Exploring Satisfaction and Impulsive Buying in Sustaining Cloud-Based Buy Now Pay Later

Erwin Halim
Information Systems Department
School of Information Systems
Bina Nusantara University
Jakarta 11480, Indonesia
erwinhalim@binus.ac.id

Chau Van Van
Faculty of Information Technologyt,
Posts and Telecommunications Institute of Technology
Ho Chi Minh city, Viet Nam
vancv@ptit.edu.vn

Thomas Tandewijaya
Information Systems Department
School of Information Systems
Bina Nusantara University
Jakarta 11480, Indonesia
thomas.tandewijaya@binus.ac.id

Angelyne Chatheryna Setiawan
Information Systems Department
School of Information Systems
Bina Nusantara University
Jakarta 11480, Indonesia
angelyne.setiawan@binus.ac.id

Faris Bayhaqi
Information Systems Department
School of Information Systems
Bina Nusantara University
Jakarta 11480, Indonesia
faris.bayhaqi@binus.ac.id

Anderes Gui
Information Systems Department
School of Information Systems
Bina Nusantara University
Jakarta 11480, Indonesia
anderesgui@binus.edu

Nguyen Minh Tuan*
Faculty of Information Technologyt,
Posts and Telecommunications Institute of Technology
Ho Chi Minh city, Viet Nam
minhtuan@ptit.edu.vn

***Abstract*—The rapid expansion of Buy Now Pay Later (BNPL) services have transformed consumer purchasing behavior, particularly among younger digital natives. However, the convenience of deferred payment has raised concerns about impulsive buying, indebtedness, and data security risks. This study aims to examine how system quality, service quality, perceived usefulness, confirmation, satisfaction, and impulsive buying influence the continued use of cloud computing that supports BNPL platforms. Data were collected using purposive sampling from 472 respondents in the Greater Jakarta area, Indonesia, between March and April 2025, consisting mainly of students, employees, and young professionals. The data were analyzed using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) technique to explore relationships among behavioral and technological constructs. The results show that perceived usefulness, confirmation, and satisfaction strongly affect user engagement and sustained technological use, while impulsive buying contributes positively to short-term satisfaction. The findings extend digital finance theory by linking psychological and technical dimensions in BNPL adoption and emphasizing the importance of ethical platform design and digital trust. Practically, the study offers insights for policymakers and fintech developers to enhance consumer protection and build responsible lending ecosystems.**

Keywords—buy now pay later, satisfaction, perceived usefulness, impulsive buying, cloud computing

I. INTRODUCTION

The rapid growth in financial technology innovation (Fintech) has changed the way customers engage in financial transactions, with the most sought-after service being Buy Now Pay Later (BNPL). BNPL allows customers to pay for products initially before paying late, offering convenience highly desirable to Generation Z, who are digital native consumers with evolving consumption behavior [1].

**Corresponding author: minhtuan@ptit.edu.vn*

While such services are convenient, they give rise to fears of unaffordable spending and fiscal vulnerability. The design of BNPL arrangements separates the pleasure of consumption from the pain of payment, creating a space where short-term gratification is derived while fiscal accountability is postponed. This arrangement undermines self-control and increases the tendency towards compulsive buying [1]. As BNPL reaches more corners of the globe, questions have been raised on whether convenience truly hides more insidious perils to consumer well-being.

Evidence suggests that such risks are at their most potent amongst financially precarious consumers. In Indonesia, nearly 48% of BNPL customers earn merely IDR 1–5 million monthly, leaving them susceptible to defaulting upon receiving aggressive marketing promotions [2]. The phenomenon is not limited to Indonesia. In China alone, more than 55% of youthful BNPL consumers admitted to purchasing items they would not have considered purchasing in the absence of delayed payment possibilities, suggesting happiness may be hiding long-term financial suffering [3]. Besides consumer behavior, misleading digital promotion techniques have added to the challenge as well. In August 2025, Indonesia's Ministry of Trade reported 14 products (18% of audited products) had their licenses revoked under Regulation No. 18/2024 for false representation, and 21 products (27%) were penalized for non-compliance with labeling requirements [4]. Although not directly related to BNPL, they highlight the risk of fraudulent promotion in e-commerce, where "easy installment" schemes deceive consumers and encourage unsound lending. Also, research shows that 40% of BNPL consumers are unsatisfied, about one-third later regret their purchase because of impulsive buying, showing that short-term satisfaction can conceal problems such as indebtedness and financial strain [5].

