecturer, Faculty of Business Administration, Industrial University of Ho Chi Minh City, Vietnam.

Luong Thi Thanh Viet, Ph.D., Lecturer, Faculty of Accounting and Auditing, University of Finance – Marketing, Vietnam.

Phan Thi Huyen, MSc, Lecturer, Faculty of Accounting and Auditing, University of Finance – Marketing, Vietnam.

Pham Thi Ngoc Dung, MSc, Lecturer, Faculty of Accounting and Auditing, University of Finance – Marketing, Vietnam.



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Conflict of interest statement:**

Author(s) reported no conflict of interest

Pham Thi Kim Thanh (Vietnam), Nguyen Ha Thach (Vietnam),  
Nguyen Thi Minh Thuy (Vietnam), Luong Thi Thanh Viet (Vietnam),  
Phan Thi Huyen (Vietnam), Pham Thi Ngoc Dung (Vietnam)

# BRAND LOVE AND CUSTOMER LOYALTY IN DIGITAL BANKING: THE MEDIATING ROLE OF ONLINE BRAND EXPERIENCE AND THE MODERATING ROLE OF DIGITAL INFORMATION OVERLOAD

**Abstract**

The shift toward digital banking has transformed how consumers build relationships with financial brands. As banking interactions increasingly occur through mobile applications and online platforms, understanding how emotional attachment is converted into customer loyalty has become important in digital banking research. This study aims to examine how the three dimensions of brand love – intimacy, passion, and commitment – influence customer loyalty through online brand experience, and how digital information overload moderates the relationship between online brand experience and customer loyalty. Data were collected from Vietnamese digital banking users through online and offline surveys conducted in June and July 2025. Respondents were required to have used their current digital banking brand for at least one year. After screening 593 responses, 527 valid questionnaires were analyzed using partial least squares structural equation modeling. The results show that intimacy and passion positively affect commitment, with path coefficients of 0.423 and 0.362, respectively. Intimacy, passion, and commitment positively influence online brand experience, with coefficients of 0.342, 0.314, and 0.280, respectively. Online brand experience strongly predicts customer loyalty ( $\beta = 0.637$ ) and mediates the effects of intimacy, passion, and commitment on loyalty, with indirect effects of 0.218, 0.200, and 0.178. Digital information overload negatively moderates the online brand experience and loyalty relationship ( $\beta = -0.049$ ). The findings confirm that emotional attachment strengthens customer loyalty through online brand experience, whereas excessive digital information weakens this process.

**Keywords**

brand love, customer loyalty, digital banking, brand experience, information overload

**JEL Classification**

M31, G21, O33

**INTRODUCTION**

Over the past decade, digital banking has redefined the landscape of financial services, particularly in emerging markets across Asia. According to Statista (2023), the growth of cashless transactions in Vietnam has been remarkable, with a significant increase in transactions conducted via digital platforms such as internet banking and mobile banking in 2023. As banking interactions increasingly move from physical branches to mobile applications and online platforms, customer relationships with financial brands are no longer shaped only by service access or transaction efficiency, but also by emotional attachment and the quality of digital interaction. Within this shift, emotional drivers such as brand love and online brand experience (OBEX)

have become central to understanding how customer relationships evolve in virtual service environments (Wong, 2023).

This transformation raises an important scientific problem for digital banking research. In a service context where direct human contact is reduced, banks need to understand how emotional bonds with a brand are translated into customer loyalty through online experiences. At the same time, customers are increasingly exposed to notifications, promotional messages, app-based content, and other digital information, which may create cognitive pressure and weaken their engagement with banking brands. While online brand experience has been extensively studied as a pathway to customer loyalty, especially in technology-mediated services (Levy, 2022), brand love remains relatively underexplored in terms of its internal structure and functional components. Traditionally treated as a unidimensional concept, brand love is more complex and may be better understood through the lens of Sternberg's (1986) Triangular Theory of Love (TTL), which identifies intimacy, passion, and commitment as its three core elements. Emerging studies suggest that each component exerts a distinct influence on consumer attitudes and behavior, particularly in digital contexts where emotional engagement is mediated through screens rather than human interaction (Chen et al., 2025).

In the absence of physical touchpoints, understanding OBEX as a psychological construct becomes even more critical (Karim et al., 2023; Levy, 2022). Drawing on the Stimulus-Organism-Response (S-O-R) framework, brand-related emotions may be viewed as stimuli that shape customers' internal online experiences and subsequent behavioral responses. Although several studies have explored this model in isolation, very few have attempted to integrate TTL into the S-O-R framework, particularly to investigate how each dimension of brand love individually affects OBEX and subsequent loyalty outcomes (Pal et al., 2023; Pourazad et al., 2024).

A further gap in the literature involves the role of digital information overload (DIOV). In today's digital banking environments, customers are continuously exposed to excessive information from mobile apps, notifications, and promotional content. Such cognitive overload may impair the user's ability to engage meaningfully with the brand, thereby weakening the OBEX – loyalty relationship (Li et al., 2025; Sharma et al., 2023). Although this concept has been examined in e-commerce, its implications for banking – a sector increasingly dependent on digital engagement – remain insufficiently studied.

Therefore, the central problem addressed in this study is how emotional attachment to a digital banking brand is converted into customer loyalty through online brand experience, and whether this process is weakened when customers face digital information overload. By focusing on this problem, the study responds to the need for a clearer explanation of loyalty formation in digital banking environments where emotional connection, online experience, and information pressure coexist.

---

## 1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section reviews the theoretical foundations and empirical evidence related to brand love, online brand experience, customer loyalty, and digital information overload in digital banking. It first discusses the relevance of the Triangular Theory of Love and the Stimulus-Organism-Response framework, and then develops hypotheses con-

cerning the direct, mediating, and moderating relationships in the proposed model.

Sternberg's (1986) Triangular Theory of Love was originally developed to explain emotional dynamics in interpersonal relationships. In marketing research, TTL has been adapted as a theoretical foundation to study consumer attachment to brands, particularly by emphasizing how emotional connection can be formed and maintained over time. Empirical research has shown that brand love, structured through the TTL framework, sig-

nificantly impacts brand attachment and loyalty behaviors (Nawaz et al., 2020). Importantly, each dimension of TTL plays a distinct role in shaping behavioral outcomes; for instance, commitment has been identified as the key driver of long-term brand relationships (Acker & Davis, 1992).

However, the application of TTL in consumer research remains subject to debate. Some scholars argue that brand love is inherently a one-sided relationship, lacking the reciprocal dynamics inherent in TTL's original interpersonal framework (Fetscherin, 2019). Furthermore, most existing studies treat brand love as a unified construct without isolating the specific effects of intimacy, passion, and commitment (Albert & Merunka, 2013). This limits the explanatory potential of TTL regarding mediating variables such as brand experience or customer satisfaction.

In response, this study adopts a disaggregated approach to TTL by independently examining the roles of intimacy, passion, and commitment. This allows for a more precise understanding of how each emotional dimension shapes online brand experience and customer loyalty within the context of digital banking (Junaid et al., 2022).

The S-O-R model, originally proposed by Mehrabian and Russell (1974), conceptualizes human behavior as the result of internal emotional and cognitive processing in response to environmental stimuli. In the digital era, this framework has been extensively expanded to explain consumer behavior on digital platforms such as e-commerce and online banking (Kumar & Hsieh, 2024). In this model, external triggers such as interface design, advertising, and content presentation serve as stimuli; internal affective and cognitive states – such as trust, satisfaction, or emotional arousal – form the organism; and consumer behaviors like loyalty or continued usage represent the response (Anisimova et al., 2019).

