Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

UTAUT2 Theory to Unveil Users' Satisfaction and Loyalty towards eWallet Mobile Application in Sarawak

Farizzul Akmal Bin Ibrahim*[1], Chin Chee Hua[2] and Mohd Zainal Munshid Harun[3]
[1,2,3] School of Business and Management, Business Marketing Programme,
University of Technology Sarawak, No 1. Jalan Universiti, 96000 Sibu
*Corresponding author: farizzulakmal.ibrahim@gmail.com

Abstract

In the digital age, transactional behaviours have changed, notably in Sarawak, due to the widespread use of online financial services, especially eWallets. Disparities in usage still exist despite growing popularity, particularly among senior citizens and those living in rural areas who still prefer conventional payment methods. The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) is used in this study to investigate how user satisfaction is influenced by performance expectancy, effort expectancy, facilitating conditions, and habit, and how user loyalty to eWallet mobile applications is subsequently impacted by satisfaction. Using G*Power software, a sample of 200 active eWallet users in Sarawak was identified. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to analyze the data using WarpPLS. The findings indicate that whilst performance expectancy and facilitating factors do not significantly affect user satisfaction, effort expectancy and habit do. Furthermore, user loyalty is strongly positively impacted by user satisfaction. In addition to reevaluating presumptions about performance benefits and infrastructure support in order to promote sustained digital payment satisfaction in Sarawak, these findings provide insightful information for eWallet service providers and policymakers, highlighting the necessity of enhancing usability and encouraging habitual usage.

Keywords: eWallet, loyalty, satisfaction, UTAUT2, Sarawak.

Introduction

During the age of the industrial revolution characterized by rapid technological advancement, there has been remarkable global growth in online financial services such as eWallets and online payments (Dirgantari, Hidayat, Mahphoth, & Nugraheni Dirgantari, 2020). The increasingly favored form of online financial services among users' is commonly referred to as Financial Technology or 'FinTech' (Chong, Choo, Yip, Chan, Teh, & Ng, 2019). Despite growing in popularity, eWallets are still in their nascent phase in Malaysia. The country has been comparatively slow in adopting this technology since its initial implementation. However, eWallets have gradually garnered significant attention and have become a prominent topic of discussion. Following the introduction of the Interoperable Credit Transfer Framework (ICTF) on July 1st, 2018, eWallets have emerged as a remarkable phenomenon within the digital and electronic commerce realm in Malaysia (Abdullah, Mansor, & Lim, 2020). eWallet service providers can enhance the likelihood of eWallet usage by offering features unavailable in other payment systems. Put simply, to attract new users, eWallet services need to deliver efficient

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

payment solutions. eWallets are recognized as a crucial alternative payment method, widely employed across various applications and scenarios. In the context of Sarawak, the Sarawak Government has a strong commitment to driving the digital revolution in order to foster the growth of the Sarawak e-commerce industry (Tang, Aik, & Choong, 2021). With the rise in users' awareness and the advancement of internet connectivity, eWallets are steadily emerging as the predominant payment method in various regions worldwide, including Sarawak. As a key component of Sarawak's digital economy initiatives, the objective of eWallet satisfaction is for Sarawak residents to incorporate it into their everyday financial transactions, both personal and professional. During 2020, the Sarawak government provided subsidies for contactless payments, specifically for small enterprises and food stalls like Bantuan Khas Sarawakku Sayang (BKSS). In contrast to the federal government, Sarawak's administration prioritized the promotion of eWallet satisfaction among local businesses in Sarawak (Hiew, Adrian, Leong, Liew, & Soe, 2022). The Sarawak Government's commitment to investing in digital technology to modernize and digitize systems, processes, and transactions has effectively enhanced economic efficiency goals. This FinTech initiative by the Sarawak state government has recorded approximately 440,000 active users (Mohamed, Ganie, Narawi, Ezza, & Ramlee, 2023).

Even if prior research indicates that performance expectancy consumers' perception that a system will assist them in achieving desired results positively increases satisfaction (Yuliantie, 2024). To enhance user experience and retention, it is essential to comprehend whether users' expectations about system performance are being fulfilled and how this affects their level of satisfaction. The continuous use of e-wallets in nations like Malaysia is still low and unsatisfactory, despite the financial technology (Fintech) industry's rapid rise (Ismail, 2021). Similarly, both developed and emerging nations are seeing a delayed pace of adoption of mobile-based payment systems (Talwar, Dhir, Khalil, Mohan, & Islam, 2020). Although the Technology Acceptance Model (TAM) has been used to examine user intentions regarding the adoption of Fintech systems in a number of studies (Ngo & Nguyen, 2022; Phuong, Thuy, Giang, Han, Hieu, & Long, 2022; Singh & Sharma, 2022; Candra, Nuruttarwiyah, & Hapsari, 2020), these models frequently concentrate on the initial satisfaction of eWallet users.

Despite the increasing popularity of eWallets, service providers face challenges in attracting and retaining users' (Hamzah et al., 2023). Convincing users to shift from traditional payment methods to eWallets is not an easy task, making it crucial to investigate the factors that influence users' satisfaction to use eWallets. Therefore, this study recognizes the need to identify the factors that either contribute to or hinder Sarawak users' loyalty towards eWallets. Moreover, the findings of this study can offer valuable insights into users' perceptions in the context of Sarawak and other developing countries. Consequently, the results of this study are not limited to the Sarawak market and can be relevant to academics and business professionals in developing nations. This is particularly significant because prior research has predominantly focused on related issues from the perspectives of users in developed countries.

