Factors Affecting Service Quality and Satisfaction Customers Use of Mobile Commerce in Ho Chi Minh

Nguyen, Luan-Thanh

Ho Chi Minh City University of Foreign Languages-Information Technology

5 January 2024

FACTORS AFFECTING SERVICE QUALITY AND SATISFACTION CUSTOMERS USE OF MOBILE COMMERCE IN HO CHI MINH

Abstract: Mobile commerce has an important potential in changing consumer shopping habits that have a direct impact on service quality and customer satisfaction when using mobile commerce and becoming a channel of important trade. Based on the development of technology and digital devices along with the outstanding development of M-commerce, it is predicted that mobile phones will soon become a convenient commerce channel for easy access easy online shopping. This study aims to examine the factors affecting customer satisfaction and service quality when using mobile commerce in Ho Chi Minh. This study is experimental in nature and is based on feedback from a survey of 100 customers in Ho Chi Minh. The results show that Reliability (RE), Responsiveness (RP), Content (CO), Accessibility (AC), Expectations (EX), and Satisfaction (SAT) have a strong impact on consumers, these factors affect the purchasing decision of customers using M-commerce services.

1. Introduction

With the development of society, people is needs are increasing day by day. In recent years, with rapid development and driven by technological factors, it has had a strong impact on people's lives, including business activities. Currently, many economic and financial activities in the market are carried out using technology-related product applications. The Internet is powerful and has changed many aspects of the business (Vărzaru et al., 2021). The rapid and sudden transformation of data from desktop devices to handheld devices has facilitated and encouraged consumers to purchase goods and services online (Bhatt, 2021). Most with the trend of converting from traditional commerce to Internet commerce, and this is also considered a major revolutionary change, it is widely applied in the process of buying and selling products and services. In another aspect, e-commerce is also considered the process of buying, selling, and exchanging goods and services online. Mobile commerce called M-commerce is currently receiving the attention, attention, and interest of customers. This is a new version, M-commerce is considered a subset of electronic commerce (Baloch et al., 2019). M-commerce is considered a process that refers to wireless e-commerce services that are applied to consumers or impact businesses through handheld devices such as smartphones, and tablets.

For consumers, M-commerce facilitates merchants to reach customers easily anytime, anywhere, through handheld devices and the Internet. In contrast, E-commerce needs to have the support of computers and internet devices to reach customers. M-commerce allows customers to transact in many different ways such as financial transactions, transferring money, paying bills, or buying products and receiving many incentives from private organizations. Personnel and provide good service quality to help bring satisfaction to customers (Kale & Mente, 2018). M-commerce is highly competitive in the Vietnam market such as Shopee, Tiki, Lazada, Sendo, etc...

There are many definitions of M-commerce, it is referred to online transactions or businesses for applications, along with goods and services. The process of using mobile devices to communicate and interact through the process of connecting to Internet services at high speed.

"M-commerce is the use of information and communication technologies for the use of mobile integration of different value chains in business relationships" (Mba et al., 2016). In addition, giving user experience reviews and feedback has been widely used and applied to explain behavior towards a product or service. Moreover, the relationship between service quality and customer satisfaction when using M-commerce is one of the important factors to evaluate customer experience, which in turn will affect consumer behavior long-term use and has a significant impact on the life and consumption of customers. Service companies succeed in combining and implementing both service quality and customer satisfaction because they understand their customers' needs and expectations. This study was conducted with the aim of finding out the factors affecting service quality and customer satisfaction for M-commerce in Ho Chi Minh. Customer satisfaction and service quality depend on perceived value, brand awareness is a key factor in the survival of M-commerce and commercial activities, actively developing and improving processes to meet customer needs in the best way. Custom factors affect commercial quality M by combining Reliability (RE), Responsiveness (RP), Content (CO), Accessibility (AC), Expectations (EX), and Satisfaction (SAT) is applied to assess the relationship, perceived service quality, and customer satisfaction.

In this study, in order to achieve the stated objective, the existing research on service quality indicators is first considered, specifically the aspect of the SERVQUAL model (Ong, Prasetyo, Lagura, et al., 2023). The next sections of this study will review the theories of service quality and customer satisfaction when using M-commerce, develop hypotheses, research models and present the methodology. Research the factors affecting customer satisfaction with M-commerce. Next is the synthesis, collection, analysis of data, and evaluation of the external measurement model and internal structure. Discussion and results will be presented at the end of this paper.

2. Literature Review and Hypotheses development

M-commerce stands for mobile commerce, it fulfills requirements and empowers customers by connecting customers with them, providing the ability to transact directly with customers, anytime & anywhere maximum convenience for customers. Service quality and mobile commerce customer satisfaction are crucial in this process for app providers, which will help them reap real benefits by improving service quality and customer satisfaction, these are the main factors affecting customers when using M-commerce.

2.1 Literature Review

2.1.1 Service quality

Service quality can be understood as a comprehensive assessment of the customer's perception of a particular service and the extent to which this is all that service meets expectations and brings satisfaction to the customer row. The relationship between service quality and customers corresponds to customer satisfaction when experiencing the service, and in addition, customer evaluation after service experience has a direct relationship with each other (Esmailpour et al., 2022). Service quality and customer satisfaction are critical success factors for companies that tend to think about competitiveness in the market, in order to develop growth and promote growth in M-commerce services, service quality is determined by people's attitudes and perceptions, this is said to be difficult to imitate or follow, service quality has a relationship with

service dimensions or attributes different from what the user wants (Zhou et al., 2021). Service quality is also considered a description of the results of the overall quality assessment process that customers give to service providers by comparing customer expectations with their perceived quality after experiencing different types of services. (Dam & Dam, 2021). Next comes assurance, this aspect is based on the ability of employees and the company to establish trust and instill trust with customers, this is based on the knowledge and ability of employees to maintain communication with customers through technology devices and M-commerce services(Lee & Lee, 2020). Service quality is also established by the aspects of empathy when connecting with customers through showing care, consulting, answering all questions and expectations of customers, providing appropriate solutions, and time bringing the best optimal effect to new customers excellent service quality.