These problems also depend on the technology infrastructure upon which BNPL platforms are based. Most providers use systems based on cloud infrastructure so that

they are scalable, effective, and provide secure transactions. But these systems are vulnerable with respect to trust since 72% of users of fintech identify information security as the key concern in the adoption of financial apps [6]. Even minor breakdowns in service quality or information security would tarnish consumer confidence and uptake. It means that threats of BNPL lie not just in consumer behavior and promotion but also in the trustworthiness of technological systems supporting financial innovation. Moreover, the increase in personalized algorithmic and digital marketing makes engagement behavior even harder. Algorithmic personalization is found by studies to increase impulse financial decisions unless it is supported by clear data governance. These studies insist that ethical design and digital trust must be used for sustaining engagement instead of encouraging consumptive riskiness [7]

The objective of this research is to establish whether positive reports about BNPL obscure weaknesses that incur financial losses. The study adds value and contributes to practice and theory: for scholars, it advances the body of literature on consumer culture and digital finance; for practitioners, it offers a lesson in designing commercially successful BNPL systems with lending responsibility; and for policymakers, it reinforces the importance of regulating to defend consumers against fraud. Lastly, this study seeks to put on the map BNPL as not only a favorable payment method but also as a financial innovation whose risks and rewards need to be carefully considered in a bid to sustain consumer welfare sustainably [8], [9].

II. Literature Review

A. Service Quality

Service Quality is a user perception of the degree to which the service provided by a Buy Now, Pay Later company meets or exceeds their expectation. This metric goes beyond the minimum transaction to include the entire support system that characterizes the user experience. It includes the overall level of service, the reliability of delivery of the service, and the usability of the interface to meet payment needs. Quality service is also reflected in good and prompt communication of the terms of payment and charges, which forms a basis of trust. Reliability is also a critical factor, which means timely and accurate processing of payments and the stability of the operations of the platform [1]. A reliable service ensures proper handling of payments and that account information is up-to-date, which reduces user concern. Ease of interface use is also crucial, i.e., how straightforwardly customers can manage payment obligations and communicate their needs through the platform. That includes having a clean dashboard to look at payment terms and have due dates visible. Most critical of all, though, is the quality of customer care when a glitch does surface its availability, promptness, and effectiveness is a decent gauge of overall service quality [2]. These factors lead to a good or bad impression of the service, a feature that directly relates to the satisfaction of the user.

B. System Quality

System Quality is what the user perceives as the technical features of a Buy Now, Pay Later platform. This field differs from service quality in that it has to do only with the technology's performance, stability, and design. The evaluation includes several basic features that determine how smooth the user experience is. They are the ease of use and navigation, the aesthetic beauty of the design, and the feeling of security while paying. An extremely quality system is intuitive, allowing users to get transactions accomplished with minimal effort and navigate through the application in a rational manner [1]. The visual design also plays a role; a clean, lovely, and professional look might offer a better sense of trust to a user and make the experience more pleasant. Furthermore, the platform's promptness of loading data is also covered under system quality. System lag or slow loading can lead to frustration and end in users abandoning their transaction, which defeats the convenience that the service ought to offer [2]. System Quality is thus an inclusive measure of the technical efficacy of the platform, from its interface to its server loads.

C. Perceived Usefulness

Perceived Usefulness is a feeling by an individual that using a Buy Now, Pay Later service will improve his or her productivity and provide him or her with an advantage [3]. This is a belief that looks past the technical details to the functional benefit a user gets from the service. This measure includes the extent to which users understand the PayLater service as being able to satisfy their needs, conserving effort and time, and being greater than other modes of payments [4]. The main advantage is increased money flexibility, allowing consumers to get what they need now and afterwards keep expenses in check by paying later. With regard to the service being compared with other forms of payment, convenience would make the service appear more desirable [5]. The perceived usefulness that the service is indeed useful has a strong impact on user behavior because Perceived Usefulness also impacts Impulsive Buying and Satisfaction. When the user perceives the service benefits, they not only become satisfied but also more likely to use it for spontaneous buying [6].

