

## Factors impacting online complaint intention and service recovery expectation: The case of e-banking service in Vietnam

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ABSTRACT

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With advanced technology, service providers have used multiple channels to get customer feedback. Online complaints are considered a useful solution for many service providers. If the online complaints are appropriately resolved, this not only helps recover customer satisfaction but also enhances the service image in customers' minds. This study applies structural equation modeling (SEM) to determine the affecting factors on online complaint intention and service recovery expectation in e-banking services. Research data are collected by random sampling with a sample size of 206 customers who have ever experienced e-banking service failures. The study demonstrated that customers' intention to complain online is influenced by attitude towards online complaints, complaint experience, and service failure severity. Besides, online complaint intention positively influences customers' recovery expectations for e-banking service failures.

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## 1. Introduction

Customer satisfaction with products or services is considered the key to the success of an organization. Therefore, service providers have focused on improving service quality and increasing customer satisfaction. However, failures or mistakes in the service delivery process due to the interaction between staff and customers in plenty of transactions are inevitable (Day, 1984). Hence, complaint handling plays an essential role in the relationship quality between the company and customers. Weak service recovery efforts may encourage customers to choose another provider (Schneider & Bowen, 1999). The strong development of the internet is an effective tool that helps customers report their dissatisfaction or service failures (Lovelock & Wirtz, 2011). The technology industry has created many available complaint channels in the form of e-mails, blogs, or online forums (Robertson, 2012). Complaining online is not always bad. Based on customer feedback, service providers can quickly fix the problems and improve their services (Stevens et al., 2018). Complaint behavior and complaint handling are significant in customer satisfaction and customer retention, thereby expanding the online form of customer complaints (Robertson, 2012). Customer satisfaction with service recovery is considered crucial in maintaining a positive relationship with the customer after the failure (Harris et al., 2006; Maxham & Netemeyer, 2002a). Based on the above arguments, this study was conducted to point out the factors that affect the online complaint intention and service recovery expectation of customers: a case study in Vietnamese e-banking services.

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## 2. Theoretical Framework and Research Hypotheses

### 2.1 Theoretical framework

#### *Service failure*

Service failure is an incident in the service delivery process that easily leads to customer dissatisfaction (Singhal et al., 2013; Suh et al., 2013). Service failures have different severity levels. Some service failures cause minor discomfort, while others are major problems, strongly influencing customer complaint behavior (McQuilken et al., 2011; McQuilken et al., 2013). That service failures cause customer dissatisfaction, threatening the growth and survival of service providers (Weber & Sparks, 2009; Koc, 2013).

#### *Online complaint intention*

According to Ajzen (1991), the intention motivates and represents an individual's willingness to perform a particular behavior. It is considered the premise of the behavior's implementation. It is based on the attitude towards the behavior, subjective norms, and behavioral control (Reed & Lloyd, 2018). Customer complaint behavior is a series of behavioral and non-behavioral responses, triggered by the sense of dissatisfaction with a failure while using goods or services (Singh, 1988). Online complaint intention is the use of technology applications to complain about product or service defects arising during the customer's experiencing process to achieve individual or collective goals (Einwiller et al., 2015).

#### *Service recovery expectation*

Service recovery expectations reflect the customer's expectation of the service provider to resolve service failures (Harris et al., 2006). Since some customers have severe responses to service defects, service recovery efforts need to be strong and effective (Smith et al., 1999). If the problems are inadequately solved, the company's brand is negatively affected (Lee et al., 2010). Therefore, identification of service failures is critical to guide service recovery strategies (Yi & Lee, 2005). Service recovery is not only a process to repair services, but also an opportunity to rebuild customer relationships (Fu et al., 2015).

### 2.2 Research hypotheses

#### *Relationship between ease of use and attitude towards online complaints*

Ease of use is an individual's perception of using technology comfortably and effortlessly (Davis, 1989). Several studies have demonstrated that ease of use has a direct and positive impact on customer attitudes towards technology applications (Childers et al., 2001; Dabholkar & Bagozzi, 2002; Gentry et al., 2002). In a study in 2013, Andreassen and Streukens argued that ease of use strongly influences and promotes the formation of customer attitudes towards online complaints. Therefore, hypothesis H<sub>1</sub> is as *"Ease of use positively affects attitude towards online complaints."*

#### *The relationship between usefulness and attitude towards online complaints*

Usefulness refers to the belief that using technology improves job performance (Davis, 1989). Usefulness is the most significant factor in technology adoption (Davis, 1989; Hu et al., 1999). Many studies have proved a positive influence of usefulness on attitudes towards technology applications (Childers et al., 2001; Gentry et al., 2002; Bruner & Kumar, 2005; Lee et al., 2003). According to Andreassen and Streukens (2013), usefulness is beneficially correlated with attitude towards online complaints. Thus, hypothesis H<sub>2</sub> is proposed as follows *"Helpfulness positively impacts attitude towards online complaints."*