2.1.2 Customer satisfaction

Mobile commerce is increasingly focusing on service quality and making more and more efforts to be able to bring high service quality to meet customer satisfaction because this is the most important factor promote customer satisfaction with the service(Pakurár et al., 2019). This shows that the definition of service can vary from person to person. And this is considered a really vague concept and comes with complexity, due to the heterogeneous service characteristics that bring many different results in terms of customer satisfaction, intangibility is easily perishable damaged production for consumption (Agrawal et al., 2019). There is not any definition of the best system here, but service quality can always be understood as a customer's overall assessment of a particular service and song that is likely to become the deciding factor determining the degree to which customer expectations are met leading to satisfaction (Yi et al., 2023). Customer satisfaction is considered the most important factor that has a profound influence on a company's sales, in other words, customer satisfaction has an impact on many other foundations of any business in the current economy with a fiercely competitive market. Customer satisfaction plays an important role in motivating and encouraging customers to use their services (Rita et al., 2019). When customers have an attitude of feeling satisfied with the product or service they have purchased or used, and with they are more inclined to buy and use it again from the same supplier. Moreover, service customers also suggested many factors to contribute to overall quality assessment when customers form their overall rating of an online store (Blut, 2016).

2.2 Hypotheses development

2.2.1 Reliability

Reliability and security are essential for cultivating trust online (Li et al., 2022) and are important for M-commerce technology, especially in the early stages, because of its remarkable performance. System failure in wireless communication service will cause customers to doubt and worry about its ability to deliver on its promises (Liébana-Cabanillas et al., 2014). The consistency with which a gadget chooses to measure the same thing is referred to as reliability. As M-commerce expands, the emphasis will switch from building customer confidence in technology to building confidence in

providers. Customers will start to question and worry about a wireless communication service's capacity to deliver on its claims if there are persistent failures.

Therefore, based on the above discussion, the following hypothesis is proposed:

H1: Reliability has a positive effect on service expectations of mobile commerce.

2.2.2 Responsiveness

Responsiveness in M-commerce refers to the speed and efficiency with which a mobile application adapts to different devices and screen sizes. Responsive mobile commerce platform that allows easy navigation and interaction with a website or app, no matter what device they are using. Responsiveness is the process that is linked to customers' perceptions of the amount of feedback they receive from customers and other marketers (Johnson et al., 2006). The proposed model measures the fit within the system availability response (Shujaa Alotaibi, 2021).

Therefore, based on the above discussion, the following hypothesis is proposed:

H2: Responsiveness has a positive impact on service expectations of mobile commerce.

2.2.3 Content

This study affirms the importance of mobile commerce applications and parallel delivery of relevant content in an effort to influence service quality and customer satisfaction in M-commerce, The application is dedicated to wireless mobile devices and facilitates tailor-made allowing consumers and businesses to personalize services or content depending on the needs of different customers (McLean et al., 2020).

There for, the following hypothesis is proposed:

H3: Content has a positive impact on service expectations of mobile commerce.

2.2.4 Accessibility

The accessibility of mobile commerce services is to contribute to minimizing the negative effects of process time risks on customer satisfaction when using the service (See-To & Ho, 2016). Accessibility is also rated as medium-high, the accessibility of mobile commerce could easily be considered inconsistent with customer metrics or requirements if accessibility not going well (Pot et al., 2023).

There for, the following hypothesis is proposed:

H4: Accessibility has a positive impact on service expectations of mobile commerce.

2.2.5 Expectations

The expectation is the degree to which an individual has given and believes that the use of new technologies or good service quality will meet and deliver the expectation for the job in a better way (Iranmanesh et al., 2022). The higher the usefulness of the service, the better the customer's expectation of the service (Al-Saedi et al., 2020).

This study was proposed as follows:

**H5: Expectations have a positive impact on satisfaction for mobile commerce**

2.2.6 Satisfaction

Satisfaction and expectations in mobile commerce are closely related and are widely accepted as the main issues of a business's finished product. Satisfaction is a key influence on customer behavior and here it continues to influence customer expectations for mobile commerce (Agarwal & Dhingra, 2023). Meeting the good expectations of customers in the process of building a sense of active participation in the action of using M-commerce services in the future (Salamah et al., 2022). Satisfaction can lead to a variety of purposes, such as giving positive feedback (Gawron & Strzelecki, 2021). Therefore, this study is proposed as follows:

H6: Satisfaction has a positive impact on expectations for mobile commerce

2.3 Research model

Figure 1: Propose model
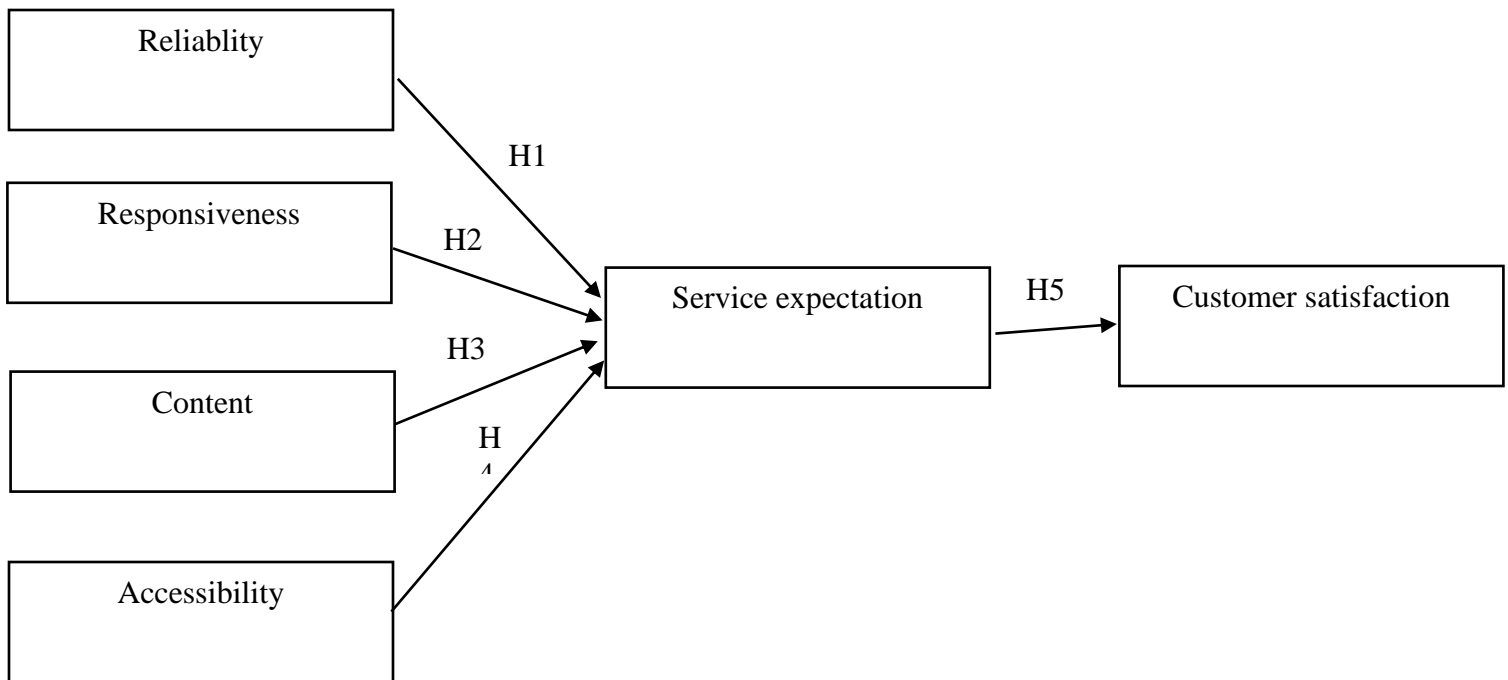
3. Methodology

3.1 Data collection

For this study, m-commerce users in Ho Chi Minh City, Vietnam, were polled. All of the study's participants were people of Ho Chi Minh City and used Shopee, Facebook, or Tiki to make online purchases. The study aimed to gather insights on the preferences and behaviors of m-commerce users in Ho Chi Minh City specifically, as these platforms are widely popular among online shoppers in the city (T.-Q. Dang et al., 2023; DUC et al., 2024; L.-T. Nguyen, Phan, et al., 2023). By focusing on these three platforms, the study sought to understand the common trends and patterns among users who rely on them for their online shopping needs. According to the statistical software G*Power version 3.1, for an effect size, of f^2 = 0.15, probability of error, α = 0.05 and power level, (1- β) =

0.8, and the number of predictors = 5, a minimum sample size of 92 is recommended (Dzandu et al., 2022; L. Nguyen & Dang, 2023; T. T. C. Phan et al., 2023). 100 questionnaires, fully filled out by both men and women of various ages and educational levels, were distributed. An illustration of a shopping interception question is, "Have you engaged in mobile commerce before?" Only those of the 100 online surveys that were sent out with complete responses were received. The online survey's goal was to compile information on respondents' perceptions of and experiences with mobile commerce (T.-T. C. Phan et al., 2023; Tien, Luan, et al., 2023). The collection of data is accurate and reliable for analysis because only complete responses are included. Of the participants, 21% were men and 79% were women. Additionally, 37% were less than the age of 20. 60% were between the ages of 20 and 35. 3% were more than the age of 35. The percentage of college graduates is as follows: 18% are workers, 75% are students, and 7% others. Among the mobile commerce platforms, 25% of respondents relied on Facebook, 34% relied on Tiki, and 41% relied on Shopee.

3.2 Data analysis

The questionnaire is divided into two parts: one part contains demographics, and the other asks crucial questions about consumer attitudes, beliefs, and preferences. To ensure that respondents can understand the questions, Vietnamese translations are offered throughout the survey (C. N. B. Dang et al., 2023; B.-T. H. Nguyen, Le, et al., 2023; L.-T. Nguyen, 2023). References from earlier successful studies are incorporated into the researcher's survey. A seven-point Likert scale is used to rate each response, with 1 representing a strong disagreement and 7 representing a high level of agreement (L.-T. Nguyen, Nguyen, et al., 2022; L.-T. Nguyen, Duc, et al., 2023). The components and their sources of measurement are listed in the table below, which corresponds to Table 1. The sources of measurement for each component are carefully selected to ensure the accuracy and consistency of the data collected.