Prior research suggests that favorable digital experiences trigger positive emotional states and trust, which in turn lead to loyalty outcomes (Makudza, 2021). Conversely, negative stimuli such as digital information overload may provoke adverse emotional responses and undermine customer retention (Chopdar et al., 2022). In digital banking spe-

cifically, recent studies have confirmed that service interface quality and experience management significantly influence loyalty through emotional mechanisms (Hoang, 2024).

However, the extant literature largely treats stimulus effects as unidirectional and positive, offering limited insight into how competing emotional forces – both positive and negative – interact in shaping customer outcomes (Jacoby, 2002). Therefore, this study adopts the S-O-R model to investigate the dual role of online brand experience (a positive factor) and digital information overload (a negative factor) in shaping customer loyalty within the digital banking environment.

Informed by Sternberg's (1986) Triangular Theory of Love, the construct of brand love in this study is conceptualized as a multifaceted emotional bond comprising intimacy, passion, and commitment. Each represents a distinct but interrelated dimension that underpins the consumer-brand relationship in digital settings. In the context of modern marketing, particularly within digital service environments, these components have been shown to drive critical consumer behaviors, including loyalty, positive word-of-mouth, and continued usage intention (Albert et al., 2013; C. Rodrigues & R. Rodrigues, 2019; Wong, 2023).

In digital banking, where physical interaction is entirely absent, emotional connection serves as a primary mechanism for forming consumer-brand relationships (Karim et al., 2023; Levy, 2022). Accordingly, the three elements – intimacy (INTI), passion (PASS), and commitment (COMM) – are not only outcomes of brand attachment but also serve as emotional stimuli within the S-O-R framework (Mehrabian & Russell, 1974; Safeer & Nazir, 2025). Integrating TTL with the S-O-R model allows for more nuanced analysis of how each emotional component is internalized and translated into cognitive and behavioral outcomes.

Specifically, online brand experience (OBEX), defined as the aggregate of cognitive and emotional responses during digital interactions with a brand, represents the Organism component in the S-O-R framework (Khan et al., 2020; Safeer & Le, 2023). OBEX is directly shaped by the emotional stimuli derived from brand love and reflects how consum-

ers internalize and respond to feelings of intimacy, passion, and commitment during digital engagement (Chen et al., 2022; Pal et al., 2023).

Despite this, most prior studies have treated brand love as a composite construct, lacking in-depth examination of its individual dimensions in the development of digital customer experience (Khan et al., 2020; Wang et al., 2019). This limitation highlights the need for an empirical model that disaggregates INTI, PASS, and COMM as independent emotional drivers, each influencing specific aspects of OBEX in digital banking contexts. Accordingly, this study proposes an integrated model in which TTL components serve as emotional stimuli within the S-O-R framework and OBEX functions as the internal organismal response. This conceptualization enhances theoretical clarity and provides a foundation for testing the emotional mechanisms underlying brand loyalty in digital settings.

In digital banking environments, where physical interaction is fully replaced by digital engagement, OBEX plays a pivotal role in shaping customer perceptions and behaviors. OBEX is defined as the aggregated cognitive and emotional response generated through customer interactions with a brand via digital touchpoints, including mobile applications, websites, and social media platforms (Khan et al., 2020; Safeer & Le, 2023). It encompasses various factors such as aesthetics, interactivity, responsiveness, and personalization, which significantly contribute to trust formation and emotional brand attachment (Bhatnagr & Rajesh, 2025; Garzaro et al., 2021).

Empirical studies have consistently demonstrated that OBEX has a direct and positive influence on customer loyalty (CULO). It does so by eliciting favorable emotional responses, fostering trust, and decreasing the likelihood of brand switching (Levy, 2022; Mbama et al., 2018). Customers who have positive digital brand experiences are more inclined to continue using the services, recommend the brand to others, and develop long-term relationships with the provider (Mukerjee, 2018; Yuen et al., 2022).

Despite existing evidence linking brand love components to customer loyalty (Albert & Merunka, 2013; Wong, 2023), the role of OBEX as a mediat-

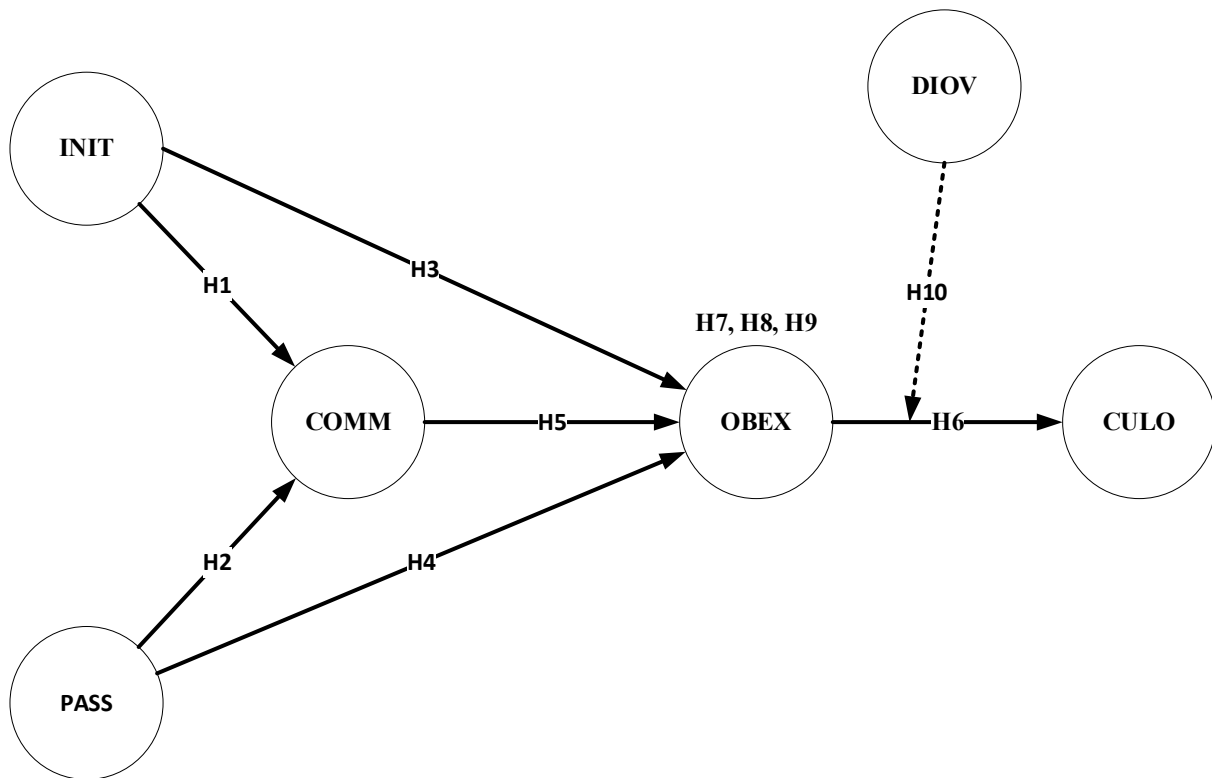
ing mechanism within the S-O-R framework has received limited empirical attention (Choi et al., 2024; Robertson et al., 2022). Emerging studies suggest that digital experience can act as a linking mechanism between emotional antecedents and behavioral outcomes, effectively serving as a mediator in digital consumer behavior models (Khan et al., 2020; Safeer & Nazir, 2025).