#### *Relationship between enjoyment and attitude towards online complaints*

Customers are not always right, and their emotions can drive their technology adoption (Zhang & Li, 2005). Customers often find it interesting to experience new ways or methods of handling situations that make them easily accept new online complaints applications (Dabholkar & Bagozzi, 2002). As presented by Sivaramakrishnan et al. (2007), customers who enjoy novelty-seeking have a positive attitude towards online complaints. Hence, hypothesis H<sub>3</sub> is as follows *"Enjoyment beneficially influences attitude towards online complaints."*

#### *Relationship between attitude towards online complaint and online complaint intention*

Attitude is an individual's positive or negative emotion when performing a behavior with a specific purpose (Hsu, 2016). Studies in customer psychology and behavior have shown a strong correlation between customer attitudes and behavioral intentions (Bodey and Grace, 2007). If the customer has a complaint-oriented attitude, their complaint behavioral intention will be higher (Richin, 1983; Singh, 1989; Bodey and Grace, 2007; Fernandes and Santos, 2008; Velázquez et al., 2010; Kim and Boo, 2011; Andreassen and Streukens, 2013; Albrecht et al., 2017). As a result, the study suggests hypothesis H<sub>4</sub> as *"Attitude towards online complaint positively affects online complaint intention."*

#### *Relationship between complaint experience and online complaint intention*

Customers who have more complaint experiences in the past have higher complaint intentions in the future (Kim and Boo, 2011). The source of information and complaint experience have a great influence on customer online complaint intention (Velázquez et al., 2010; Fernandes and Santos, 2008). Therefore, hypothesis H<sub>5</sub> is as *"Complaint experience positively affects online complaint intention."*

### *The relationship between service failure severity and online complaint intention*

According to Richins (1983), the severity of service failures reflects the degree of customer dissatisfaction. Singh and Wilkes (1996) have argued that customer responses increase as the service failure severity and customer dissatisfaction increase. The severity of service failure is positively correlated with customers' online complaint intention (Zaugg, 2008; De Matos et al., 2009; Velázquez et al., 2010; Andreassen & Streukens, 2013). From there, hypothesis H6 is proposed "Service failure severity positively impacts online complaint intention."

### *Relationship between online complaint intention and service recovery expectation*

Customers are more likely to abandon service providers if their complaints are not resolved satisfactorily while they have high expectations of service recovery (Levesque & MacDougall, 1996; Stephens & Gwinner, 1998; Oh, 2006; Andreassen & Streukens, 2013). According to Wilson et al. (2012), when customers decide to complain about service failures, they expect a better service quality recovery. Several studies have shown that customer complaint intention is positively correlated with service recovery expectation (Grønhaug & Gilly, 1991; Andreassen & Streukens, 2013). Therefore, hypothesis H7 is suggested as "Online complaint intention positively affects service recovery expectation."

Based on the above literature review and proposed research hypotheses, the study uses group discussion (qualitative research) with four experts in customer behavior and six customers who have experienced service failures in e-banking. The results of the group discussion help identify appropriate scales for the research model. The research model is suggested in Fig. 1.