Table 1: Component and measure

Factor	Items	References
Reliability	RE1 The mobile site provides me with convenient options for returning the items	(Ocampo et al., 2019)
	RE2 The mobile site has a clear process for handling returns	
	RE3 The mobile site offers a meaningful guarantee	
	RE4 There is information available of what to do if there is a problem	

Responsiveness	RP1 The mobile site provides me with convenient options for returning the items RP2 The mobile site has a clear process for handling returns RP3 The mobile site offers a meaningful guarantee RP4 There is information available of what to do if there is a problem	(T. Q. Dang et al., 2023; H.-B. Nguyen & Nguyen, 2021; Tien, Tri, et al., 2023)
Content	CO1 The content of the mobile site is accurate CO2 The mobile site contains all of the content as that on the regular site CO3 The mobile site contains regularly updated content	
Accessibility	AC1 I feel that the information made during transactions will be kept confidential AC2 I can easily transact using the form in mobile site AC3 The service agents are friendly and willing to assist when receiving complaints	(D. T. V. Dang et al., 2022; L.-T. Nguyen, Dwivedi, et al., 2022)
Expectations	EX1 Mobile site service exceeded my expectations EX2 The quality of the mobile site meets my standards EX3 I think the mobile site service is affordable EX4 The swiftness of response by mobile site regarding consumers' concerns are just as expecte	(L.-T. Nguyen, Nguyen, et al., 2023; V. P. Nguyen & Nguyen, 2021)

| | | SAT1 My choice to purchase from the mobile site was wise | (Ong, |
| Satisfaction | | SAT1 My choice to purchase from the mobile site was wise | (Ong, Prasetyo, Sacro, et al., 2023) |

Satisfaction SAT1 My choice to purchase from the mobile site was wise (Ong, Prasetyo, Sacro, et al., 2023)
SAT2 The mobile site has met my expectations
SAT3 I did the right thing by choosing this mobile site
SAT4 Overall, I was satisfied with the shopping experience on the mobile site

4. Results

4.1 Assessing the outer measurement model

Table 2: Descriptive Statistics and Reliability Coefficients for Contructs

	Loadings	Cronbach's alpha	Rho_a	Composite reliability	AVE
AC1	0.849	0.800	0.882	0.882	0.715
AC2	0.823				
AC3	0.863				
CO1	0.928	0.900	0.937	0.937	0.833
CO2	0.924				
CO3	0.886				
EX1	0.764	0.887	0.922	0.922	0.748
EX2	0.919				
EX3	0.875				
EX4	0.895				
RE1	0.868	0.847	0.891	0.891	0.671
RE2	0.814				
RE3	0.782				
RE4	0.810				
RP1	0.853	0.890	0.910	0.910	0.718
RP2	0.709				
RP3	0.917				
RP4	0.894				
SAT1	0.929	0.945	0.945	0.945	0.811
SAT2	0.927				
SAT3	0.891				
SAT4	0.854				

The results in Table 2 show that the items are internally consistent and reliable; all construct item loadings are greater than 0.7, each construct's Cronbach's alpha is greater

than 0.7, and the composite reliability is greater than 0.7. Furthermore, the average variance extracted (AVE) from each construct is greater than 0.5, demonstrating that our measurement strategy exhibits sufficient convergent validity (V. P. Nguyen & Nguyen, 2021). Utilizing cross-loadings and the Fornell-Larcker value (AVE's square root), discriminant validity is assessed. Cross-loadings involve examining the correlation between each item and its intended construct, as well as its correlation with other constructs. This analysis helps ensure that items are more strongly correlated with their intended construct than with other constructs, indicating discriminant validity. The Fornell-Larcker value compares the square root of the AVE for each construct to the correlations between constructs, further confirming discriminant validity.

Table 3: Fornell Larker Criterion

	AC	CO	EX	RE	RP	SAT
AC	0.845					
CO	0.767	0.913				
EX	0.753	0.665	0.865			
RE	0.740	0.705	0.759	0.819		
RP	0.756	0.853	0.719	0.756	0.847	
SAT	0.746	0.729	0.816	0.816	0.809	0.901

Table 4: Cross loading

	AC	CO	EX	RE	RP	SAT
AC1	**0.849**	0.711	0.662	0.705	0.705	0.690
AC2	**0.823**	0.539	0.595	0.548	0.538	0.545
AC3	**0.863**	0.686	0.649	0.615	0.666	0.651
CO1	0.674	**0.928**	0.610	0.628	0.818	0.650
CO2	0.717	**0.924**	0.602	0.659	0.785	0.684
CO3	0.710	**0.886**	0.608	0.642	0.731	0.664
EX1	0.552	0.435	**0.764**	0.571	0.406	0.511
EX2	0.753	0.670	**0.919**	0.695	0.705	0.772
EX3	0.598	0.500	**0.875**	0.612	0.641	0.704
EX4	0.683	0.659	**0.895**	0.734	0.690	0.794
RE1	0.636	0.542	0.662	**0.868**	0.578	0.633
RE2	0.621	0.504	0.542	**0.814**	0.553	0.639
RE3	0.544	0.502	0.542	**0.782**	0.577	0.672
RE4	0.617	0.726	0.709	**0.810**	0.745	0.725
RP1	0.612	0.698	0.684	0.762	**0.853**	0.769
RP2	0.522	0.562	0.436	0.464	**0.709**	0.554
RP3	0.700	0.815	0.648	0.673	**0.917**	0.705
RP4	0.715	0.790	0.630	0.621	**0.894**	0.689
SAT1	0.661	0.696	0.733	0.740	0.755	**0.929**
SAT2	0.685	0.667	0.712	0.738	0.731	**0.927**