D. Confirmation

Confirmation measures the extent to which the user experience of a Buy Now, Pay Later service meets or exceeds their original expectation. Before using a service, people form expectations in reaction to such as advertising, website ratings, and word of mouth. Confirmation is the critical assessment that happens after they have used the service, where they compare such initial expectations with reality. This assessment is multi-faceted and includes the user's opinion regarding the quality of service, promotion content quality, and interaction design of the application [7]. When the experience is higher than expectation, it gives positive confirmation, enhancing feelings of satisfaction and belief. The analysis shows that Confirmation has significant and strong impact on Perceived Usefulness and influences Satisfaction too [8]. This means its primary role; good experience validates the value of the service to the user, which is a direct factor influencing their overall satisfaction.

E. Satisfaction

Satisfaction is a good emotional feeling or a feeling of satisfaction that a user experiences after using the PayLater service. It is a general, emotional response that defines how a customer feels regarding their overall experience on the site [4]. This variable shows the user's confidence that they have made the right choice and that their overall transaction experience was acceptable [9]. Satisfaction is the end result of the other factors co-operating effectively; good service and systems, a good sense of usefulness, and a positive confirmation of their expectations all combine to give them

this sense of contentment. A satisfied user feels that the service was able to provide good results for them and that it was the right choice for them to utilize. Satisfaction is one of the main drivers that can determine whether a user intends to use cloud computing on an ongoing basis. If a client feels satisfied with the way they were handled, it is most likely that they will become a loyal, return client who is less interested in an invitation by other firms. So, user satisfaction is not only a short-term goal but also the key driver of long-term use and site loyalty.

F. Impulsive Buying

Impulsive Shopping is the propensity of a shopper to engage in impulse buys when shopping with PayLater. The design of Buy Now, Pay Later products can trigger this through eliminating the upfront cost hurdle of a purchase, facilitating an impulsive desire to be acted on more easily by a shopper. Such behavior is triggered by discounting, their current mood, and others. Promotional and limited-time offers, for example, create a sense of urgency that will result in impulse buying, and the payment mechanism deferring the cost allows users to purchase based on that sense of urgency without spending money at hand. Users can even purchase based on how they feel at the moment, and the convenience of the service is such that it allows them to do just that [4]. One of the unexpected findings of the study is that Impulsive Buying positively impacts Satisfaction. This can be attributed to instant gratification; the delight one feels in getting something one desires can result in an affect bond with the payment method that one used to get it. This can enhance the user's short-term satisfaction with the service and the system as a whole. [10]

G. Using Cloud Computing

Using Cloud Computing captures the extent to which cloud technology is being utilized and will be utilized to support BNPL transactions. While customers may not be aware of the specific backend infrastructure powering the service, their end-to-end experience—from the responsiveness and dependability of the platform to security—is wholly dependent upon this technology [11]. It captures the Effectiveness of the implementation of cloud technology and user intention to keep on utilizing this technology for future purposes of transactions. The intention of the user to keep on utilizing the Buy Now, Pay Later equals their intention to keep on utilizing its supporting cloud technology because the two are interdependent [12]. This continued use is not involuntary; the analysis determined that this intention is most influenced by Satisfaction. When the customer is satisfied with the service they receive, they gain trust and a desire to maintain the relationship, implying repeated use of the platform.

III. Methodology

A. Variables and Hypothesis

Hypothesis 1 (H1): Confirmation significantly impacts Perceived Usefulness.

Hypothesis 2 (H2): Confirmation significantly impacts Satisfaction.

Hypothesis 3 (H3): Impulsive Buying significantly impacts Satisfaction.

Hypothesis 4 (H4): Perceived Usefulness significantly impacts Impulsive Buying.

Hypothesis 5 (H5): Perceived Usefulness significantly impacts Satisfaction.

Hypothesis 6 (H6): Satisfaction significantly impacts Using Cloud Computing.

Hypothesis 7 (H7): System Quality significantly impacts Satisfaction.

Hypothesis 8 (H8): Service Quality significantly impacts Satisfaction.