Literature Review

UTAUT2 Theory (Unified Theory of Acceptance and Use of Technology 2)

The UTAUT2 (Unified Theory of Acceptance and Use of Technology 2) model was developed as a comprehensive and integrated framework aimed at better understanding the reactions of

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

organizational users towards new systems or technologies. According to Venkatesh, Thong, and Xu (2012), it encompasses three types that enhance the accuracy of predicting technology acceptance. The first type focuses on how users' respond to new technologies across different settings, including cultural and demographic considerations. The second type involves incorporating additional concepts into the model to expand the theoretical relationships of UTAUT2. Lastly, Venkatesh et al. (2012) explores the synthesis of new predictor factors into the UTAUT2 framework. The inclusion of hedonic motivation, price value, and habit as additional constructs in the UTAUT model forms a comprehensive theoretical framework for understanding users' behavior in various usage contexts (Venkatesh et al., 2012). UTAUT2, which incorporates these constructs, claims to have higher predictive power than UTAUT, as evidenced by a significant increase in the explained variance of behavioral intention (74%) and technology use (52%). Given its innovative nature, the authors emphasize the importance of testing UTAUT2 in diverse environments and cultural contexts to enhance its applicability and robustness. Limited research has been conducted on mobile technology in recent years, even though the UTAUT2 model has been validated in web-based technology settings in most Malaysian studies. For example, scholars have explored the impact of UTAUT2 constructs on social networking sites, lecture capture systems, mobile learning, and e-learning systems (Shafiri, Tamam, Hassan, Waheed, & Zaremohzzabieh. 2016; Aljaafreh, 2021; Musa, Ismail, Tahir, Fudzee, & Jofri, 2022).

In order to account for the task contexts specific to the eWallet study, some researchers have modified the UTAUT2 core model by either removing certain constructs or introducing new ones (Hasim et al., 2022). In this study, the constructs of hedonic motivation, price value, and social influence were removed. However, the UTAUT2 framework holds potential for offering valuable insights as the focus of this study is to investigate factors that may impact individual users' satisfaction and loyalty. Therefore, it has been selected as the research model for this study, considering its higher predictive power and user-centric design (Venkatesh et al., 2012). Furthermore, the model has been seldom explored in the context of eWallets (Dahlberg, Guo, & Ondrus, 2015), although it has been empirically validated in various IT contexts (Morosan & DeFranco, 2016). In this study, the research framework incorporates the UTAUT2 theory, focusing on several UTAUT2 variables, namely performance expectancy, effort expectancy, facilitating conditions, and habit as well as its impact on users' satisfaction and subsequently lead to loyalty.

Loyalty towards eWallet Mobile Applications

Users rely on and frequently utilize the mobile application provided by eWallet service providers. It has been suggested that satisfaction and attitudinal loyalty are interconnected. High satisfaction with the eWallet service allows parties to focus on the long-term benefits of the relationship. According to the researchers, users may prefer conducting transactions on the mobile platform due to familiarity and a perception of trustworthiness, despite perceiving a higher level of risk regarding payment or information exposure. This preference ultimately leads to loyalty towards the mobile platform (Su, Wu, & Yen, 2021). Users' satisfaction has a direct impact on users' loyalty (Heixia et al., 2018). Conversely, loyalty is primarily built around the brand (Ong, Lee, & Ramayah, 2018). Transforming users into valuable assets through brand attachment proves to be an effective strategy for nurturing loyal patronage.

In a highly competitive and ever-evolving business landscape, users' loyalty plays a crucial role in gaining a competitive advantage. It is a multi-dimensional concept that emerges from the

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

attitudes and behaviors of individuals (Leninkumar, 2017). According to Idenedo and Goodie-okio (2022), users' loyalty is indicated by the repeated patronage of a service provider and the recommendations made to others. It also reflects the intention of buyers to make repeated purchases and establish a lasting relationship with the organization. Users who exhibit loyalty towards a specific eWallet mobile application demonstrate their devotion and dedication, showing little interest in offers from competing eWallet mobile applications (Valencia & Leyman, 2021). Loyal users are more inclined to use the application frequently and have higher intentions for its usage. Ngobo (2017) categorizes loyalty into four types prevalent in the market: premium loyalty, latent loyalty, inertia loyalty, and no loyalty. "No loyalty" users are those who cannot rely on a particular business to fulfill their needs and desires. "Inertia loyalty" refers to users who show low involvement but frequently repurchase goods or services. "Latent loyalty" users' possess high and favorable opinions of a particular provider but rarely make repeat purchases.

Performance Expectancy and Users' Satisfaction (H1)

The significance of performance expectancy in determining user satisfaction with e-wallet services has been emphasized more and more in recent studies. It has been repeatedly shown that performance expectancy the extent to which consumers think that utilizing a technology would improve their performance is a key predictor of happiness in digital financial services. Yuliantie (2022) asserts that users' satisfaction is directly and positively impacted by performance expectancy, and that this in turn influences their satisfaction to use e-wallets. Users express greater levels of pleasure when they believe that e-wallets efficiently streamline transactions, save time, and are simple to use. This implies that a key component of performance expectancy is essential to creating a satisfying user experience.

Elok and Hidayati (2021) also looked at how consumer loyalty in the digital wallet sector is affected by performance expectations. Their results supported the notion that performance-driven satisfaction enhances the user experience and fosters sustained engagement with the platform by highlighting the role that satisfaction plays as a mediator between performance expectancy and loyalty. Performance expectancy is seen as a fundamental component of technology acceptance models in the Unified Theory of Acceptance and Use of Technology (UTAUT), which is consistent with this.

In support of this, an empirical study carried out in Yogyakarta by Prawira and Ridanasti (2022) discovered that performance expectancy had a substantial impact on user satisfaction and intention to use digital wallets. According to their research, consumers are more likely to be happy and stick with e-wallets if they believe they are effective, dependable, and simple to use. The importance of performance expectancy in promoting user satisfaction and continued use is further supported by these findings.

H1: Performance expectancy would influence users' satisfaction.