SAT3	0.634	0.626	0.788	0.754	0.709	**0.891**
SAT4	0.713	0.639	0.699	0.706	0.721	**0.854**

4.2 Inspecting the inner structural model

Table 5: Path coefficient results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Results
AC -> EX	0.359	0.374	0.112	3,215	0.001	Supported
CO -> EX	-0.054	-0.063	0.110	0.491	0.623	Not supported
EX -> SAT	0.816	0.817	0.033	24,695	0.000	Supported
RE -> EX	0.369	0.359	0.103	3,582	0.000	Supported
RP -> EX	0.215	0.221	0.120	1,790	0.074	Not support

Regarding discriminant validity (Table 5), the square root of the AVE for each factor/construct exceeded MS-SQ on customer satisfaction ($p < 0.05$), suggesting that the relationship between loyalty and customer satisfaction is fully mediated by satisfaction. As a result, the analysis disproves H2 and H3 while supporting H1 and H4. This result suggests that the relationship between loyalty and the factors/constructs under investigation is largely explained by customer satisfaction. Contrary to hypotheses H2 and H3, it also implies that elements other than customer satisfaction may have an impact on loyalty directly (Omar et al., 2021).
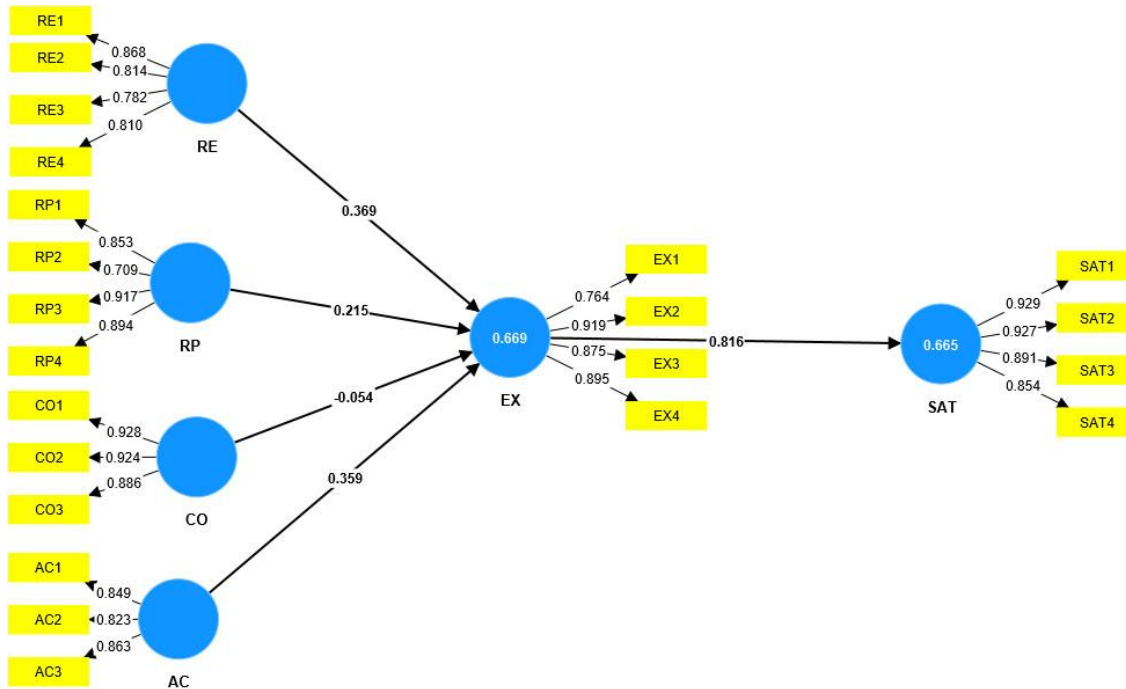
Figure 2: Structural Model Evaluation

Table 6: R-square

	R-square	R-square adjusted
EX	0.669	0.659
SAT	0.665	0.663

The bootstrapping technique was employed to assess the structural paths. The structural routes were evaluated using the bootstrapping method. A total of 5000 sub-samples were used to test the hypotheses. The data in Figure 2 and Table 5 , for the first hypothesis, the effect of AC on the usefulness of EX is said to be positive and significant ($p<0.05$). H1 is supported by the substantial effects of RE on consumers' adaption EX ($p<0.05$). H5 also demonstrates that EX has positive impacts on SAT ($p<0.05$). However, H2 and H3 did show RP and AC negative effects on EX ($p>0.05$).

5. Discussion and conclusion

5.1 Discussion

Customer satisfaction will increase in direct proportion to the level of service that meets customer needs. Businesses can further improve customer satisfaction by providing tailored solutions and addressing specific problems. Furthermore, promoting a feeling of trust and loyalty among customers can be done by creating open lines of communication and responding to any problems as soon as they arise. Men and women rate social service spatial attributes differently, which has been revealed and indicates that women are the primary target audience in an effort to improve overall satisfaction. with services provided by mobile commerce. Furthermore, it highlights the importance of using gender-specific marketing techniques to successfully target and engage with female consumers in this online environment. The results of this study can be used to generate

open innovations as they provide a thorough understanding of the role of social service spatial factors in enhancing customer satisfaction, which can then translate into loyalty. Ultimately, having this knowledge can lead to more dedicated customers and a competitive edge in the rapidly growing mobile commerce market.

This study has several important theoretical implications. By highlighting the importance of specific variables that are not examined by traditional theories of consumer satisfaction, the research model helps to identify key factors affecting customer satisfaction. customers in mobile commerce. Perceived performance, expectations, value, and quality often appear as drivers of consumer satisfaction in traditional theories and models. The proposed model is based on the well-known theory of SERVQUAL technology acceptance and highlights its uniqueness by positioning satisfaction as the main model variable. By focusing on customer satisfaction in mobile commerce, businesses can gain a competitive advantage in the digital marketplace.