In the context of digital banking, where emotional engagement is predominantly mediated through virtual interfaces, OBEX becomes the key affective layer connecting consumers with brands. As such, it plays a central role in developing customer loyalty (Levy, 2022). Therefore, this study examines the mediating function of OBEX in the relationships between individual components of brand love and customer loyalty.

This integrated perspective contributes to the literature by extending the TTL and S-O-R frameworks. It does so by embedding emotional drivers and digital experience into a unified conceptual model. Moreover, it provides practical implications for designing emotionally resonant and effective digital customer journeys in banking services.

Digital information overload (DIOV) refers to a condition in which consumers are exposed to more information than they can cognitively manage within a given time frame. This state often leads to mental fatigue, impaired decision-making, and decreased brand interaction (Graf & Antoni, 2023; Hochstein et al., 2023; Tian et al., 2025). In the context of digital banking, DIOV frequently arises due to the proliferation of content from mobile applications, promotional emails, transactional alerts, and social media. These multiple streams of information can overwhelm users and divert their attention from meaningful brand engagement (Chauhan et al., 2022; Levy, 2022).

DIOV has been found to impair OBEX through three primary mechanisms. First, it contributes to cognitive fatigue, reducing consumers' ability to focus and effectively process brand-related inputs (Wang et al., 2023a). Second, it diminishes trust, as users struggle to filter credible messages from irrelevant or manipulative content (Atele-Williams & Marsh, 2023; Hochstein et al., 2023;



**Figure 1.** Proposed research model

Wang et al., 2023a). Third, it leads to decision paralysis, where excessive or conflicting information disrupts the consumer's capacity to make timely and confident decisions (Hochstein et al., 2023; Wang et al., 2023a). Collectively, these effects undermine the emotional and experiential pathways through which OBEX contributes to brand loyalty in digital environments.

Although prior research confirms that OBEX has a positive effect on CULO by enhancing trust, satisfaction, and engagement (Bhatnagr & Rajesh, 2025; Mbama et al., 2018), limited empirical attention has been paid to the moderating influence of DIOV on this relationship. Recent findings suggest that under conditions of high informational stress, even strong digital brand experiences may become less effective in cultivating consumer loyalty (Graf & Antoni, 2023; Hochstein et al., 2023; Wang et al., 2023b). DIOV acts as a moderator by weakening or amplifying the effect of OBEX on customer loyalty, depending on its intensity. When DIOV levels are high, consumers are more likely to exhibit adverse emotional and behavioral reactions. This attenuates the impact of OBEX on customer loyalty, reducing the effectiveness of otherwise positive digital experiences.

Taken together, the reviewed literature suggests that brand love, online brand experience, and digital information overload are theoretically connected but have rarely been examined within a unified digital banking model. In particular, prior studies have not sufficiently clarified how the three dimensions of brand love shape loyalty through OBEX, nor how DIOV conditions this experiential pathway.

Therefore, this study aims to examine how the three dimensions of brand love – intimacy, passion, and commitment – influence customer loyalty in digital banking through online brand experience, and how digital information overload moderates the relationship between online brand experience and customer loyalty.

Based on the above theoretical rationale and supporting empirical findings, the following research hypotheses are proposed:

*H1: INTI has a positive effect on COMM.*

*H2: PASS has a positive effect on COMM.*

*H3: INTI positively influences OBEX.*

- H4: *PASS positively influences OBEX.*
- H5: *COMM positively influences OBEX.*
- H6: *OBEX positively influences CULO.*
- H7: *OBEX mediates the relationship between INTI and CULO.*
- H8: *OBEX mediates the relationship between PASS and CULO.*
- H9: *OBEX mediates the relationship between COMM and CULO.*
- H10: *DIOV moderates the relationship between OBEX and CULO, such that high DIOV weakens the positive effect of OBEX on CULO.*

Figure 1 illustrates the proposed research model, which integrates the TTL into the S-O-R framework. This conceptualization enables the disaggregation of brand love into three distinct emotional dimensions – intimacy, passion, and commitment – and investigates their individual effects on online brand experience and customer loyalty, with digital information overload introduced as a moderating variable.

## 2. METHODOLOGY

In the context of rapid digital transformation in Vietnam, digital banking has emerged as a dominant channel for financial transactions, particularly among younger consumers, such as Generation Z, who are both digitally savvy and expect high-quality service experiences. Recent research has shown that compliance with consumer protection regulations significantly influences young users' intention to continue using digital financial services (Dinh & Thanh, 2024). Furthermore, customer experience plays a critical role in shaping banks' financial performance, especially during periods of limited physical interaction, such as the Covid-19 pandemic (Nguyen et al., 2022).

Alongside regulatory and experiential factors, existing research highlights that trust, perceived value, behavioral control, brand equity, and perceptions of social value, utility, and risk collectively

serve as key determinants shaping users' attitudes, behavioral intentions, and loyalty in the context of mobile and digital banking adoption in Vietnam (Khoi et al., 2018; Liang & Nguyen, 2018; Tuong et al., 2025). These insights reinforce the necessity of developing a contextualized understanding of consumer behavior in digital banking environments as a theoretical foundation for model development aligned with Vietnam's market realities.

All measurement items in this study were adapted from well-established and validated scales in the extant literature. A five-point Likert scale was employed, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Brand love was measured using three dimensions – passion, intimacy, and commitment – based on the frameworks of Chen et al. (2025) and Sternberg (1986). Online brand experience was measured based on the scales developed by Morgan-Thomas and Veloutsou (2013) and Yasin et al. (2020). Customer loyalty followed the structure proposed by Kurtoğlu et al. (2022). Finally, digital information overload was measured following the scales by Li et al. (2025) and Sharma et al. (2023). To assess content validity, two domain experts – a university marketing lecturer and a brand manager in the banking sector – reviewed all items for relevance, clarity, and cultural appropriateness. Revisions were made accordingly. A pilot test involving 30 users of digital banking platforms was subsequently conducted to refine the wording, sequence, and structure of the survey instrument. The final questionnaire included screening questions, demographic questions, and measurement items for intimacy, passion, commitment, online brand experience, customer loyalty, and digital information overload. The measurement items are provided in Appendix A.

This study adopted a non-probability convenience sampling strategy to target individuals with prior experience using digital banking services in Vietnam. Data were collected through both offline and online channels. Offline surveys were conducted at selected branches of commercial banks, with staff members assisting in the distribution and clarification of the questionnaire. In parallel, the online version was hosted via Google Forms and distributed via Zalo, a widely used digital communication platform in Vietnam. Data collection was carried out during June and July 2025.

Before participating in the survey, respondents were informed of the academic purpose of the study, the voluntary nature of participation, and their right to withdraw at any stage. No personally identifiable information was collected. To ensure alignment with the study's focus on brand love, a filtering criterion was applied: only respondents who had used their current digital banking brand for at least one year were invited to complete the full survey. This criterion is grounded in the theoretical premise that emotional attachment to a brand typically develops through sustained and repeated interactions, which serve as a foundation for downstream outcomes such as loyalty and positive word-of-mouth (Junaid et al., 2022; Levy, 2022; Verma, 2021). A total of 593 responses were collected. After removing incomplete or invalid entries, 527 valid cases were retained for data analysis.

**Table 1.** Research sample structure (n = 527)

Sources: Author's study.