Effort Expectancy and Users' Satisfaction (H2)

The apparent ease of use of a technology is known as effort expectation, and its impact on user satisfaction has been studied in a variety of fintech fields, such as online wealth management systems, digital wallets, and mobile payments. Research indicates that in fintech environments, effort expectancy has a major impact on users' satisfaction and inclinations to continue using the

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

service. For example, a study by Esawe(2021) discovered that customer satisfaction with mobile e-wallet services is influenced by ease of use, which is closely linked to effort expectancy. Abed and Alkadi(2025) also found a significant correlation between effort expectancy and user satisfaction in Saudi Arabian fintech payment applications. These studies support the notion that the less work needed to connect with fintech platforms, the better the satisfaction levels, by showing a strong correlation between contentment and perceived ease of use.

Additionally, it has been demonstrated that other elements like perceived value and trust operate as mediators in the relationship between effort expectancy and satisfaction among users. For instance, a study on the use of digital wallets in Indonesia revealed that the relationship between effort expectancy and customer loyalty is significantly mediated by customer satisfaction (Elok & Hidayati, 2021). As mentioned in (Hassan et al., 2024), where the moderating effect of trust influenced user satisfaction in fintech platforms in Bangladesh, trust also seems to play a crucial part in fintech services. Therefore, although effort expectancy plays a role in user satisfaction, the larger context of perceived value and trust also influences the whole experience.

Furthermore, studies conducted in a variety of geographical areas have shown that although effort expectation plays a significant role in users' adoption of fintech services, the degree to which it has an impact varies based on the technological and demographic context (Ajao, Oludamilare, & Sadeeq, 2023). This variance emphasizes how crucial it is to comprehend the cultural and market-specific elements that affect how users perceive effort expectation and satisfaction.

H2: Effort expectancy would influence users' satisfaction.

Facilitating Condition and Users' Satisfaction (H3)

The significance of these factors in affecting e-wallet satisfaction has been confirmed by numerous research. Facilitating factors including smartphone compatibility, user education, and QR code policies, for instance, were found to have a substantial impact on users' behavioral intention to embrace e-wallets in an Indonesian study (Putra & Anggraini, 2021).

Facilitating circumstances were shown to be essential in rural India for removing technology obstacles and boosting user trust and perceived utility (Chakraborty et al., 2024). This emphasises how infrastructure and technical support play an even more crucial role in determining customer satisfaction in less urbanised environments. The adoption of e-wallets by university students in Malaysia was found to be primarily influenced by enabling conditions including technical assistance and system accessibility, highlighting the importance of institutional and contextual support (Abdullah et al., 2020). Additionally, the literature connects e-service quality dimensions to facilitating conditions, which have a favourable impact on customer loyalty and satisfaction. A positive user experience and sustained use are directly correlated with system quality in terms of responsiveness, availability, and assistance (Patel & Singh, 2023).

The mediating function of satisfaction between facilitating conditions and loyalty has been highlighted by several academics. Users are more satisfied and more likely to remain loyal when they believe that e-wallet platforms are dependable and simple to use because of established support mechanisms (Rahim & Nawawi, 2022). Furthermore, by improving constructs like perceived ease of use, trust, and enjoyment, enabling conditions have been found to indirectly affect satisfaction in studies that take these factors into account (Ali et al., 2022). Notably, enabling factors play a more significant impact in determining perceived usefulness and ease of use two

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025
important antecedents of satisfaction in regions where digital payment infrastructure is still developing (Kurniawan et al., 2023).

H3: Facilitating condition would influence users' satisfaction.

Habit and Users' Satisfaction (H4)

A key factor in the long-term use of eWallets is the correlation between habit and satisfaction among users. Research shows that habit has a significant impact on a user's intention to stick with eWallets over time, as demonstrated by studies by Malaquias and Silva (2020) and Nguyen et al. (2021). The process becomes more automated and becomes a habit when individuals interact with their eWallets more regularly. This is especially noticeable when the transaction procedure is easy, fast, and successful.

One important indicator of continued FinTech use is habit (Abed & Alkadi, 2025). Research that combines the Trust Theoretic Model with the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) has shown that habit has a favourable impact on consumers' inclination to use FinTech services. This is consistent with earlier studies showing that users create habits based on the ease of use and accessibility of FinTech platforms, which makes them an obvious choice for financial activities (Amnas et al., 2023).

FinTech's future is defined by developments in AI and machine learning, which allow platforms to improve fraud detection and provide tailored financial suggestions. By automating repetitive chores and offering personalized financial advice, these technologies are changing customer habits and increasing user satisfaction (Partner, 2025).

H4: Habit would influence users' satisfaction.

Satisfaction and Loyalty (H5)

Extensive research into the elements influencing client satisfaction and loyalty has been prompted by the rapid growth of e-wallet services in Indonesia. In their study of ShopeePay users, Valencia and Layman (2021) discovered that service innovation and delivery greatly increase customer satisfaction, which in turn has a beneficial effect on customer loyalty. Pramono, Bramantyo, Syukur, Dewabroto, and Gunadi (2023) concentrated on OVO users and pointed out that customer loyalty and satisfaction are directly impacted by service quality. Their research highlights how crucial dependable and regular services are to keeping clients.

The scope by examining how consumer satisfaction and loyalty are affected by brand image, trust, e-service quality, and reward programs across different e-wallet platforms. Their results show that customer satisfaction, which mediates the relationship between e-service quality and trust and customer loyalty, is significantly predicted by these parameters (Handayani, Widowati, & Nuryakin, 2021). The function of AI chatbots in fintech services within the banking sector was investigated. According to their research, chatbots driven by AI improve customer satisfaction by offering prompt, individualized assistance, which in turn increases customer loyalty (El-Shihy, Abdelraouf, Hegazy, & Hassan, 2024).