Mobility is not a widely investigated predictor in previous technology satisfaction and acceptance studies, but it has proven to be the most important predictor of customer satisfaction. customers in mobile commerce. This new model recognizes the importance of considering factors such as mobility and trust when studying customer satisfaction in a digital environment by understanding how these variables impact consumer behavior. This can lead to increased customer loyalty and overall success in the competitive marketplace(Kalinić et al., 2021).

5.2 Conclusion

In this study, we investigate how online review writing behavior and customer satisfaction are affected by different designs of online review systems, especially online reviews. closed and open text comments. In addition to the heterogeneous impact between the reflections of closed and open reviews on satisfaction, we also found direct and indirect effects of online review behavior. In addition, the rating system used affects the level of satisfaction shown in online reviews, with open comments more likely to reflect a higher level of satisfaction. Regarding the heterogeneous effect, for the sake of properties, open reviews of properties have a more significant impact than closed reviews of those attributes in reflecting overall customer satisfaction. In other words, customers are more satisfied overall with their shopping experience when the focus of reviews is higher. However, customers who give only positive reviews in closed reviews to indicate satisfaction at the attribute level are not always representative of the entire customer base. On the other hand, poor closed-form reviews are a clear indication of how dissatisfied customers are with their overall consumption experience. To accurately gauge overall customer satisfaction, it is important to consider the focus of reviews and the nature of closed reviews. While a positive attribute-level rating may not provide a comprehensive view, negative reviews can serve as a clear sign of low satisfaction. Therefore, it is crucial to analyze both types of feedback in order to gain a complete understanding of customers' overall consumption experience (Xu, 2021).

References

Agarwal, R., & Dhingra, S. (2023). Factors influencing cloud service quality and their relationship with customer satisfaction and loyalty. *Heliyon*, *9*(4). https://doi.org/10.1016/j.heliyon.2023.e15177

Agrawal, A., Gans, J. S., & Goldfarb, A. (2019). Artificial intelligence: The ambiguous labor market impact of automating prediction. In *Journal of Economic Perspectives* (Vol. 33, Issue 2, pp. 31–50). American Economic Association. https://doi.org/10.1257/jep.33.2.31

Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, *62*. https://doi.org/10.1016/j.techsoc.2020.101293

Baloch, M. A., Huseynov, F., Aydın, İ., Sosyal, Ü., Enstitüsü, B., Yönetimi, İ., & Lisans Öğrencisi, Y. (2019). *Determinants of Consumer Satisfaction of Mobile Commerce in Turkey 1 "Determinants of Consumer Satisfaction of Mobile Commerce in Turkey" yüksek lisans tez çalışmasından türetilmiştir*.

Bhatt, S. (2021). An Empirical Study of Factors Affecting Adoption of M-Commerce in India. *Empirical Study*, *3*(1), 2021.

Blut, M. (2016). E-Service Quality: Development of a Hierarchical Model. *Journal of Retailing*, *92*(4), 500–517. https://doi.org/10.1016/j.jretai.2016.09.002

Dang, C. N. B., Nguyen, D. T., Le, T. T., Nguyen, V. H., & Nguyen, L. T. (2023). Factors influencing student citizenship behavior (SCB) and long–term student relationship orientation (LRO) in Vietnamese education sector. *The Second International Conference on Science, Economics and Society Studies–UEF 2023*, 67–81.

Dang, D. T. V., Nguyen, L., & Nguyen, A. H. D. (2022). Extending UTAUT2 in Mobile money adoption and actual use behavior: An empirical research in Vietnam during the Covid-19. *Industrielle Beziehungen. Zeitschrift Für Arbeit, Organisation Und Management*, *10*(4). https://doi.org/10.53384/inbe.101390943.2779.1862003510

Dang, T.-Q., Tran, P.-T., & Nguyen, L.-T. (2023). *Are You Ready for Tapping into the Metaverse in Higher Education? Integrated by Dual PLS-SEM and ANN Approach BT - Current and Future Trends on Intelligent Technology Adoption: Volume 1* (M. A. Al-Sharafi, M. Al-Emran, G. W.-H. Tan, & K.-B. Ooi (eds.); pp. 63–84). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-48397-4_4

Dang, T. Q., Nguyen, L.-T., & Thuy, T. N. T. (2023). The capability of E-reviews in

online shopping. Integration of the PLS-SEM and ANN method. *International Journal of Professional Business Review*, *8*(7), 1–29. https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i7.2638

DUC, D. T. V., NGUYEN, L.-T., Dang, T.-Q., & TRAN, N. T. T. (2024). Customer Loyalty and Brand Value Co-Creation of Financial Apps: The Integration of. *Uses &Gratification Theory*.

Dzandu, M. D., Hanu, C., & Amegbe, H. (2022). Gamification of mobile money payment for generating customer value in emerging economies: The social impact theory perspective. *Technological Forecasting and Social Change*, *185*(September), 122049. https://doi.org/10.1016/j.techfore.2022.122049

Dam, S. M., & Dam, T. C. (2021). Relationships between Service Quality, Brand Image, Customer Satisfaction, and Customer Loyalty. *Journal of Asian Finance, Economics and Business*, *8*(3), 585–593. https://doi.org/10.13106/jafeb.2021.vol8.no3.0585

Esmailpour, J., Aghabayk, K., Aghajanzadeh, M., & De Gruyter, C. (2022). Has COVID-19 changed our loyalty towards public transport? Understanding the moderating role of the pandemic in the relationship between service quality, customer satisfaction and loyalty. *Transportation Research Part A: Policy and Practice*, *162*, 80–103. https://doi.org/10.1016/j.tra.2022.05.023