**Table 1**  
Interpretation of observed variables in the research model

Factor	Observed variables	Sign	Scale	Reference resources
Ease of use (EU)	The online complaint system has a simple interface.	EU1	Likert 1-5	Davis (1989), Venkatesh (2000), Kuisma et al. (2007), Dasgupta et al. (2011), Hoque and Sorwar (2017)
	The online complaint system is clear and easy to understand.	EU2	Likert 1-5	
	The online complaint system makes it easy for users to perform a complaint.	EU3	Likert 1-5	
	It is easy to navigate when using the online complaint system.	EU4	Likert 1-5	
Usefulness (UF)	The online complaint system makes the complaint procedure and complaint handling more convenient.	UF1	Likert 1-5	Davis (1989), Venkatesh (2000), Wang et al. (2006), Foon and Fah (2011), Dasgupta et al. (2011), Wu (2013)
	The online complaint system enhances the efficiency of the complaint procedure.	UF2	Likert 1-5	
	Online complaint system saves time in making complaints.	UF3	Likert 1-5	
	Online complaint system benefits customers and service providers.	UF4	Likert 1-5	
Enjoyment (EN)	The online complaint system offers a new experience.	EN1	Likert 1-5	Venkatesh (2000), Moon et al. (2001), Wang et al. (2006)
	The online complaint system reduces stress compared to in-person complaints.	EN2	Likert 1-5	
	The online complaint system brings interesting things.	EN3	Likert 1-5	
Attitude towards online complaint (ATC)	If I get a service failure, I feel very disappointed.	ATC1	Likert 1-5	Blodgett et al. (1997), Velázquez et al. (2010)
	When it comes to service failures, I am more likely to complain, request a refund, or change the service.	ATC2	Likert 1-5	
	If I encounter a high-value service failure, I have the intention to complain.	ATC3	Likert 1-5	
Complaint experience (CE)	I understand consumer rights.	CE1	Likert 1-5	Velázquez et al. (2010), Wu, (2013)
	I have experience in how to present complaints online.	CE2	Likert 1-5	
	I can predict what the service provider will do with my complaints.	CE3	Likert 1-5	
Service failure severity (SFS)	The service failure makes me unsatisfied with that service.	SFS1	Likert 1-5	Velázquez et al. (2010), Singhal et al. (2013)
	The service failure makes me do not like e-banking services.	SFS2	Likert 1-5	
	The service failure makes me stop using the e-banking service.	SFS3	Likert 1-5	
	The service failure makes me regret using the e-banking service.	SFS4	Likert 1-5	
Online complaint intention (OCI)	I will not forget the service failure and will respond appropriately.	OCI1	Likert 1-5	Moon et al. (2001), Carlsson et al. (2006), Wang et al. (2006), Dasgupta et al. (2011), Foon and Fah (2011), Wu, L. (2013), Hoque and Sorwar (2017)
	I intend to use the online complaint system to gain experience with online complaints.	OCI2	Likert 1-5	
	I intend to complain online instead of an in-person complaint.	OCI3	Likert 1-5	
	I intend to use the online complaint system in the future.	OCI4	Likert 1-5	
Service recovery expectation (SRE)	After making a complaint, I expect the service provider to deal with it satisfactorily.	SRE1	Likert 1-5	McCullough et al. (2000), Maxham and Netemeyer (2002b), Wu, L. (2013)
	I expect the service provider to do whatever it takes to ensure my satisfaction.	SRE2	Likert 1-5	
	I expect the service provider to promptly resolve my problems.	SRE3	Likert 1-5	
	I hope similar service failures will be fixed in the future.	SRE4	Likert 1-5	

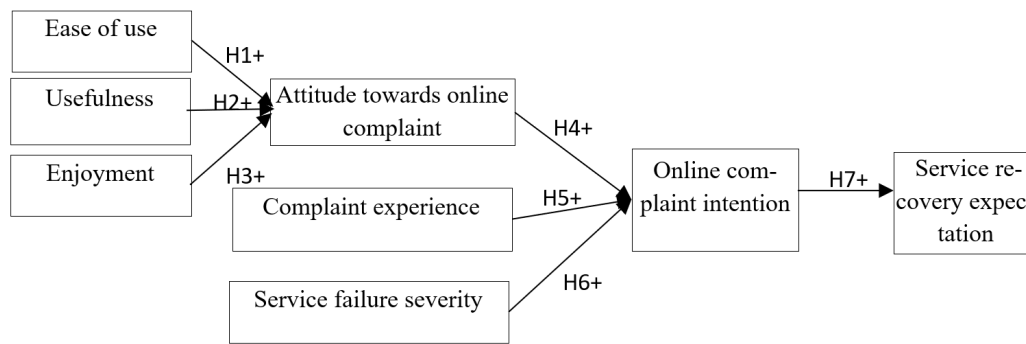


Fig.1. Proposed research model

### 3. Research Methodology

#### 3.1 Analytical method

In this study, the analytical methods used include testing the reliability of the scale by Cronbach's alpha, exploratory factor analysis (EFA) to evaluate the convergent and discriminant validity, confirmatory factor analysis (CFA) to test the suitability of research data, and structural equation modeling (SEM) to test research hypotheses. The evaluating scales are 5-level Likert scales, ranging from 1 = strongly disagree to 5 = strongly agree.

#### 3.2 Data collection method

Structural equation modeling (SEM) requires a large sample size because it is based on the pattern distribution theory (Raykov and Widaman, 1995). To achieve reliability in testing the suitability of SEM, the sample size limit should be 200 observations (Hoelter, 1983; Hoyle, 1995). This study applies random sampling to collect data. The survey was conducted from August to October 2020. The survey subjects are customers who have experienced failures in e-banking services. The study has surveyed 206 customers via online and e-mail interviews. The survey area is concentrated in three major cities and provinces in Vietnam, including Ho Chi Minh City (84 customers), Can Tho City (62 customers), and Tien Giang Province (60 customers). Thus, the sample size meets the requirement, ensuring the reliability for research model testing.