H5: Users' satisfaction would influence users' loyalty.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Methodology

This research utilized a quantitative survey approach to gather data, employing a questionnaire that consisted of two sections. Section A was designed to collect demographic information from respondents, while section B included items for measuring the variables in the research model, namely performance expectancy, effort expectancy, facilitating condition, habit, and users' satisfaction. Section C focused on the dependent variable, which was users' loyalty. A total of 23 items were adapted from previous studies (Venkatesh et al., 2012; Chuah et al., 2017; Haong & Nguyen, 2019) and modified to suit the Malaysian context. Participants rated their level of agreement with each statement on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). A non-probability sampling method, specifically a purposive sampling technique was employed to select the research respondents. One of the selection criteria is he/she must be a user of eWallet mobile application for at least one month.

For this study, a minimum sample size of 63 respondents was determined, and the questionnaires were distributed to 150 respondents residing in Sarawak, Malaysia. The sample size calculation was conducted using G*Power software (Kang, 2021), which was a standalone software widely used for power analysis in various statistical tests (Faul, Erdfelder, Lang, & Buchner, 2007; Faul, Erdfelder, Buchner, & Lang, 2009). The G*Power software was set to 95% power, large effect size, and five predictors. Prior to conducting the measurement and structural analyses, initial tests were performed using Statistical Package for Social Science (SPSS) version 26.0 to handle missing values and straight-line responses. During this process, 24 sets of questionnaires were excluded, resulting in 126 sets of questionnaires deemed suitable for assessing the fit of the measurement model and testing the hypotheses. The research model was analyzed using the Partial Least Squares-Structural Equation Modeling (PLS-SEM) estimation procedure, implemented with the WarpPLS software.

Findings

Table 1 presented an overview of the demographic characteristics of the respondents. The majority consisted of male participants, accounting for 75 out of 126 respondents, which was equivalent to 59.5%. In contrast, female participants made up the remaining 51 respondents, representing 40.5% of the total. The largest segment of respondents fell within the age range of 21 to 30 years old, comprising 44 individuals or 34.9%. Following this group, those aged 31 to 40 years old made up the second-largest segment with 33 respondents, amounting to 26.2%. The category of 18 to 20 years old consisted of 26 participants, which was equivalent to 20.6%. On the other hand, respondents aged 41 to 50 years old and those above 50 years old constituted the smallest groups, comprising 15 individuals (11.9%) and 8 individuals (6.3%), respectively. The Malay ethnic group represented the largest participation in this research, accounting for 37 respondents or 29.4%. Among the educational qualifications, 38.1% of the total respondents (48 individuals) possessed a bachelor's degree. In contrast, the educational level with the fewest representatives was a PhD, which only 6 respondents (4.8%) held. Regarding monthly income, the range of RM3001 - RM4,000 demonstrated the highest representation, with 54 participants (42.9%). Finally, 33 respondents were affiliated with Sibu, constituting 26.2% of the total respondents.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Table 1: Demographic Profile of Respondents (N= 126)

	Frequency	Percentage (%)
Gender		
Male	75	59.5
Female	51	40.5
Age		
18-20	26	20.6
21-30	44	34.9
31-40	33	26.2
41-50	15	11.9
50 years old and above	8	6.3
Ethnic Group		
Malay	37	29.4
Chinese	20	15.9
Iban	21	16.7
Melanau	23	18.3
other	25	19.8
Educational Background		
SPM	23	18.3
Diploma	37	29.4
Bachelor's	48	38.1
Master's	12	9.5
PhD	6	4.8
Monthly Income		
Less than RM2,000	10	7.9
RM2,001 - RM3,000	39	31.0
RM3,001 - RM4,000	54	42.9
More than RM4,001	23	18.3
Division		
Kuching	28	22.2
Miri	29	23.0
Sibu	33	26.2
Bintulu	27	21.4
Mukah	4	3.2
Others	5	4.0
Total	N=126	100%

Source: Authors

In the initial phase of the measurement model, Confirmatory Factor Analysis (CFA) was conducted to assess item loading, reliability, convergent validity, and discriminant validity. Several criteria established in previous research were utilized to evaluate the measurement model. This included a minimum loading cutoff of 0.5 (Bagozzi et al., 1991), composite reliability (CR) values above 0.7 (Chin, 2010), and a minimum average variance extracted (AVE) of 0.5 (Hair et al., 2014). The results, as presented in Table 2, indicated that all remaining loading values

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

exceeded the minimum cutoff of 0.5. Convergent validity was achieved as all CR values were above 0.7 (Hair et al., 1998), and all AVE values met the minimum criterion of 0.5 (Henseler et al., 2009). These findings indicated good internal consistency. Table 3 displayed the heterotrait-monotrait (HTMT) ratio, revealing that all HTMT values were lower than the most conservative criterion of 0.85 (Kline, 2011). In summary, the measurement model demonstrated reliability, convergent validity, and discriminant validity. The p-values, t-values, and standardized coefficient beta values from the inner (structural) model were used to analyze the remaining hypotheses. In line with one-tailed hypothesis testing, t-values were required to be greater than 1.645 ($p < 0.05$) or 2.33 ($p < 0.01$).