Variables		n	%
Gender	Male	159	30.17
	Female	368	69.83
Demographic age	18-25	335	63.57
	26-35	90	17.08
	36-50	56	10.63
	≥50	46	8.73
Education	High school and below	55	10.44
	Vocational training or an associate degree	18	3.41
	Undergraduate degree	407	77.23
	Master's or Doctorate	47	8.92
Occupation	Student	245	46.49
	Self-employment	34	6.45
	Working in the private sector	118	22.39
	Working in the public sector	110	20.87
Income (Million VND)	Other	20	3.80
	Less than 5 million VND	148	28.08
	Between 5 and less than 10 million VND	89	16.89
	Between 10 and less than 15 million VND	129	24.48
	Above 15 million VND	161	30.55

Table 1 outlines the demographic characteristics of the 527 respondents included in the survey. Female participants made up 69.83% of the sample, while males accounted for 30.17%. Although not balanced, this distribution offers an opportunity to explore possible gender-based differences in

digital banking perceptions, especially in relation to emotional constructs such as intimacy, passion, and commitment. Most respondents (63.57%) were between 18 and 25 years old – an age group known for its frequent use of digital platforms and openness to new technologies. This is particularly relevant to the study, which focuses on online brand experience and the effects of digital information overload in the context of digital banking. In terms of educational background, more than 86% of respondents held at least a bachelor's degree, indicating a sample that is generally well-equipped to engage with digital financial tools. A large portion of the sample (46.49%) consisted of students, a group that typically develops early brand preferences and is active in mobile and online banking environments. The sample also captured a range of income levels, from under 5 million VND to over 15 million VND per month, which supports comparisons of loyalty and commitment across different economic groups. Overall, the demographic profile reflects the characteristics of emerging digital banking users in Vietnam and is appropriate for investigating how personal experiences and perceptions influence customer loyalty and brand relationships in digital financial services.

### 3. RESULTS

Data were analyzed using SmartPLS 4.0. The measurement model was assessed based on internal consistency, composite reliability, and average variance extracted, in accordance with Sarstedt et al. (2021). Discriminant validity was verified using the Fornell-Larcker criterion. The structural model was tested via PLS-SEM with 5,000 bootstrap samples. Path coefficients,  $R^2$ ,  $f^2$ , and  $Q^2$  values were reported to evaluate the strength and predictive power of relationships. Common method bias was assessed using collinearity diagnostics (VIF), ensuring that multicollinearity was not a concern (Kock, 2015; Sarstedt et al., 2021).

The results in Table 2 show that all outer loadings exceed the recommended threshold of 0.70, indicating adequate item reliability and that each observed variable adequately represents its underlying latent construct (Sarstedt et al., 2021). Cronbach's alpha values range from 0.783 to 0.886, and composite reliability (CR) scores from 0.873

**Table 2.** Outer loadings, Cronbach's Alpha, CR, and AVE

Sources: Author's study.

Constructs	Items	Outer loadings	Cronbach's alpha	CR	AVE	VIF
INTI	INTI1	0.862	0.847	0.907	0.766	1.964
	INTI2	0.880				2.043
	INTI3	0.883				2.144
PASS	PASS1	0.862	0.797	0.881	0.712	1.935
	PASS2	0.87				1.912
	PASS3	0.798				1.484
COMM	COMM1	0.784	0.783	0.873	0.697	1.512
	COMM2	0.870				1.901
	COMM3	0.850				1.656
OBEX	OBEX1	0.863	0.886	0.921	0.744	2.318
	OBEX2	0.860				2.309
	OBEX3	0.858				2.334
	OBEX4	0.870				2.463
DIOV	DIOV1	0.836	0.803	0.884	0.717	1.765
	DIOV2	0.874				1.936
	DIOV3	0.829				1.594
CULO	CULO1	0.766	0.821	0.882	0.651	1.518
	CULO2	0.844				1.963
	CULO3	0.795				1.778
	CULO4	0.821				1.878

to 0.921, all well above the 0.70 benchmark, reflecting satisfactory internal consistency across constructs (Sarstedt et al., 2021). Notably, OBEX and INTI demonstrate the highest reliability, confirming the robustness of measurements related to online brand experience and brand intimacy. All average variance extracted (AVE) values are above 0.50, suggesting good convergent validity (Fornell & Larcker, 1981).

Furthermore, all variance inflation factor (VIF) values fall below the critical value of 3.3, implying that multicollinearity is not a concern and that common method bias is unlikely to affect the results seriously (Kock, 2015; Roemer et al., 2021). This reinforces the validity and reliability of the measurement results. Overall, the findings confirm that the measurement model exhibits accept-

able reliability, convergent validity, and no serious multicollinearity issues. These results support the subsequent evaluation of the structural model and hypothesis testing in the context of digital banking.

Discriminant validity was evaluated using the Fornell-Larcker criterion, which requires that the square root of AVE for each construct exceeds its correlations with other constructs (Fornell & Larcker, 1981). As shown in Table 3, all constructs meet this condition (e.g., INTI = 0.875; OBEX = 0.863), indicating a clear distinction among latent variables. This is particularly relevant for closely related constructs such as INTI, PASS, and COMM, where theoretical overlap is possible (Robertson et al., 2022; Wong, 2023). The distinction between OBEX and CULO further supports

**Table 3.** Discriminant validity assessment using the Fornell-Larcker criterion

Sources: Author's study.

Constructs	COMM	CULO	DIOV	INTI	OBEX	PASS
COMM	0.835					
CULO	0.658	0.807				
DIOV	0.471	0.524	0.847			
INTI	0.641	0.631	0.420	0.875		
OBEX	0.693	0.750	0.468	0.711	0.863	
PASS	0.617	0.661	0.459	0.604	0.693	0.844

the independence of emotional and behavioral constructs in digital banking contexts (Obiegbu & Larsen, 2024; Safer & Nazir, 2025). These results confirm adequate discriminant validity, ensuring the measurement model's integrity for structural analysis.

## 4. ASSESSMENT OF THE STRUCTURAL MODEL

Collinearity was assessed using the VIF, with a threshold of 3.3 indicating the absence of serious multicollinearity (Kock, 2015). As shown in Table 4, all VIF values are equal to or very close to 1.000, suggesting minimal correlation among independent variables and confirming that collinearity is not a concern in this model. This condition is

critical for ensuring the accuracy and stability of parameter estimates in structural equation modeling (Sarstedt et al., 2021). In particular, when analyzing emotionally related constructs such as INTI, PASS, and COMM, controlling for collinearity is essential to prevent distortion in causal interpretations (Obiegbu & Larsen, 2024; Safer & Nazir, 2025). Additionally, the clear statistical independence between affective constructs and behavioral outcomes demonstrates high structural discriminability within the model (Wong, 2023). In sum, these results validate the methodological rigor of the study and provide a robust foundation for subsequent structural model testing without the risk of multicollinearity-induced bias.

Table 5 presents the hypothesis testing results, which confirm a strong and statistically significant interrelationship among the brand love components (intimacy, passion, commitment), online

**Table 4.** Collinearity variance inflation factors (VIFs) test

Sources: Author's study.

Constructs	COMM	CULO	DIOV	INTI	OBEX	PASS
COMM					1.000	
CULO						
DIOV		1.000				
INTI	1.000				1.000	
OBEX		1.000				
PASS	1.000				1.000	

**Table 5.** Hypotheses testing

Sources: Author's study.