Gawron, M., & Strzelecki, A. (2021). Consumers' adoption and use of e-currencies in virtual markets in the context of an online game. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1266–1279. https://doi.org/10.3390/jtaer16050071

Iranmanesh, M., Min, C. L., Senali, M. G., Nikbin, D., & Foroughi, B. (2022). Determinants of switching intention from web-based stores to retail apps: Habit as a moderator. *Journal of Retailing and Consumer Services*, *66*. https://doi.org/10.1016/j.jretconser.2022.102957

Johnson, G. J., Bruner, G. C., & Kumar, A. (2006). Interactivity and its facets Revisited: Theory and empirical test. *Journal of Advertising*, *35*(4), 35–52. https://doi.org/10.2753/JOA0091-3367350403

Kale, A., & Mente, R. (2018). M-Commerce: Services and applications. In *International Journal of Advanced Science and Research* (Vol. 3). https://www.researchgate.net/publication/326082663

Kalinić, Z., Marinković, V., Kalinić, L., & Liébana-Cabanillas, F. (2021). Neural network modeling of consumer satisfaction in mobile commerce: An empirical analysis. *Expert Systems with Applications*, *175*, 114803. https://doi.org/https://doi.org/10.1016/j.eswa.2021.114803

Lee, S. M., & Lee, D. H. (2020). "Untact": a new customer service strategy in the digital age. In *Service Business* (Vol. 14, Issue 1). Springer. https://doi.org/10.1007/s11628-019-00408-2

Li, S., Zhou, H., Yan, Y., Han, W., & Ren, J. (2022). Reliability and sensitivity analysis of loop-designed security and stability control system in interconnected power systems. *Global Energy Interconnection*, *5*(5), 501–511. https://doi.org/10.1016/j.gloei.2022.10.004

Liébana-Cabanillas, F., Sánchez-Fernández, J., & Muñoz-Leiva, F. (2014). Antecedents of the adoption of the new mobile payment systems: The moderating effect of age. *Computers in Human Behavior*, *35*, 464–478. https://doi.org/10.1016/j.chb.2014.03.022

Nguyen, B.-T. H., Le, T. H., Dang, T. Q., & Nguyen, L.-T. (2023). What Role Does AI Chatbot Perform in the F&B Industry? Perspective from Loyalty and Value Co-Creation: Integrated PLS-SEM and ANN Techniques. *Journal of Law and Sustainable Development*, *44*(4), 1–39. https://doi.org/https://doi.org/10.55908/sdgs.v11i4.794

Nguyen, H.-B., & Nguyen, L.-T. (2021). Factors Influence Blockchain Adoption in Supply Chain Management Among Companies Based in Ho Chi Minh City. *Conference Towards ASEAN Chairmanship 2023 (TAC 23 2021)*, 1–13. https://www.atlantis-press.com/proceedings/t-a-c-23-21/125965535

Nguyen, L.-T. (2023). Financial Inclusion through Mobile Money in developing countries : the case of Vietnam. *Digital Transformation, Cooperation and Global Integration in the New Normal*, 121–141.

Nguyen, L.-T., Duc, D. T. V., Dang, T.-Q., & Nguyen, D. P. (2023). Metaverse Banking Service: Are We Ready to Adopt? A Deep Learning-Based Dual-Stage SEM-ANN Analysis. *Human Behavior and Emerging Technologies*, *2023*, 6617371. https://doi.org/10.1155/2023/6617371

Nguyen, L.-T., Dwivedi, Y. K., Tan, G. W. H., Aw, E. C. X., Lo, P. S., & Ooi, K. B. (2022). Unlocking Pathways to Mobile Payment Satisfaction and Commitment. *Journal of Computer Information Systems*, *00*(00), 1–18. https://doi.org/10.1080/08874417.2022.2119444

Nguyen, L.-T., Nguyen, D., Ngoc, K. N.-N., & Duc, D. T. V. (2023). Blockchain adoption in logistics companies in Ho Chi Minh City. *Cogent Business & Management*, *10*(2), 1–24. https://doi.org/10.1080/23311975.2023.2216436

Nguyen, L.-T., Nguyen, V. P., & Dang, D. T. V. (2022). Critical Factors Affecting the Adoption of Artificial Intelligence: An Empirical Study in Vietnam. *The Journal of Asian Finance, Economics and Business(JAFEB)*, *9*(5), 225–237. https://doi.org/10.13106/jafeb.2022.vol9.no5.225

Nguyen, L.-T., Phan, T.-T. C., Dang, D.-V. T., & Tran, T.-T. T. (2023). *Mobile Payment Adoption in Vietnam: A Two-Staged SEM-ANN Approach BT - Current and Future Trends on Intelligent Technology Adoption: Volume 1* (M. A. Al-Sharafi, M. Al-Emran, G. W.-H. Tan, & K.-B. Ooi (eds.); pp. 209–228). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-48397-4_11

Nguyen, L., & Dang, T. (2023). THE IMPACT OF KOLs AND KOCs PERSONAL MEDIA ON SHOPPING INTENTION OF CONSUMERS. *PsyArXiv*. https://doi.org/doi:10.31234/osf.io/jdywn

Nguyen, V. P., & Nguyen, L. T. (2021). Aggregate planning in manufacturing industry: Planning and firm performance of Vietnam manufacturing firms. *International Journal of Information Systems and Supply Chain Management*, *14*(1–2).