Table 2: Results of measurement model

Model construct	Measurement item	Loading	CR	AVE
Performance expectancy (PE)	PE1	0.724	0.803	0.505
	PE2	0.655		
	PE3	0.759		
	PE4	0.575		
Effort expectancy (EE)	EE1	0.798	0.833	0.556
	EE2	0.721		
	EE3	0.798		
	EE4	0.655		
Facilitating condition (FC)	FC1	0.773	0.823	0.538
	FC2	0.735		
	FC3	0.769		
	FC4	0.650		
Habit (HA)	HA1	0.760	0.827	0.544
	HA2	0.735		
	HA3	0.712		
	HA4	0.742		
Satisfaction (SA)	SA1	0.814	0.865	0.616
	SA2	0.810		
	SA3	0.778		
	SA4	0.734		
Loyalty (LO)	LO1	0.833	0.859	0.670
	LO2	0.828		
	LO3	0.794		

Note: CR = Composite Reliability; AVE = Average Variance Extracted (No item has been removed)

The Heterotrait-Monotrait (HTMT) ratio was used to assess discriminant validity. Referring to Table 3, the HTMT ratios for each pair of constructs were below the threshold of 0.90 (Kline & Rex, 2011). This implied that the items of each construct did not measure the same thing, and there was minimal overlap among the items from the respondents' perspective within the constructs.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Table 3: Discriminant Validity of Constructs Using HTMT

	PE	EE	FC	HA	SA	LO
PE						
EE	0.767					
FC	0.887	0.712				
HA	0.849	0.738	0.830			
SA	0.619	0.890	0.700	0.823		
LO	0.710	0.640	0.760	0.827	0.718	

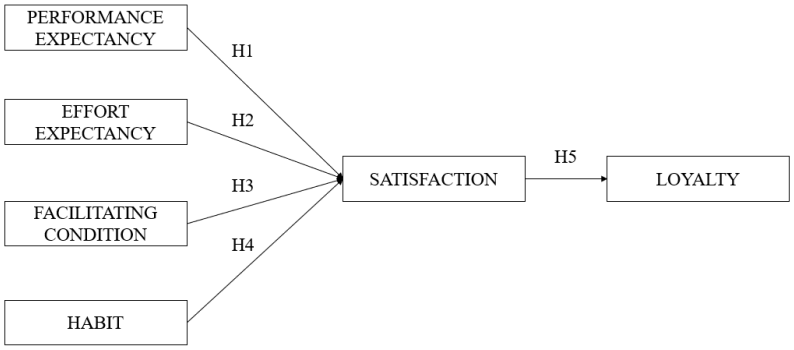

Figure 1: Theory of Unified Theory of Acceptance and Use of Technology UTAUT2
Source: Venkatesh et al., (1985)

Table 4 below demonstrates the R2 value of satisfaction and loyalty. The R^2 value for satisfaction is 0.66. In contrast, the R^2 value for loyalty is 0.35. This reflects a moderate explanatory power (Cohen, 1988).

Table 4: Constructs and R2

Constructs	R^2
Satisfaction (SA)	0.66
Loyalty (LO)	0.35

Table 5: Path Coefficients and Hypothesis Testing

Hypothesis	Standard beta	t-Value	p-Value	Decision	VIF
H1: PE > SA	0.075	0.856	0.197	Not Supported	1.974
H2: EE > SA	0.426	5.306	<0.001	Supported	2.134
H3: FC > SA	0.119	1.371	0.086	Not Supported	2.043
H4: HA > SA	0.385	4.737	<0.001	Supported	2.301
H5: SA > LO	0.593	7.680	<0.001	Supported	2.377

Note: $p < 0.01$** = $t > 2.33$; $p < 0.05$ *= $t > 1.645$

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Discussion

Table 4 presented the results of the regression analysis. The results indicated that H2, H4, and H5 were significantly related to users' satisfaction with eWallet in Sarawak, and the hypotheses were supported. This finding was consistent with earlier studies, such as the research conducted by Aji et al. (2020) and Talwar et al. (2020), which emphasized the substantial and positive influence of effort expectancy and habit following the adoption of eWallet technology. It's worth noting that effort expectancy and habit hold special significance as predictors of eWallet users' satisfaction. H2 aligned with the findings of Soodan and Rana (2020) and Chresentia and Suharto (2020). Similarly, the results of this study indicated that the perceived ease of using the technology played a pivotal role in determining individuals' persistence in utilizing eWallets, specifically within the context of Sarawak. The intention to sustain usage could be influenced by various factors linked to the expected level of effort exertion by users. Furthermore, H4 was identified as a direct function of users' satisfaction. As for H4, the findings revealed that individuals' intentions to continue utilizing a technology strongly predicted their actual behavior. This finding aligned with the principles of UTAUT2, which suggested that the intention to perform a behavior was the most accurate predictor of actual conduct (Mustafa et al., 2022). For instance, individuals who possessed a strong determination to persistently use an eWallet might exhibit a greater inclination to actively seek opportunities to use it and seamlessly integrate it into their daily routine. For H5, users' satisfaction had a significant effect on the loyalty of eWallet users in Sarawak. This discovery corresponded with the research conducted by Amin (2016), which demonstrated a positive correlation between users' contentment and loyalty within the context of commercial banks in Malaysia. This outcome could gauge user responses, as higher levels of satisfaction and loyalty among users increased the likelihood of their continued use of the technology.

Surprisingly, H1 and H3 found to have no significant relationship with users' satisfaction among eWallet users in Sarawak. The findings of performance expectancy (H1) indicated that the t-value was above 0.05, specifically 0.197, and the result was not supported. Performance expectancy could be influenced by various factors, including technological capabilities, perceived advantages of usage, and the quality of the user experience (Escobar et al., 2014). Additionally, if users perceived the technology as ineffective or inadequate in meeting their needs, their propensity to persist in its use might decrease. As for H3, in an unexpected and contradictory manner compared to the original UTAUT 2 model, the examination uncovered that facilitating conditions did not hold a substantial predictive influence over eWallet users' satisfaction. This outcome underscored that the presence or absence of specific external factors did not notably align with individuals' determinations to sustain their use of the technology. Facilitating conditions encompassed external variables capable of either advancing or hindering the adoption and utilization of a technology, including factors such as the accessibility of supporting infrastructure, compatibility with other technologies, and the level of support from organizational or governmental policies (Ikomoro & Jawad, 2019).