Hypothesis	Path coefficient	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Results
<b>Direct effects</b>					
H1: INTI → COMM	0.423	0.045	9.337	0.000	Supported
H2: PASS → COMM	0.362	0.048	7.553	0.000	Supported
H3: INTI → OBEX	0.342	0.039	8.808	0.000	Supported
H4: PASS → OBEX	0.314	0.039	8.126	0.000	Supported
H5: COMM → OBEX	0.280	0.042	6.721	0.000	Supported
H6: OBEX → CULO	0.637	0.031	20.801	0.000	Supported
<b>Multiple indirect effects</b>					
H7: INTI → OBEX → CULO	0.218	0.026	8.366	0.000	Supported
H8: PASS → OBEX → CULO	0.200	0.027	7.441	0.000	Supported
H9: COMM → OBEX → CULO	0.178	0.029	6.105	0.000	Supported
<b>Moderating effects</b>					
H10: DIOV × OBEX → CULO	-0.049	0.023	2.137	0.033	Supported
Adjusted R <sup>2</sup>	R <sup>2</sup> <sub>COMM</sub> = 0.492; R <sup>2</sup> <sub>CULO</sub> = 0.601, R <sup>2</sup> <sub>OBEX</sub> = 0.652				
f <sup>2</sup>	f <sup>2</sup> <sub>INTI → COMM</sub> = 0.225; f <sup>2</sup> <sub>INTI → OBEX</sub> = 0.176; f <sup>2</sup> <sub>PASS → COMM</sub> = 0.165; f <sup>2</sup> <sub>PASS → OBEX</sub> = 0.156; f <sup>2</sup> <sub>COMM → OBEX</sub> = 0.114; f <sup>2</sup> <sub>OBEX → CULO</sub> = 0.774; f <sup>2</sup> <sub>DIOV × OBEX → CULO</sub> = 0.006				
Q <sup>2</sup>	Q <sup>2</sup> <sub>COMM</sub> = 0.389; Q <sup>2</sup> <sub>CULO</sub> = 0.414, Q <sup>2</sup> <sub>OBEX</sub> = 0.560				

brand experience, and customer loyalty in the context of digital banking. All direct, indirect, and moderating hypotheses were supported at the  $p < 0.05$  level.

Specifically, intimacy and passion had significant positive effects on commitment ( $\beta = 0.423; 0.362$ ), indicating that emotional closeness and enthusiasm are associated with stronger commitment to digital banking brands. This finding aligns with prior research highlighting how emotional closeness and excitement contribute to enduring consumer-brand relationships (Albert & Merunka, 2013; Robertson et al., 2022; C. Rodrigues & R. Rodrigues, 2019). These results lend support to Sternberg's triangular theory of love, suggesting that consumer-brand connections can emulate interpersonal love when emotional resonance and brand trust coexist (Karim et al., 2023; Sternberg, 1986).

Furthermore, all three dimensions of brand love significantly influenced OBEX ( $\beta_{\text{INTI} \rightarrow \text{OBEX}} = 0.342$ ;  $\beta_{\text{PASS} \rightarrow \text{OBEX}} = 0.314$ ;  $\beta_{\text{COMM} \rightarrow \text{OBEX}} = 0.280$ ), confirming OBEX as a key "organism" in the S-O-R model. These findings corroborate prior work identifying online brand experience as a product of emotional and cognitive responses to digital interactions (Chen et al., 2022; Khan et al., 2020; Levy, 2022). In the S-O-R framework, OBEX captures consumers' internal states, shaped by their emotional connections to the brand environment (Mehrabian & Russell, 1974; Safeer & Nazir, 2025).

More importantly, OBEX strongly predicted brand loyalty ( $\beta_{\text{OBEX} \rightarrow \text{CULO}} = 0.637$ ) and served as a crucial mediator linking emotional factors (INTI, PASS, COMM) to behavioral outcomes (CULO). The mediating effects – ( $\beta_{\text{INTI} \rightarrow \text{OBEX} \rightarrow \text{CULO}} = 0.218$ ), ( $\beta_{\text{PASS} \rightarrow \text{OBEX} \rightarrow \text{CULO}} = 0.200$ ), ( $\beta_{\text{COMM} \rightarrow \text{OBEX} \rightarrow \text{CULO}} = 0.178$ ) – demonstrate that OBEX plays an effective emotional-behavioral bridge in digital environments. This is in line with recent research stressing the significance of online experience as a predictor of customer loyalty in fintech and banking platforms (Bhatnagr & Rajesh, 2025; Choi et al., 2024; Sadek & El Mehelmi, 2020; Yasin et al., 2020).

Digital information overload was found to negatively moderate the OBEX-CULO relationship ( $\beta = -0.049$ ;  $p = 0.033$ ). When DIOV is high, the

positive influence of OBEX on customer loyalty diminishes, highlighting the disruptive role of emotional fatigue and cognitive saturation in digital contexts (Chauhan et al., 2022; Li et al., 2025; Sharma et al., 2023).

Lastly, the model demonstrated substantial explanatory and predictive power. The adjusted  $R^2$  values for OBEX (0.652) and CULO (0.601) that the model explains a considerable proportion of variance in these constructs. Predictive relevance was also high, with  $Q^2$  values exceeding 0.35 ( $Q^2_{\text{OBEX}} = 0.560$ ;  $Q^2_{\text{CULO}} = 0.414$ ), and the large effect size of OBEX  $\rightarrow$  CULO ( $f^2 = 0.774$ ) confirms its dominant mediating role (Sarstedt et al., 2021).

Overall, the results support all proposed hypotheses and show that OBEX is the main pathway through which brand love dimensions are associated with customer loyalty, while DIOV weakens the OBEX-CULO relationship.

## 5. DISCUSSION

This study contributes to the literature by extending the application of the TTL and the S-O-R framework to the context of digital banking, where the relationship between consumer emotions and customer loyalty remains underexplored. Unlike previous studies that treat brand love as a single construct, this study disaggregates it into three dimensions (intimacy, passion, and commitment), allowing for a more nuanced evaluation of each factor's role and mechanism in influencing online brand experience and customer loyalty. This approach aligns with Albert and Merunka's (2013) recommendation and clarifies the emotion-cognition-behavior mechanism in digital environments (Karim et al., 2023; Robertson et al., 2022). The finding that intimacy and passion positively affect commitment is consistent with prior brand love studies, which suggest that emotional closeness and enthusiasm are important antecedents of enduring consumer-brand relationships. In the digital banking context, this result indicates that customers' affective attachment to a banking brand can develop into commitment even when interactions are mainly mediated through digital interfaces.

From a theoretical standpoint, the model reveals that commitment is not merely a consequence of intimacy and passion but also an emotional antecedent of online brand experience. This finding strengthens the argument that commitment bridges emotional states and behavioral loyalty, consistent with recent research in banking and e-commerce (Levy, 2022; Safeer & Nazir, 2025). Moreover, the study emphasizes the central mediating role of OBEX between emotional antecedents (INTI, PASS, COMM) and loyalty, positioning OBEX as the “organism” in the S-O-R framework – an underexplored perspective in digital banking literature (Choi et al., 2024). This result is consistent with studies showing that online and digital experiences shape loyalty by improving customers’ affective and cognitive evaluations of service providers (Levy, 2022; Mbama et al., 2018; Yasin et al., 2020). However, this study extends those findings by showing that OBEX also transmits the effects of specific brand love dimensions to loyalty, rather than functioning only as a direct antecedent of loyalty. Notably, this research extends the S-O-R model by introducing digital information overload as a moderator, revealing that information overload weakens the positive effect of OBEX on loyalty. This finding is in line with research suggesting that excessive digital information can create cognitive fatigue and reduce users’ ability to process brand-related information effectively (Chauhan et al., 2022; Li et al., 2025; Sharma et al., 2023). It also helps explain why favorable digital experiences may not always produce strong loyalty when customers are exposed to excessive notifications, promotional content, and app-based information.