B. Model Building

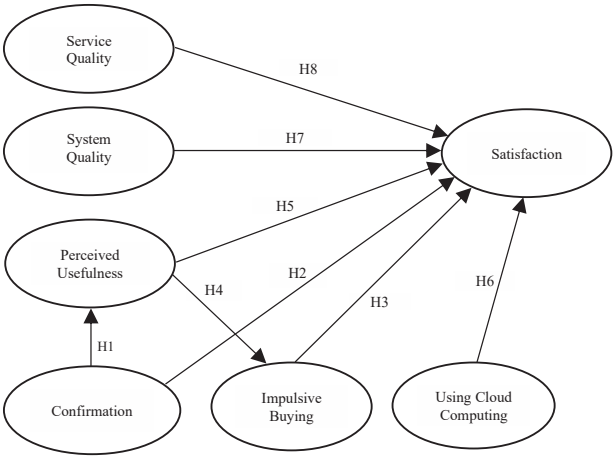

Fig. 1. Research Model

C. Variables and Hypothesis

Hypothesis 1 (H1): Confirmation significantly impacts Perceived Usefulness.

Hypothesis 2 (H2): Confirmation significantly impacts Satisfaction.

Hypothesis 3 (H3): Impulsive Buying significantly impacts Satisfaction.

Hypothesis 4 (H4): Perceived Usefulness significantly impacts Impulsive Buying.

Hypothesis 5 (H5): Perceived Usefulness significantly impacts Satisfaction.

Hypothesis 6 (H6): Satisfaction significantly impacts Using Cloud Computing.

Hypothesis 7 (H7): System Quality significantly impacts Satisfaction.

Hypothesis 8 (H8): Service Quality significantly impacts Satisfaction.

TABLE I. Variable and Indicators

Question	Code	Ref.
Service Quality (SRQ)	**SRQ**	
The level of service quality I receive from the BNPL platform is very high.	SRQ1	[1]
I rate the quality of service provided by the BNPL platform as very good.	SRQ2	
The BNPL platform I use offers a high level of service quality.	SRQ3	
The BNPL platform that I use consistently provides high-quality services.	SRQ4	[2]
The BNPL platform has a user interface that makes it easy for me to communicate my payment needs.	SRQ5	
System Quality (SQ)	**SQ**	

The BNPL platform that I use is easy to use.	SQ1	[1]
The BNPL platform is easy to navigate when making transactions.	SQ2	
The visual design of the BNPL platform is attractive and pleasing to the eye.	SQ3	
I feel safe using the BNPL platform to make payments.	SQ4	
The BNPL platform quickly loads all the text and graphic information needed during transactions.	SQ5	
Perceived Usefulness (PU)	**PU**	
I find PayLater easy to fulfill my needs and shorten my time and effort.	PU1	[3], [4]
Using PayLater is beneficial to me and provides an advantage.	PU2	
Using the PayLater service allows me to complete my shopping faster.	PU3	[4], [5]
I find PayLater more useful and helpful than other payment methods.	PU4	[3], [6]
Using PayLater increases my chances of buying something.	PU5	[5], [6]
Confirmation (CF)	**CF**	
My experience using BNPL's services was better than I expected.	CF1	[7]
The level of service provided by the BNPL platform was better than I expected.	CF2	
Overall. most of my expectations of using the BNPL service were met.	CF3	
The quality of the promotional content in the apps that offer BNPL is better than I expected.	CF4	[8]
The interaction design and impact of using BNPL-related apps is better than I expected.	CF5	
Satisfaction (SF)	**SF**	
I am satisfied with the use of PayLater.	SF1	[4]
Overall. the experience of transacting with PayLater satisfied me.	SF2	
I am confident that I have made the right decision in using PayLater.	SF3	[9]
Using PayLater is effective in fulfilling my shopping needs.	SF4	
Using PayLater for transactions is the right choice.	SF5	[4]
Impulsive Buying (IB)	**IB**	
When I use PayLater. I buy things that I didn't plan to buy before.	IB1	[4]
If I see a discount. I tend to use PayLater for impulse shopping.	IB2	
I can't resist the feeling of wanting to buy something using PayLater.	IB3	[10]
When using PayLater. I buy things based on my mood at the time.	IB4	[4]
I am easily influenced by various factors to make purchases using PayLater.	IB5	[10]
Use Cloud Computing (CC)	**CC**	
The implementation of cloud-based computing technology has been employed in an effective manner to facilitate BNPL transactions.	CC1	[11]
I plan to continue using cloud computing-based technologies that support BNPL in the future.	CC2	
I intend to continue using cloud computing in my transaction activities.	CC3	
My company is investing resources in cloud computing technology to support BNPL transactions.	CC4	[12]
My company's business activities require the use of cloud computing technology to support BNPL payments.	CC5	