Limitation/Implications/Conclusion

In summary, the emergence of eWallet as an outstanding financial innovation has acted as a catalyst in propelling the country towards its goal of a cashless society. Consequently, this study

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025
aimed to investigate the significance of UTAUT2 predictors, including performance expectancy, effort expectancy, facilitating conditions, and habit, in relation to the satisfaction and loyalty of eWallet users in Sarawak, Malaysia. The research findings revealed that the majority of respondents expressed satisfaction and loyalty towards eWallets due to their user-friendly nature and the established habit of incorporating eWallets into their daily routines. However, the results also indicated that respondents perceived eWallets as less utilitarian, despite their ease of use, and identified compatibility issues, such as QRpay for Sarawak Pay being incompatible with other eWallet QR payment systems.

The outcomes of this study hold both theoretical and practical implications. Previous research endeavors have consistently employed various models to investigate the factors influencing users' satisfaction and loyalty towards eWallet mobile applications. Theoretically, the research framework adopted in this study stands out for its comprehensiveness, incorporating a more logical array of factors within the context of eWallets, particularly within the context of a developing economy. In this pursuit, the study embraced the fundamental constructs of the UTAUT2 model to attain a more distinct understanding of the phenomenon. Furthermore, the researchers incorporated the UTUAT2 predictors performance expectancy, effort expectancy, facilitating condition, and habit as antecedents of users' satisfaction and loyalty, aligning these predictors with the research context. This approach allowed for the assessment of their predictability at an individual level of analysis. As a result, this research furnishes theoretical evidence underscoring the significance of the UTUAT2 predictors as substantial determinants of eWallet mobile applications in Sarawak. Consequently, the findings of this study suggest that eWallets can utilize effort expectancy and habit as predictive factors to enhance users' satisfaction and foster user loyalty (Kilani et al., 2023). The results show effort expectancy and habit can fit and relate to the eWallet mobile application and it contributes to the purposed framework. However, performance expectancy and facilitating condition not significantly related to users' satisfaction and this should be focused for future research as it the predictors should be the important role in the context of eWallet mobile applications.

Practically, this study proposes a range of potential strategies aimed at enhancing the management of eWallet mobile applications in Sarawak. These suggestions are designed to bolster competitiveness and ensure sustainability by amplifying the levels of performance expectancy and effort expectancy, ultimately contributing to users' satisfaction and loyalty. To achieve these goals, the management of eWallet mobile applications should adopt a multifaceted approach involving increased investments in research and development, technology, and human resources. Special emphasis should be placed on fortifying the development team, optimizing business operations, and refining design aspects. The overarching goal of these strategic enhancements is to optimize operations, simplify service processes for user convenience, and establish robust mechanisms to preempt glitches and inconsistencies in users' interactions with eWallet services. It is anticipated that these measures will effectively mitigate instances of user dissatisfaction with both new and existing service features. This recommendation aims to bolster the overall performance and effort of users utilizing the eWallet mobile application.

Aside from that, the significant impact of habit on users' satisfaction and consequent loyalty emphasizes the idea that earlier usage of a particular technology increases the possibility of nurturing intentions to continue using it, while also smoothing the transition from intention to action. This highlights the importance of combining critical actions with eWallets, whether

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

through reliance or simplification, to increase users' satisfaction and facilitate the translation of intentions into tangible behaviours by leveraging the power of habit and make sure the users' loyal to eWallet mobile applications.

Maintaining user satisfaction is critical for eWallet mobile app administration. These initiatives contribute to the retention and potential growth of user loyalty. The implications of users' satisfaction and loyalty outcomes highlight the importance of a carefully planned approach to promote and elicit positive intents among users. Collaboration within eWallet mobile application administration is critical for increasing customer pleasure, which in turn drives loyalty. This requires addressing the underlying causes of direct complaints about services that indicate user dissatisfaction. This can be accomplished by ensuring that the eWallet mobile application services, as well as its features, are of high quality and conveniently accessible and compatible for use.

For future researchers, it is recommended that eWallet service providers concentrate on addressing two factors which are risk and privacy, as these elements pose significant challenges for eWallet service providers. Additionally, the researcher proposes that future studies expand their scope by introducing new independent variables into the research framework or substituting existing ones. Finally, given that the current study's scope is confined to Sarawak, Malaysia, it is advised that future research extend to encompass developing divisions or rural areas within Sarawak as the results shows that most respondents were from urban area. This is to enhance the study's applicability and relevance.

Acknowledgement

We would like to thank University of Technology Sarawak (UTS) for providing us with the support and facilities to complete this research.

References

Abdullah, R., Mansor, N., & Lim, Y.M. (2020). E-wallet: factors influencing user acceptance towards cashless society in Malaysia among public universities. *Indonesian Journal of Electrical Engineering and Computer Science*, 19(1), 476–483.

Abdullah, N.N., Prabhu, M., & Othman, M.B. (2022). Analyzing driving factors of customer satisfaction among telecommunication service providers in Kurdistan region. *International Journal of Engineering Business Management*, 14, 1-10.

Abed, S.S. & Alkadi, R.S. (2025). Consumer continuous use of and satisfaction with Fintech payment applications in Saudi Arabia: towards an integrated model. *Journal of Financial Reporting and Accounting*, 23(2), 496-517.

Ajao, Q., Oludamilare, O., & Sadeeq, L. (2023). Drivers of mobile payment acceptance: the impact of network externalities in Nigeria. *arXiv*, 23(05), 15436.

Albugami, M.A. & Zaheer, A. (2023). Measuring e-commerce service quality for the adoption of online shopping during COVID-19: Applying unified theory and use of technology model (UTAUT) Model Approach. *International Journal of Technology*, 14(4), 705-71.

Ali, A., Sharma, R., & Mishra, D. (2022). How satisfied am I with mobile wallets? exploring the nexus between MSQual, hedonism, and satisfaction. *Future Business Journal*, 8(1), 1–15.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Aljaafreh, A. (2021). Why students use social networks for education: extension of Utaut2. *Journal of Technology and Science Education*, 11(1), 53-66.