Empirically, the study utilizes survey data from 527 Vietnamese digital banking users – a fast-growing market undergoing rapid digital transformation. The SEM-PLS results demonstrate high adjusted  $R^2$  values (OBEX: 0.652; CULO: 0.601) and  $Q^2$  values above 0.35, indicating strong explanatory and predictive power. Notably, the effect size  $f^2$  from OBEX to CULO (0.774) highlights the dominant influence of brand experience on loyalty, echoing findings in the broader digital service literature. Compared with prior digital banking studies that emphasize trust, satisfaction, service quality, or technology acceptance, the present findings show that emotional attachment and online brand experience also provide a meaningful explanation of loyalty formation. This is particularly relevant in Vietnam, where digital banking use has expanded rapidly and customers increasingly evaluate banks through mobile and online interactions rather than through branch-based contact.

Overall, the study contributes to digital consumer behavior literature by establishing the central role of brand love in shaping digital experience and showing that OBEX links emotional antecedents with loyalty outcomes, though susceptible to disruption from digital information overload. Its disaggregated treatment of brand love, the inclusion of a moderator, and comprehensive model testing enhance both its theoretical novelty and empirical value. These findings suggest that loyalty in digital banking should not be understood only as a response to functional service quality, but also as the outcome of emotional attachment, accumulated online experience, and the level of information pressure imposed on customers.

---

## CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

This study aimed to examine how the three dimensions of brand love – intimacy, passion, and commitment – influence customer loyalty in digital banking through online brand experience, and how digital information overload moderates the relationship between online brand experience and customer loyalty. The findings suggest that OBEX is not merely a mediating factor but also a mechanism through which emotional attachment to a digital banking brand is translated into customer loyalty. Notably, commitment emerges as an important antecedent of online brand experience, while the moderating effect of digital information overload introduces a crucial boundary condition that attenuates the OBEX – CULO relationship. These findings indicate that loyalty formation in digital banking depends not only on customers’ emotional attachment to a brand, but also on the quality of their online experience and the level of information pressure they encounter.

Nevertheless, several limitations should be acknowledged. First, the cross-sectional nature of the data restricts the ability to draw causal inferences. While the use of PLS-SEM facilitates testing complex relationships, future studies employing longitudinal or experimental designs would be better suited to capture temporal dynamics and causality. Second, the study is geographically limited to digital banking users in Vietnam. Although Vietnam represents a fast-growing digital market, cultural norms and consumer behaviors may vary significantly in other contexts. Future research could expand to multi-country or cross-regional comparisons to enhance the generalizability of findings and explore the cultural contingencies in brand love and digital experience formation.

Another limitation stems from the reliance on self-reported data, which may be subject to social desirability and recall biases. Future studies could triangulate self-report measures with behavioral tracking or usage data to improve reliability and dimensional validity. Furthermore, while this research emphasized effective and perceptual variables, it would be valuable to integrate cognitive or affective load theories in subsequent work to better understand how consumers filter, process, and prioritize brand information under varying levels of digital saturation.

As digital banking increasingly incorporates AI-driven personalization, future studies should investigate how algorithmic interactions influence brand love and loyalty, possibly serving as moderators or mediators within the current model. The emotional tone, perceived empathy, and trust in AI-powered services could significantly extend the existing framework. Finally, enriching the theoretical model by incorporating constructs such as switching costs, customer satisfaction, or co-creation behavior may offer a more holistic understanding of digital loyalty formation.

In summary, the study shows that brand love contributes to customer loyalty primarily through online brand experience, but this process becomes weaker when customers face digital information overload. Future research can build on these findings by examining the model across different cultural contexts, using longitudinal or behavioral data, and incorporating emerging features of AI-enabled digital banking.

## AUTHOR CONTRIBUTIONS

Conceptualization: Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet.

Data curation: Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Formal analysis: Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Funding acquisition: Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Investigation: Pham Thi Kim Thanh, Nguyen Ha Thach, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Methodology: Pham Thi Kim Thanh, Nguyen Ha Thach, Luong Thi Thanh Viet, Phan Thi Huyen.

Project administration: Pham Thi Kim Thanh.

Resources: Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy.

Software: Nguyen Ha Thach, Phan Thi Huyen, Pham Thi Ngoc Dung.

Supervision: Nguyen Ha Thach.

Validation: Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Visualization: Nguyen Ha Thach.

Writing – original draft: Pham Thi Kim Thanh, Nguyen Ha Thach, Nguyen Thi Minh Thuy, Luong Thi Thanh Viet, Phan Thi Huyen, Pham Thi Ngoc Dung.

Writing – reviewing & editing: Pham Thi Kim Thanh, Nguyen Ha Thach.

## ACKNOWLEDGMENT

This research is partly funded by Industrial University of Ho Chi Minh City and University of Finance – Marketing.

## REFERENCES

1. Acker, M., & Davis, M. H. (1992). Intimacy, passion and commitment in adult romantic relationships: A test of the triangular theory of love. *Journal of social and personal Relationships*, 9(1), 21-50. <https://doi.org/10.1177/0265407592091002>
2. Albert, N., & Merunka, D. (2013). The role of brand love in consumer-brand relationships. *Journal of Consumer Marketing*, 30(3), 258-266. <https://doi.org/10.1108/07363761311328928>
3. Albert, N., Merunka, D., & Valette-Florence, P. (2013). Brand passion: Antecedents and consequences. *Journal of Business Research*, 66(7), 904-909. <https://doi.org/10.1016/j.jbusres.2011.12.009>
4. Anisimova, T., Weiss, J., & Mavondo, F. (2019). The influence of corporate brand perceptions on consumer satisfaction and loyalty via controlled and uncontrolled communications: a multiple mediation analysis. *Journal of Consumer Marketing*, 36(1), 33-49. <https://doi.org/10.1108/JCM-05-2017-2199>
5. Atele-Williams, T., & Marsh, S. (2023). Information trust model. *Cognitive Systems Research*, 80, 50-70. <https://doi.org/10.1016/j.cogsys.2023.02.004>
6. Bhatnagr, P., & Rajesh, A. (2025). Online customer experience in Indian digital banks impacting continuous intention usage: Generation Y and Z perspective. *Journal of Financial Reporting and Accounting*, 23(2), 830-850. <https://doi.org/10.1108/JFRA-11-2023-0638>
7. Chauhan, S., Akhtar, A., & Gupta, A. (2022). Customer experience in digital banking: a review and future research directions. *International Journal of Quality and Service Sciences*, 14(2), 311-348. <https://doi.org/10.1108/IJQSS-02-2021-0027>
8. Chen, C., Zhang, J., Bu, X., & Gao, J. (2022). Fueling the passion: The role online brand experiences play in developing harmonious or obsessive brand passion. *Human Systems Management*, 41(5), 629-642. <https://doi.org/10.3233/hsm-211566>
9. Chen, Q., Jing, Y., Gong, Y., & Tan, J. (2025). Will users fall in love with ChatGPT? a perspective from the triangular theory of love. *Journal of Business Research*, 186, 114982. <https://doi.org/10.1016/j.jbusres.2024.114982>
10. Choi, C.-J., Xu, J., & Min, D.-G. (2024). Investigating of the influence process on consumer's active engagement through emotional brand attachment and brand love. *Asia Pacific Journal of Marketing and Logistics*, 36(11), 3061-3080. <https://doi.org/10.1108/APJML-10-2023-1028>
11. Chopdar, P. K., Paul, J., Korfiatis, N., & Lytras, M. D. (2022). Examining the role of consumer impulsiveness in multiple app usage behavior among mobile shoppers. *Journal of Business Research*, 140, 657-669. <https://doi.org/10.1016/j.jbusres.2021.11.031>
12. Dinh, L. C., & Thanh, H. P. (2024). Enforcement of consumer rights protection laws and intention to reuse digital financial services among Generation Z youth: Empirical evidence from Vietnamese commercial banks. *Banks and Bank Systems*, 19(4), 17. [http://dx.doi.org/10.21511/bbs.19\(4\).2024.02](http://dx.doi.org/10.21511/bbs.19(4).2024.02)
13. Fetscherin, M. (2019). The five types of brand hate: How they affect consumer behavior. *Journal of Business Research*, 101, 116-127. <https://doi.org/10.1016/j.jbusres.2019.04.017>
14. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
15. Garzaro, D. M., Varotto, L. F., & Pedro, S. d. C. (2021). Internet and mobile banking: the role of engagement and experience on satisfaction and loyalty. *International Journal of Bank Marketing*, 39(1), 1-23. <https://doi.org/10.1108/IJBM-08-2020-0457>
16. Graf, B., & Antoni, C. H. (2023). Drowning in the flood of information: a meta-analysis on the relation between information overload, behaviour, experience, and health and moderating factors. *European Journal of Work and Organizational Psychology*, 32(2), 173-198. <https://doi.org/10.1080/1359432X.2022.2118051>
17. Hoang, D. P. (2024). Customer experience of video teller machine service: drivers and behavioural outcomes. *International Journal of Bank Marketing*, 42(7), 1634-1665. <https://doi.org/10.1108/IJBM-09-2023-0528>
18. Hochstein, R. E., Harmeling, C. M., & Perko, T. (2023). Toward a theory of consumer digital trust: Meta-analytic evidence of its role in the effectiveness of user-generated content. *Journal of the Academy of Marketing Science*, 53, 1034-1054. <https://doi.org/10.1007/s11747-023-00982-y>
19. Jacoby, J. (2002). Stimulus-organism-response reconsidered: an evolutionary step in modeling (consumer) behavior. *Journal of Consumer Psychology*, 12(1), 51-57. [https://doi.org/10.1207/S15327663JCP1201\\_05](https://doi.org/10.1207/S15327663JCP1201_05)
20. Junaid, M., Fetscherin, M., Hus-sain, K., & Hou, F. (2022). Brand