IV. Results and Discussion

A. Statistics and Overview

This chapter present the statistical overview of the survey titled "When Squid Game Squids Your Life: Customer Behavior with Buy Now, Pay Later", which gathered a total of 472 responses since its distribution began in March 2025. The demographic breakdown reveals that most respondents were female (61.1%), while male participants made up 38.9%. Geographically, the participants were primarily based in major urban areas, with the highest representation from Jakarta (24.4%), followed by Tangerang (18.2%), Depok (16%), Bogor (17%), Bekasi (13.1%), and the remaining 11.3% residing outside the Greater Jakarta area. In terms of education, most respondents held a diploma or bachelor's degree (48.3%), while others had completed high school (41.8%), postgraduate education (7%), or lower levels of education.

The income data shows that nearly half of the participants (48.1%) earned between IDR 1 to 5 million per month, followed by 27.3% in the IDR 6 to 10 million range. Meanwhile, 14.3% earned less than IDR 1 million, and only a small portion reported income above IDR 10 million. Monthly expenses largely mirrored this pattern, with 58.2% spending between IDR 1 to 5 million. Age distribution was dominated by younger age groups those aged 12 to 27 (59.9%) and 28 to 43 (32.5%) suggesting that BNPL services appeal strongly to digital-native consumers. Regarding occupation, students and university attendees made up the largest group (39.8%), followed by employees of state-owned enterprises and the private sector (34.2%), civil servants (12.3%), and others such as professionals, entrepreneurs, and retirees. These demographic insights form the foundation for understanding the behavioral trends discussed in the following sections.

B. Measurement Model: Reliability and Validity

The conceptual model outlines the interactions among six core latent constructs: Service Quality (SRQ), Systems Quality (SQ), Perceived Usefulness (PU), Confirmation (CF), Satisfaction (SF), Using Cloud Computing (CC), and Intention to Impulsive Buying (IB). Each construct is represented through five measurement indicators. In this framework, both SRQ and SQ have a direct impact on user Satisfaction (SF), while PU and CF contribute to the development of both Satisfaction and Impulsive Buying. Satisfaction itself serves as a pivotal factor, influencing users' ongoing Using Cloud Computing (CC) and directly affecting their intention to continue using the service (IB). This model serves as a basis for understanding the determinants of user satisfaction, confirmation, and repeated engagement with digital financial platforms.

TABLE II. Outer Loadings

Code	Outer Loadings	Code	Outer Loadings
CC2	0.713	SF2	0.703
CC3	0.705	SF3	0.782
CC4	0.813	SF5	0.812
CC5	0.803	SQ1	0.772
CF1	0.775	SQ4	0.726
CF3	0.712	SQ5	0.760
CF4	0.709	SRQ2	0.750
CF5	0.727	SRQ3	0.708
IB1	0.828	SRQ4	0.711
IB2	0.824	SRQ5	0.724
IB3	0.837	PU1	0.732
IB4	0.841	PU3	0.723
IB5	0.806	PU4	0.754

All indicators in the table show outer loading values above 0.70, indicating that each reliably measures its respective construct. Constructs such as Impulsive Buying (IB) and Using Cloud Computing (CC) exhibit strong measurement consistency, reflecting valid assessments of impulsive purchasing behavior and cloud technology adoption in the Buy Now, Pay Later (BNPL) context. Other constructs including Confirmation (CF), Perceived

Usefulness (PU), System Quality (SQ), Service Recovery Quality (SRQ), and Satisfaction (SF) also demonstrate solid reliability and validity, confirming that the measurement model is suitable for further analysis.