Amnas, M.B., Selvam, M., Raja, M., Santhoshkumar, S., & Parayitam, S. (2023). Understanding the determinants of FinTech adoption: integrating UTAUT2 with trust theoretic model. *Journal of Risk and Financial Management*, 16(12), 505.

Bagozzi, R.P. & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.

Bommer, W.H., Rana, S., & Milevoj, E. (2022). A meta-analysis of eWallet adoption using the UTAUT model. *International Journal of Bank Marketing*, 40(4), 791-819.

Candra, S., Nuruttarwiyah, F., & Hapsari, I.H. (2020). Revisited the technology acceptance model with e-trust for peer-to-peer lending in Indonesia (perspective from fintech users). *International Journal of Technology*, 11(4), 710-721

Chakraborty, S., Raghavan, V., & Kumar, R. (2024). Investigation on the factors influencing the continuation intention to use digital wallet in rural India using extended UTAUT2. *Asian Journal of Economics and Banking*, 8(1), 50–65.

Chin, W.W. (2010). How to write up and report PLS analyses. In Handbook of Partial Least Squares. Springer Handbooks of Computational Statistics. By Esposito Vinzi, V., Chin, W., Henseler, J., Wang, H. (eds).

Chong, T.P., Choo, K.S.W., Yip, Y.S., Chan, P.Y., Teh, H.L.J., & Ng, S.S. (2019). An adoption of fintech service in Malaysia. *South East Asia Journal of Contemporary Business, Economics and Law*, 18(5), 134-147.

Chuah, S.H.W., Marimuthu, M., Kandampully, J., & Bilgihan, A. (2017). What drives Gen Y loyalty? understanding the mediated moderating roles of switching costs and alternative attractiveness in the value-satisfaction-loyalty chain. *Journal of retailing and consumer services*, 36, 124-136.

Dahlberg, T., Guo, J., & Ondrus, J., (2015). A critical review of mobile payment research. *Electronic Commerce Research and Applications*, 14(5), 265-284.

Dirgantari, P.D., Hidayat, Y.M., Mahphoth, M.H., & Nugraheni, R. (2020). Level of use and satisfaction of e-commerce customers in Covid-19 pandemic period: an information system success model (ISSM) approach. *Indonesian Journal of Science & Technology*, 5(2), 261-270.

Elok, C.S. & Hidayati, A. (2021). Customer loyalty in digital wallet industry: the role of satisfaction, effort expectancy, performance expectancy, and habit. In the Proceedings of the 3rd International Conference on Economics, Business and Economic Education Science (ICE-BEES 2021). 27–28 July 2021.

El-Shihy, D., Abdelraouf, M., Hegazy, M., & Hassan, N. (2024). The influence of AI chatbots in fintech services on customer loyalty within the banking industry. *Future of Business Administration*, 3(1), 16-28.

Esawe, A.T. (2022). Understanding mobile e-wallet consumers' intentions and user behavior. *Spanish Journal of Marketing-ESIC*, 26(3), 363-384.

Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.

Hair, J.F. Anderson, R., & Tatham, R.B. (1998). Multivariate data analysis. By Upper Saddle River, New. Jersey: Prentice Hall.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2010). Multivariate Data Analysis by Upper Saddle River: New Jersey: Prentice Hall. (6th edition).

Hamzah, A.A. & Shamsudin, M.F. (2020). Why customer satisfaction is important to business? *Journal of Undergraduate Social Science and Technology*, 1(1), 1-14.

Handayani, D.F.R., Widowati, R., & Nuryakin, N. (2021). The influence of e-service quality, trust, brand image on Shopee customer satisfaction and loyalty. *Jurnal Siasat Bisnis*, 119-130.

Hashim, A.A.M., Ab Aziz, M.R., & Seman, J.A. (2022). Analyzing factors influencing e-wallet adoption using UTAUT2 model: a literature review, 202-211.

Hassan, M.S., Islam, M.A., Abdullah, A.B.M., & Nasir, H. (2024). End-user perspectives on fintech services adoption in the Bangladesh insurance industry: the moderating role of trust. *Journal of Financial Services Marketing*, 1-19.

Heixia, L., Yu, G., & Wu, G., (2018). Relationship among customer loyalty, customer satisfaction, corporate image, and behavioural intention on social media for a corporation. *International Journal of Information Technology and Management*, 17(3), 170-183.

Henseler, J., Ringle, C.M., & Sinkovics, R.R. (2009). The use of partial least squares path modeling in international marketing. In New challenges to international marketing by Emerald Group Publishing Limited, pp. 277-319.

Hiew, L.C., Adrian, L.H., Leong, C.M., Liew, C.Y., & Soe, M.H. (2022). Do they really intend to adopt E-wallet? prevalence estimates for government support and perceived susceptibility. *Asian Journal of Business Research*, 12(1), 77-98.

Hoang, D.P. & Nguyen, N.H. (2019). Retaining online customers: information quality as a sign of corporate social responsibility. *International Journal of Business and Society*, 20(2), 482-500.

Idenedo, O.W. & Goodie-Okio, J.A. (2022). Contact employee recognition and customer loyalty of healthcare firms in South-South, Nigeria. *International Journal of Business Systems and Economics*, 13(5), 33-50.

Ismail, I. (2021). E-wallet use in Malaysia Growing. Retrieved on 25 March 2025. Retrieved from https://www.nst.com.my/opinion/columnists/2021/04/683345/e-wallet-usemalaysia-growing

Kang, H. (2021). Sample size determination and power analysis using the G* Power software. *Journal of educational evaluation for health professions*, 18(17), 1-12.