- love and brand addiction and their effects on consumers' negative behaviors. *European Journal of Marketing*, 56(12), 3227-3248. <https://doi.org/10.1108/EJM-09-2019-0727>
21. Karim, K., Ilyas, G. B., Umar, Z. A., Tajibu, M. J., & Junaidi, J. (2023). Consumers' awareness and loyalty in Indonesia banking sector: does emotional bonding effect matters? *Journal of Islamic Marketing*, 14(10), 2668-2686. <https://doi.org/10.1108/JIMA-03-2022-0092>
  22. Khan, I., Hollebeek, L. D., Fatma, M., Islam, J. U., & Rahman, Z. (2020). Brand engagement and experience in online services. *Journal of Services Marketing*, 34(2), 163-175. <https://doi.org/10.1108/JSM-03-2019-0106>
  23. Khoi, N. H., Tuu, H. H., & Olsen, S. O. (2018). The role of perceived values in explaining Vietnamese consumers' attitude and intention to adopt mobile commerce. *Asia Pacific Journal of Marketing and Logistics*, 30(4), 1112-1134. <https://doi.org/10.1108/APJML-11-2017-0301>
  24. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration (IJEC)*, 11(4), 1-10. Retrieved from [https://cits.tamtu.edu/kock/pubs/journals/2015JournalIJeC\\_CommonMethodBias/Kock\\_2015\\_IJeC\\_CommonMethodBiasPLS.pdf](https://cits.tamtu.edu/kock/pubs/journals/2015JournalIJeC_CommonMethodBias/Kock_2015_IJeC_CommonMethodBiasPLS.pdf)
  25. Kumar, S., & Hsieh, J.-K. (2024). How social media marketing activities affect brand loyalty? Mediating role of brand experience. *Asia Pacific Journal of Marketing and Logistics*, 36(10), 2300-2323. <https://doi.org/10.1108/APJML-09-2023-0900>
  26. Kurtoğlu, R., Özbölük, T., & Hacıhasanoğlu, P. (2022). Revisiting the effects of inward negative emotions on outward negative emotions, brand loyalty, and negative WOM. *Journal of Brand Management*, 29(1), 72-84. <https://doi.org/10.1057/s41262-021-00257-3>
  27. Levy, S. (2022). Brand bank attachment to loyalty in digital banking services: mediated by psychological engagement with service platforms and moderated by platform types. *International Journal of Bank Marketing*, 40(4), 679-700. <https://doi.org/10.1108/IJBM-08-2021-0383>
  28. Li, J., Ji, X., & Chen, F. (2025). Does information overload attract or Repel self-driving tourists? *Journal of Hospitality and Tourism Management*, 63, 343-365. <https://doi.org/10.1016/j.jhtm.2025.05.008>
  29. Liang, C.-C., & Nguyen, N. L. (2018). Marketing strategy of internet-banking service based on perceptions of service quality in Vietnam. *Electronic Commerce Research*, 18(3), 629-646. <https://doi.org/10.1007/s10660-017-9261-z>
  30. Makudza, F. (2021). Augmenting customer loyalty through customer experience management in the banking industry. *Journal of Asian Business and Economic Studies*, 28(3), 191-203. <https://doi.org/10.1108/JABES-01-2020-0007>
  31. Mbama, C. I., Ezepue, P., Alboul, L., & Beer, M. (2018). Digital banking, customer experience and financial performance. *Journal of Research in Interactive Marketing*, 12(4), 432-451. <https://doi.org/10.1108/JRIM-01-2018-0026>
  32. Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. The MIT Press. Retrieved from <https://mitpress.mit.edu/9780262630719/an-approach-to-environmental-psychology/>
  33. Morgan-Thomas, A., & Veloutsou, C. (2013). Beyond technology acceptance: Brand relationships and online brand experience. *Journal of Business Research*, 66(1), 21-27. <https://doi.org/10.1016/j.jbusres.2011.07.019>
  34. Mukerjee, K. (2018). The impact of brand experience, service quality and perceived value on word of mouth of retail bank customers: investigating the mediating effect of loyalty. *Journal of Financial Services Marketing*, 23(1), 12-24. <https://doi.org/10.1057/s41264-018-0039-8>
  35. Nawaz, S., Jiang, Y., Alam, F., & Nawaz, M. Z. (2020). Role of brand love and consumers' demographics in building consumer-brand relationship. *Sage Open*, 10(4). <https://doi.org/10.1177/2158244020983005>
  36. Nguyen, N. T. H., Kim-Duc, N., & Freiburghaus, T. L. (2022). Effect of digital banking-related customer experience on banks' financial performance during Covid-19: a perspective from Vietnam. *Journal of Asia Business Studies*, 16(1), 200-222. <https://doi.org/10.1108/JABS-09-2020-0366>
  37. Obiegbu, C. J., & Larsen, G. (2024). Algorithmic personalization and brand loyalty: An experiential perspective. *Marketing Theory*, 25(2), 199-219. <https://doi.org/10.1177/14705931241230041>
  38. Pal, D., Vanijja, V., Thapliyal, H., & Zhang, X. (2023). What affects the usage of artificial conversational agents? An agent personality and love theory perspective. *Computers in Human Behavior*, 145, 107788. <https://doi.org/10.1016/j.chb.2023.107788>
  39. Pourazad, N., Stocchi, L., Michaelidou, N., & Pare, V. (2024). What (really) drives consumer love for traditional luxury brands? The joint effects of brand qualities on brand love. *Journal of Strategic Marketing*, 32(4), 422-446. <https://doi.org/10.1080/0965254X.2023.2236615>
  40. Robertson, J., Botha, E., Ferreira, C., & Pitt, L. (2022). How deep is your love? The brand love-loyalty matrix in consumer-brand relationships. *Journal of Business Research*, 149, 651-662. <https://doi.org/10.1016/j.jbusres.2022.05.058>
  41. Rodrigues, C., & Rodrigues, P. (2019). Brand love matters to Millennials: the relevance of mystery, sensuality and intimacy to neo-luxury brands. *Journal of Product & Brand Management*, 28(7), 830-848. <https://doi.org/10.1108/JPBM-04-2018-1842>
  42. Roemer, E., Schuberth, F., & Henseler, J. (2021). HTMT2—an improved criterion for assessing discriminant validity in structural equation modeling. *Industrial management & data systems*, 121(12), 2637-2650. <https://doi.org/10.1108/IMDS-02-2021-0082>