TABLE III. CONSTRUCT REABILITY AND VALIDITY

Variable	Construct Reliability and Validity		
	Cronbach's alpha	Composite reliability (rho_c)	AVE
CC	0.757	0.845	0.578
CF	0.710	0.821	0.535
IB	0.885	0.916	0.685
PU	0.581	0.781	0.543
SF	0.649	0.810	0.589
SQ	0.618	0.797	0.567
SRQ	0.697	0.815	0.524

The reliability and validity analysis confirms that all constructs meet the recommended thresholds. Most constructs demonstrate acceptable internal consistency, with Composite Reliability (rho_c) values exceeding 0.70. Cronbach's Alpha values are generally above 0.60, indicating moderate to strong reliability, except for Perceived Usefulness (PU), which shows a lower alpha (0.581) but still acceptable CR (0.781). All Average Variance Extracted (AVE) values are above the 0.50 threshold, suggesting adequate convergent validity. Notably, Impulsive Buying (IB) has the highest reliability ($\alpha = 0.885$, CR = 0.916, AVE = 0.685), while Confirmation (CF), Cloud Computing (CC), and Satisfaction (SF) also meet reliability and validity standards. Overall, these results indicate that the measurement model is robust and suitable for structural analysis.

TABLE IV. FORNELL-LARCKER CRITERION

	CC	CF	IB	PU	SF	SQ	SRQ
CC	0.760						
CF	0.603	0.731					
IB	0.540	0.349	0.827				
PU	0.601	0.631	0.427	0.737			
SF	0.580	0.546	0.448	0.589	0.767		
SQ	0.591	0.701	0.322	0.615	0.512	0.753	
SRQ	0.629	0.686	0.315	0.590	0.554	0.702	0.724

The Fornell-Larcker criterion results indicate that all constructs meet the requirement for discriminant validity. Each construct's square root of the Average Variance Extracted (AVE), shown on the diagonal, is higher than its correlations with any other construct in the model. For example, Impulsive Buying (IB) has a square root of AVE of 0.827, which is greater than its correlations with CF (0.349), CC (0.540), PU (0.427), and others. Similarly, Using Cloud Computing (CC), Confirmation (CF), Perceived Usefulness (PU), Satisfaction (SF), Systems Quality (SQ), and Service Quality (SRQ) all demonstrate greater diagonal values than the off-diagonal ones in their respective rows and columns. These results confirm that each construct is empirically distinct from the others, validating the model's discriminant validity.

TABLE V. HETEROTRAIT-MONOTRAIT RATIO (HTMT)

	CC	CF	IB	PU	SF	SQ	SRQ
CC	0.000						
CF	0.833						
IB	0.652	0.436					
PU	0.901	0.987	0.582				
SF	0.816	0.811	0.580	0.949			
SQ	0.876	1.055	0.433	1.030	0.816		
SRQ	0.882	0.974	0.397	0.931	0.828	1.066	

HTMT analysis is used to assess discriminant validity, with a threshold commonly set at 0.90 (or 0.85 for stricter criteria). Based on the matrix, several construct pairs slightly exceed this threshold. Notably, the HTMT values between Confirmation (CF) and Systems Quality (SQ) (1.055), and between Perceived Usefulness (PU) and SQ (1.030) exceed the 0.90 benchmark, indicating potential issues with discriminant validity between these constructs. Similarly, Service Quality (SRQ) shows high HTMT values with SQ (1.066) and CF (0.974), suggesting overlapping conceptual domains. However, other construct pairs remain within acceptable limits, such as Impulsive Buying (IB) with all others (all < 0.70), confirming adequate distinction. These findings suggest that while most constructs are distinguishable, further model refinement may be needed to clearly differentiate SQ, SRQ, CF, and PU.

TABLE VI. R-SQUARE

	R-square	R-square adjusted
CC	0.337	0.335
IB	0.182	0.180
PU	0.398	0.397
SF	0.461	0.455

R-square values indicate the proportion of variance in each endogenous construct explained by its predictors. Satisfaction (SF) has the highest R-square value at 0.461, meaning 46.1% of its variance is explained by the model, followed by Perceived Usefulness (PU) at 0.398. Using Cloud Computing (CC) shows a moderate R-square of 0.337, while Impulsive Buying (IB) has the lowest at 0.182, suggesting that only 18.2% of the variation in IB is accounted for by the explanatory variables. The adjusted R-square values are slightly lower, reflecting correction for model complexity. Overall, these values suggest that the model has moderate explanatory power, with room for improvement in explaining behavioral outcomes like impulsive buying.