Kurniawan, B., Yuliani, E., & Mahmudah, F.N. (2023). A study on intention, implementation, and adoption of e-wallet in Indonesia. *Journal of Infrastructure, Policy and Development*, 7(1), 8857.

Leninkumar, V. (2017). The relationship between customer satisfaction and customer trust on customer loyalty. *International Journal of Academic Research in Business and Social sciences*. 7(4), 450-465.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025
Malaquias, R.F. & Silva, A.F. da. (2020). Understanding the use of mobile banking in rural areas of Brazil: an analysis of the role of behavioral intention, habit, and trust. *Technology in Society*, 60, 101228.

Mohamed, N.N., Ganie, K., Narawi, F., Ezza, N., & Ramlee, F. (2023). Factors influencing the intention to use and actual use of the S pay global e-wallet application in Sarawak. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 13(2), 566–580.

Moorthy, K., Xsin, N.K., Salleh, N.M.Z.N., Ling, P.C., & Ting, L.C. (2022). Continuance intention to use e-wallets in Malaysia after outbreak of COVID-19. *International Journal of Applied Business and Management Sciences*, 3(1), 39-64.

Morosan, C. & DeFranco, A. (2016). It's about time: revisiting utaut2 to examine consumers' intentions to use nfc mobile payments in hotels. *International Journal of Hospitality Management*, 53, 17-29.

Musa, M., Ismail, M.N., Tahir, S., Fudzee, M.F.M., & Jofri, M.H. (2022). Student acceptance towards online learning management system based on UTAUT2 model. *International Journal of Advanced Computer Science and Applications*, 13(11), 1-30.

Ngo, H.T. & Nguyen, L.T.H. (2024). Consumer adoption intention toward FinTech services in a bank-based financial system in Vietnam. *Journal of Financial Regulation and Compliance*, 32(2), 153-167.

Ngobo, P.V. (2017). The trajectory of customer loyalty: an empirical test of Dick and Basu's loyalty framework. *Journal of the Academy of Marketing Science*, 45, 229-250.

Nguyen, T.H., Nguyen, N.T., & Cao, T.H. (2021). The impact of digital payment on customer behavior: a study on e-wallets in Vietnam. *Journal of Retailing and Consumer Services*, 62, 102638.

Ong, C.H., Lee, H.W., & Ramayah, T., (2018). Impact of brand experience on loyalty. *Journal of Hospitality Marketing & Management*. 27(7), 755-774.

Partner. (2025). How fintech is changing consumer habits in financial management. Retrieved on 27 March 2025. Retrieved from https://techcabal.com/2025/01/13/how-fintech-is-changing-consumer-habits-in-financial-management/?utm

Patel, K. & Singh, P. (2023). The effect of mobile-wallet service dimensions on customer satisfaction and loyalty: an empirical study. *Cogent Business & Management*, 10(1), 2229544.

Phuong, N.T.H., Thuy, N.D., Giang, T.L., Han, B.T.N., Hieu, T.H., & Long, N.T. (2022). Determinants of intention to use Fintech payment services: evidence from Vietnam generation Z. *International Journal of Business, Economics and Law*, 26(1), 354-366.

Prawira, S.S. & Ridanasti, E. (2022). An empirical analysis of factors affecting the intention of using digital wallet in Yogyakarta. *Selekta Manajemen: Jurnal Mahasiswa Bisnis dan Manajemen*, 8(1), 30–40.

Pramono, Y., Bramantyo, M.A., Syukur, M., Dewabroto, W.S., & Gunadi, W. (2023). Analysis of the influence of brand image, trust, e-service quality, and loyalty program on customer satisfaction and customer loyalty on e-wallet usage. *The International Journal of Accounting and Business Society*, 31(2), 131-136.

Borneo Journal of Social Science & Humanities
DOI: https://doi.org/10.35370/bjssh.2025.7.1-08
e-ISSN: 2682-8235

Submitted: 01 March 2025 Accepted: 09 June 2025 Published: 30 June 2025

Putra, P.D.K. & Anggraini, R.D. (2021). Intention to use m-wallet application: an adjusted measurement of facilitating conditions. *Jurnal Ekonomi dan Bisnis Airlangga (JEBA)*, 31(3), 187–198.

Rahim, A.F.A. & Nawawi, M.R. (2022). The influence of e-satisfaction on users' e-loyalty toward e-wallet payment apps: a mediated-moderated model. *International Journal of Emerging Markets*.

Shafiri, S., Tamam, E., Hassan, M.S., Waheed, M., & Zaremohzzabieh, Z. (2016). Factors affecting Malaysian university students purchase intention in social networking sites. *Cogent Business & Management*, 3(1), 118-261.

Singh, A.K. & Sharma, P. (2022). A study of Indian Gen X and Millennials consumers' intention to use FinTech payment services during COVID-19 pandemic. *Journal of Modelling in Management*, 18(4), 1177-1203.

Su, B.C., Wu, L.W., & Yen, Y.C., (2021). Antecedents and consequences of trust and loyalty in physical banking affecting mobile payment. *Sustainability*, 13(22), 23-68.

Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A.K.M.N., (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services*, 55, 102086

Tang, K.L., Aik, N.C., & Choong, W.L., (2021). A modified UTAUT in the context of m-payment usage intention in Malaysia. *Journal of Applied Structural Equation Modeling*, 5(1), 40-59.

Valencia, D. & Layman, C.V. (2021). E-wallet service innovation, service delivery, and customer satisfaction on customer loyalty within shopeepay in Indonesia. *Ultima Management*, 13(1), 23-46.

Venkatesh, V., Thong, J.Y.L., & Xu, X. (2012). Consumer acceptance and use of information technology. *Extending the unified theory of acceptance and use of technology*, 36(1), 157-178.

Yuliantie, E. (2024). The effect of performance expectancy on behavioral intention: the mediating role of satisfaction. *Journal of Management and Business Insight*, 2(1), 80-89.