43. Sadek, H., & El Mehelmi, H. (2020). Customer brand engagement impact on brand satisfaction, loyalty, and trust in the online context. Egyptian Banking Sector. *Journal of Business and Retail Management Research*, 14(03). <https://doi.org/10.24052/jbrmr/v14i03/art-03>
44. Safeer, A. A., & Le, T. T. (2023). Transforming customers into evangelists: influence of online brand experience on relationship quality and brand evangelism in the banking industry. *Asia Pacific Journal of Marketing and Logistics*, 35(12), 2947-2964. <https://doi.org/10.1108/APJML-12-2022-1018>
45. Safeer, A. A., & Nazir, M. (2025). Crafting brand love: role of perceived brand localness, foreignness, coolness and consumer identities in digital retail banking. *International Journal of Bank Marketing*, 43(4), 710-730. <https://doi.org/10.1108/IJBM-05-2024-0321>
46. Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of Market Research* (pp. 587-632). Springer. [https://doi.org/10.1007/978-3-319-57413-4\\_15](https://doi.org/10.1007/978-3-319-57413-4_15)
47. Sharma, M., Kaushal, D., & Joshi, S. (2023). Adverse effect of social media on generation Z user's behavior: Government information support as a moderating variable. *Journal of Retailing and Consumer Services*, 72, 103256. <https://doi.org/10.1016/j.jretconser.2023.103256>
48. Statista. (2023). *Transaction value of digital payments in Vietnam from 2018 to 2028, by segment*. Retrieved from <https://www.statista.com/forecasts/1228389/digital-payments-transaction-value-by-segment-vietnam>
49. Sternberg, R. J. (1986). A triangular theory of love. *Psychological Review*, 93(2), 119-135. Retrieved from [https://pzacad.pitzer.edu/~dmoore/psych199/1986\\_sternberg\\_trianglelove.pdf](https://pzacad.pitzer.edu/~dmoore/psych199/1986_sternberg_trianglelove.pdf)
50. Tian, Y., Chan, T. J., Liew, T. W., Chen, M. H., & Liu, H. N. (2025). Overwhelmed online: investigating perceived overload effects on social media cognitive fatigue via stressor-strain-outcome model. *Library Hi Tech, ahead-of-print* (ahead-of-print). <https://doi.org/10.1108/LHT-03-2024-0145>
51. Tuong, V. D., Thach, N. H., Khanh, P. N. K., Han, L. T. B., & Thanh, P. T. K. (2025). Understanding Gen Z's Digital Banking Loyalty: The Role of Switching Costs and Consumption Values. *Journal of Organizational Behavior Research*, 10(1), 44-57. <https://doi.org/10.51847/j4PjHlcm90>
52. Verma, P. (2021). The Effect of Brand Engagement and Brand Love upon Overall Brand Equity and Purchase Intention: A Moderated –Mediated Model. *Journal of Promotion Management*, 27(1), 103-132. <https://doi.org/10.1080/10496491.2020.1809591>
53. Wang, J., Shahzad, F., & Ashraf, S. F. (2023a). Elements of information ecosystems stimulating the online consumer behavior: A mediating role of cognitive and affective trust. *Telematics and Informatics*, 80, 101970. <https://doi.org/10.1016/j.tele.2023.101970>
54. Wang, Y., Mo, D. Y., & Ho, G. T. S. (2023b). How Choice Fatigue Affects Consumer Decision Making in Online Shopping. *2023 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)* (pp. 128-132). <https://doi.org/10.1109/IEEM58616.2023.10406866>
55. Wang, Y.-C., Qu, H., & Yang, J. (2019). The formation of sub-brand love and corporate brand love in hotel brand portfolios. *International Journal of Hospitality Management*, 77, 375-384. <https://doi.org/10.1016/j.ijhm.2018.08.001>
56. Wong, A. (2023). Understanding consumer brand love, Brand Commitment, and brand loyalty. *Journal of Relationship Marketing*, 22(2), 87-114. <https://doi.org/10.1080/15332667.2023.2173937>
57. Yasin, M., Liébana-Cabanillas, F., Porcu, L., & Kayed, R. N. (2020). The role of customer online brand experience in customers' intention to forward online company-generated content: The case of the Islamic online banking sector in Palestine. *Journal of Retailing and Consumer Services*, 52, 101902. <https://doi.org/10.1016/j.jretconser.2019.101902>
58. Yuen, K. F., Tan, L. S., Wong, Y. D., & Wang, X. (2022). Social determinants of panic buying behaviour amidst COVID-19 pandemic: The role of perceived scarcity and anticipated regret. *Journal of Retailing and Consumer Services*, 66, 102948. <https://doi.org/10.1016/j.jretconser.2022.102948>

## APPENDIX A

**Table A1.** Survey measurements

Constructs	No.	Items
Intimacy	INTI	Chen et al. (2025) and Sternberg (1986)
	INTI1	This brand is an important part of my daily financial life
	INTI2	I trust this digital banking brand more than others
	INTI3	I feel that this brand understands my financial needs in the digital environment
Passion	Passion	Chen et al. (2025) and Sternberg (1986)
	PASS1	I feel excited when interacting with this brand's digital banking services
	PASS2	I enjoy thinking about this digital banking brand
Commitment	PASS3	I feel a special connection with this digital banking brand
	COMM	Chen et al. (2025) and Sternberg (1986)
	COMM1	I plan to stay with this brand for my digital banking needs for a long time
	COMM2	I prefer to stick with this brand even when other banks offer similar digital services
Customer Loyalty	COMM3	I feel responsible for supporting this digital banking brand
	CULO	Kurtoğlu et al. (2022)
	CULO1	I intend to continue using this bank's digital services
	CULO2	I will recommend this digital banking brand to others
	CULO3	I prioritize this brand's digital offerings over competitors
Online Brand Experience	CULO4	I feel emotionally attached to this digital banking brand
	OBEX	Morgan-Thomas and Veloutsou (2013) and Yasin et al. (2020)
	OBEX1	I enjoy interacting with this brand through its website and mobile banking app
	OBEX2	This bank's digital platform is easy to navigate and use
	OBEX3	I can customize my digital banking experience with this brand
Digital Information Overload	OBEX4	I feel confident making transactions through this brand's digital channels
	DIOV	Li et al. (2025) and Sharma et al. (2023)
	DIOV1	I feel overwhelmed by the number of notifications and messages from this bank
	DIOV2	I find it hard to process all the digital information from this bank.
	DIOV3	I feel frustrated trying to find relevant information in the flood of digital content