TABLE VII. PATH COEFFICIENTS

	Original sample (O)	Sample mean (M)	Stand. Dev	T-Stat	P-Values
CF → PU	0.631	0.631	0.039	16.138	0.000
CF → SF	0.128	0.126	0.060	2.145	0.032
IB → SF	0.209	0.207	0.058	3.595	0.000
PU → IB	0.427	0.429	0.037	11.640	0.000
PU → SF	0.268	0.266	0.050	5.335	0.000
SF → CC	0.580	0.583	0.041	14.085	0.000
SQ → SF	0.040	0.044	0.066	0.603	0.546
SRQ → SF	0.214	0.217	0.061	3.515	0.000

Path coefficient analysis reveals several significant relationships among the constructs. Confirmation (CF) has a strong and significant effect on Perceived Usefulness (PU) ($\beta = 0.631$, $p < 0.001$) and a weaker yet significant influence on Satisfaction (SF) ($\beta = 0.128$, $p = 0.032$). Perceived Usefulness (PU) significantly predicts both Impulsive Buying (IB) ($\beta = 0.427$, $p < 0.001$) and Satisfaction (SF) ($\beta = 0.268$, $p < 0.001$), suggesting its central role in shaping user responses. IB also has a significant effect on SF ($\beta = 0.209$, $p < 0.001$), indicating that impulsive behavior contributes positively to user

satisfaction. Furthermore, Satisfaction (SF) strongly influences Using Cloud Computing (CC) ($\beta = 0.580$, $p < 0.001$). Service Quality (SRQ) significantly affects SF ($\beta = 0.214$, $p < 0.001$), whereas Systems Quality (SQ) does not show a significant impact ($\beta = 0.040$, $p = 0.546$). Overall, the model highlights the importance of PU, CF, and SF as key drivers of behavioral and technological outcomes in the BNPL context.

V. Conclusions

This study reveals that both psychological and technological factors significantly shape user satisfaction and continued engagement with BNPL platforms. Perceived usefulness and confirmation emerge as key drivers of satisfaction, highlighting that when user expectations are met and functional benefits are evident, positive emotional and behavioral responses follow. Impulsive buying, while often associated with short-term gratification, also contributes to temporary satisfaction, suggesting that BNPL systems may unintentionally reinforce impulsive consumption. Furthermore, satisfaction acts as a crucial mediator, encouraging sustained usage of cloud-based infrastructure that underpins BNPL operations.

Theoretically, these findings advance fintech adoption models by integrating behavioral elements—such as impulsiveness and confirmation—with technological attributes like service and system quality. This integration contributes to a more comprehensive understanding of digital consumption behavior within financial ecosystems. Practically, the results emphasize that policymakers should strengthen consumer education and digital finance regulations to mitigate overspending risks, while fintech developers should prioritize transparency, ethical marketing, and secure infrastructure to foster digital trust.

Future research should extend this framework to other emerging markets or cross-cultural contexts, examining how emotional regulation, financial literacy, or digital trust moderate consumer behavior in deferred payment systems. Longitudinal approaches could also explore how satisfaction and impulsive tendencies evolve over time, offering deeper insights into sustainable digital finance adoption.

Acknowledgment and Open Data

The authors acknowledge that this paper uses artificial intelligence to improve English grammar. However, it is important to note that all the results presented in this paper are the authors' original work, with no artificial intelligence intervention in the process of composing the main content. Open data and contributors are available at https://zenodo.org/uploads/17911660. All authors certified fulfilment of ICMJE authorship criteria. This study support by Bina Nusantara University (Indonesia) Initiative Project number PP0030093 year 2025. Thank to Posts and Telecommunications Institute (Vietnam) for support this research.

CRediT Authorship Contribution Statement

Erwin Halim and Nguyen Minh Tuan contributed to the conceptualization, methodology, questionnaire validation, data curation, and writing of the original draft. Chau Van Van, Thomas Tandewijaya, Angelyne Chatheryna Setiawan, Faris Bayhaqi, and Anderes Gui were involved in conceptualization, data collection, and resources.

References

[1] S. S. Abed and R. S. Alkadi, "Sustainable Development through Fintech: Understanding the Adoption of Buy Now Pay Later (BNPL) Applications by Generation Z in Saudi Arabia," *Sustainability*, vol. 16, no. 15, p. 6368, Jan. 2024, doi: https://doi.org/10.3390/su16156368.