McLean, G., Osei-Frimpong, K., Al-Nabhani, K., & Marriott, H. (2020). Examining consumer attitudes towards retailers' m-commerce mobile applications – An initial adoption vs. continuous use perspective. *Journal of Business Research*, *106*, 139–157. https://doi.org/10.1016/j.jbusres.2019.08.032

Ocampo, L., Alinsub, J., Casul, R. A., Enquig, G., Luar, M., Panuncillon, N., Bongo, M., & Ocampo, C. O. (2019). Public service quality evaluation with SERVQUAL and AHP-TOPSIS: A case of Philippine government agencies. *Socio-Economic Planning Sciences*, *68*, 100604. https://doi.org/https://doi.org/10.1016/j.seps.2017.12.002

Omar, S., Mohsen, K., Tsimonis, G., Oozeerally, A., & Hsu, J.-H. (2021). M-commerce: The nexus between mobile shopping service quality and loyalty. *Journal of Retailing and Consumer Services*, *60*, 102468. https://doi.org/https://doi.org/10.1016/j.jretconser.2021.102468

Ong, A. K. S., Prasetyo, Y. T., Lagura, F. C., Ramos, R. N., Sigua, K. M., Villas, J. A., Nadlifatin, R., Young, M. N., & Diaz, J. F. T. (2023). Determining tricycle

service quality and satisfaction in the Philippine urban areas: A SERVQUAL approach. *Cities*, *137*, 104339. https://doi.org/https://doi.org/10.1016/j.cities.2023.104339

Ong, A. K. S., Prasetyo, Y. T., Sacro, M. C. C., Artes, A. L., Canonoy, M. P. M., Onda, G. K. D., Persada, S. F., Nadlifatin, R., & Robas, K. P. E. (2023). Determination of factors affecting customer satisfaction towards "maynilad" water utility company: A structural equation modeling-deep learning neural network hybrid approach. *Heliyon*, *9*(3), e13798. https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e13798

Pakurár, M., Haddad, H., Nagy, J., Popp, J., & Oláh, J. (2019). The service quality dimensions that affect customer satisfaction in the Jordanian banking sector. *Sustainability (Switzerland)*, *11*(4). https://doi.org/10.3390/su11041113

Pot, F. J., Koster, S., & Tillema, T. (2023). Perceived accessibility in Dutch rural areas: Bridging the gap with accessibility based on spatial data. *Transport Policy*, *138*, 170–184. https://doi.org/10.1016/j.tranpol.2023.04.014

Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, *5*(10). https://doi.org/10.1016/j.heliyon.2019.e02690

Phan, T.-T. C., Dang, T.-Q., & Nguyen, L.-T. (2023). Consumer trust in social network sites in Vietnam: PLS-SEM-ANN analysis. *The Second International Conference on Science, Economics and Society Studies–UEF 2023*.

Phan, T. T. C., Dang, T. Q., & Luan, N. T. (2023). A customer value satisfaction, and loyalty perspective of mobile payment app. *Proceedings The International Conference on Business Based on Digital Platform (BDP-3)*, 762–774.

Tien, P. C. T., Luan, N. T., & Tri, D. Q. (2023). Exploring the brand experience of Korean brands on customer interactions in Ho Chi Minh City, Vietnam: non-linear structural equation modelling approach. In *Kỷ yếu hội thảo khoa học quốc tế Việt-Hàn 2023* (pp. 276–289). Ho Chi Minh City, Vietnam: Information and Communications Publishing House.

Tien, P. C. T., Tri, D. Q., & Luan, N. T. (2023). Belief of Customers in Social Commerce Performed via Social Networking Sites : An Empirical Study from Hồ Chí Minh City. *Vietnam Social Sciences*, *2*(214), 61–80. https://doi.org/10.56794/VSSR.2(214).61-80

Salamah, A. A., Hassan, S., Aljaafreh, A., Zabadi, W. A., AlQudah, M. A., Hayat, N., Al Mamun, A., & Kanesan, T. (2022). Customer retention through service quality and satisfaction: using hybrid SEM-neural network analysis approach. *Heliyon*, *8*(9). https://doi.org/10.1016/j.heliyon.2022.e10570

See-To, E. W. K., & Ho, K. K. W. (2016). A study on the impact of design attributes on E-payment service utility. *Information and Management*, *53*(5), 668–681. https://doi.org/10.1016/j.im.2016.02.004

Shujaa Alotaibi, R. (2021). Understanding Customer Loyalty of M-Commerce Applications in Saudi Arabia. *International Transaction Journal of Engineering*, *12*(6), 1–12. https://doi.org/10.14456/ITJEMAST.2021.115

Vărzaru, A. A., Bocean, C. G., Rotea, C. C., & Budică-Iacob, A. F. (2021). Assessing antecedents of behavioral intention to use mobile technologies in e-commerce. *Electronics (Switzerland)*, *10*(18). https://doi.org/10.3390/electronics10182231

Xu, X. (2021). Closed-form evaluations and open-ended comment options: How do they affect customer online review behavior and reflect satisfaction with hotels? *Decision Support Systems*, *145*, 113525. https://doi.org/https://doi.org/10.1016/j.dss.2021.113525

Yi, H. T., Cho, Y., & Amenuvor, F. E. (2023). Internal marketing and salespeople's out-of-role behaviour: The mediating role of job satisfaction. *European Research on Management and Business Economics*, *29*(2). https://doi.org/10.1016/j.iedeen.2023.100216

Zhou, Q., Lim, F. J., Yu, H., Xu, G., Ren, X., Liu, D., Wang, X., Mai, X., & Xu, H. (2021). A study on factors affecting service quality and loyalty intention in mobile banking. *Journal of Retailing and Consumer Services*, *60*. https://doi.org/10.1016/j.jretconser.2020.102424