[2] T. Wang, C.-L. Lin, and Y.-S. Su, "Continuance Intention of University Students and Online Learning during the COVID-19 Pandemic: A Modified Expectation Confirmation Model Perspective," *Sustainability*, vol. 13, no. 8, p. 4586, Apr. 2021, doi: https://doi.org/10.3390/su13084586.

[3] A. Citra, "SKRIPSI ANALISIS LOYALITAS PENGGUNA PAYLATER DALAM E-COMMERCE DENGAN MENGGUNAKAN EXTENDED EXPECTATION CONFIRMATION MODEL Disusun oleh," Nov. 2023.

[4] C. I. P. Hegawan, T. M. Faustine, S. Wijayanti, and P. A. Manaf, "Exploring the influence of perceived usefulness and value of PayLater/BNPL on satisfaction, impulsive buying, and post-purchase intention," *International Journal of Emerging Trends in Social Sciences*, vol. 15, no. 1, pp. 1–12, Jul. 2023, doi: https://doi.org/10.55217/103.v15i1.667.

[5] Md. T. A. Himel and J. F. Airin, "Effects of Mobile Financial Services' Acceptance on Impulse Buying Behavior: A Study on Lifestyle and Fast Fashion Retailers," *Journal of Banking & Financial Services*, vol. 15, no. 1 & 2, 2024, doi: https://doi.org/10.57143/jbfsv15a6.

[6] S. Diajukan, S. Ekonomi, D. Program, S. Islam, and H. Judul, "The Influence Of Ease Of Use, Security, Delayeds Payments Towards Impulsive Buying Of Shopee Paylater Users (Study On Generation Z Yogyakarta) Oleh: Nuri Fityani 20423089," 2024.

[7] X. Huang and H. Zhi, "Factors Influencing Students' Continuance Usage Intention with Virtual Classroom during the COVID-19 Pandemic: An Empirical Study," *Sustainability*, vol. 15, no. 5, p. 4420, Mar. 2023, doi: https://doi.org/10.3390/su15054420.

[8] Y. Choi, H. Wen, M. Chen, and F. Yang, "Sustainable Determinants Influencing Habit Formation among Mobile Short-Video Platform Users," *Sustainability*, vol. 13, no. 6, p. 3216, Mar. 2021, doi: https://doi.org/10.3390/su13063216.

[9] M. Wang and J. Kim, "Investigating Drivers of Continued BNPL Service Usage and Subjective Well-being Impacts Among China's MZ Generation," *Journal of System and Management Sciences*, vol. 14 (2024) No. 8, no. 1816–6075, Jun. 2024, doi: https://doi.org/10.33168/jsms.2024.0826.

[10] A. H. Putri, "PENGARUH GAYA HIDUP, PROMOSI PENJUALAN, DAN KONTROL DIRI TERHADAP PEMBELIAN IMPULSIF PADA PENGGUNA PAYLATER DI JABODETABEK," 2023.

[11] H. Alshahrani, A. Alshahrani, M. Elfaki, S. Alshahrani, M. Alymani, and Y. Alkhurayyif, "Investigating the factors influencing the use of cloud computing," *Journal of Information Security and Cybercrimes Research*, vol. 5, no. 2, pp. 104–115, Dec. 2022, doi: 10.26735/rnoa9602.

[12] M. Chen, H. Wang, Y. Liang, and G. Zhang, "Net and configurational effects of determinants on cloud computing adoption by SMEs under cloud promotion policy using PLS-SEM and fsQCA," *Journal of Innovation & Knowledge*, vol. 8, no. 3, p. 100388, May 2023, doi: 10.1016/j.jik.2023.100388.

[13] C. Bianchi and S. Andrews, "The Appeal of 'Buy Now, Pay Later' Services and the Psychology of Credit Consumption," *Journal of Retailing and Consumer Services*, vol. 75, p. 103422, 2023, doi: https://doi.org/10.1016/j.jretconser.2023.103422.

[14] P. Hwang and H. Griffiths, "Digital Financial Inclusion and Youth Credit Behavior: Risks and Opportunities," *Journal of Behavioral Economics and Finance*, vol. 6, no. 2, pp. 45–59, 2022.

[15] J. Dessart, C. Veloutsou, and A. Morgan-Thomas, "Consumer Engagement in Online Brand Communities: A Social Media Perspective," *Journal of Product & Brand Management*, vol. 24, no. 1, pp. 28–42, 2015.