### 4. Research Results and Discussion

#### 4.1 Reliability test of scales

##### Step 1: Test the reliability of scales

The study assesses the reliability of scales through Cronbach's alpha coefficient. Based on the test result in table 3, all the scales all have Cronbach's alpha coefficient values from 0.726 to 0.810. Besides, all the observed variables have the corrected item-total correlation coefficients higher than 0.3 (Nunnally and Bernstein, 1994). Therefore, all research scales meet the reliability requirement (Nunnally, 1978; Peterson, 1994; Slater, 1995) and are used for the next step of exploratory factor analysis.

Table 2

Reliability test result

Observed variables	Mean	Standard deviation	Factor loading	Cronbach's alpha
<b>Ease of use (EU)</b>				0.744
EU1	3.87	0.607	0.644	
EU2	4.02	0.624	0.698	
EU3	3.90	0.787	0.661	
EU4	4.04	0.665	0.578	
<b>Usefulness (UF)</b>				0.769
UF1	3.98	0.774	0.617	
UF2	3.88	0.732	0.628	
UF3	3.87	0.801	0.759	
UF4	4.21	0.672	0.640	
<b>Enjoyment (EN)</b>				0.726
EN1	3.77	0.875	0.784	
EN2	4.15	0.740	0.556	
EN3	3.87	0.801	0.556	
<b>Attitude towards online complaint (ATC)</b>				0.794
ATC1	4.10	0.685	0.793	
ATC2	4.16	0.605	0.744	
ATC3	4.25	0.643	0.624	
<b>Complaint experience (CE)</b>				0.761
CE1	3.65	0.715	0.634	
CE2	3.62	0.721	0.811	
CE3	3.58	0.692	0.653	

**Table 2**  
Reliability test result (Continued)

Observed variables	Mean	Standard deviation	Factor loading	Cronbach's alpha
<b>Service failure severity (SFS)</b>				0.751
SFS1	4.12	0.625	0.530	
SFS2	4.02	0.677	0.714	
SFS3	4.01	0.695	0.646	
SFS4	4.15	0.676	0.623	
<b>Online complaint intention (OCI)</b>				0.810
OCI1	4.19	0.633	0.721	
OCI2	3.99	0.584	0.572	
OCI3	4.11	0.607	0.677	
OCI4	4.07	0.605	0.812	
<b>Service recovery expectation (SRE)</b>				0.808
SRE1	4.50	0.615	0.662	
SRE2	4.33	0.667	0.745	
SRE3	4.48	0.565	0.724	
SRE4	4.57	0.569	0.710	

*Step 2: Exploratory factor analysis (EFA)*

The EFA analysis is used to test the convergent and discriminant validity of the scales. Following the test result, the statistical values are guaranteed as follows. (1) The reliability of observed variables is satisfactory (Factor loading > 0.5). (2) Testing the appropriateness of the model is guaranteed ( $0.5 < KMO = 0.834 < 1$ ). (3) Bartlett's test on correlation of observed variables meets the requirement (Sig. = 0.000 < 0.05). Cumulative variance test = 64.82% > 50% (Anderson and Gerbing, 1988). These numbers show that the observed variables included in the model have a relatively high explanatory power (Hair et al., 1998). As a result, 8 factors are formed from 29 observed variables. There is no variable disturbance among factors, so the names of factors remain the same.

*Step 3: Confirmatory factor analysis (CFA)*

After analyzing EFA, the above eight factors are included in confirmatory factor analysis (CFA). The CFA result indicates that the following values are guaranteed. Chi-square/df = 1.260 < 2 with P = 0.000 ≤ 0.05; TLI and CFI coefficients achieve the value of 0.945 and 0.952, all are higher than 0.9. RMSEA = 0.036 < 0.08. This proves that the model is consistent with the market data (Anderson and Gerbing, 1988). The standardized regression weights of the scale are all greater than 0.5 and the unstandardized regression weights are statistically significant, so the factors acquire convergent validity. Besides, the correlation coefficients between factors are less than 1 and the standard deviations are less than 0.05. Therefore, the research factors achieve discriminant validity.

**Table 3**  
CFA and SEM result

Evaluating criteria	CFA	SEM	Comparative value	Reference resource
$\chi^2$	439.829	479.753		
Df	349	360		
$\chi^2/df$	1.260	1.333	≤ 2	
P-value	0.000	0.000	< 0.05	Hair et al. (2014)
TLI	0.945	0.929	≥ 0.9	
CFI	0.952	0.937	≥ 0.9	
RMSEA	0.036	0.040	≤ 0.08	

The result of composite reliability (Pc) and average variance extracted (Pvc) of the scales are in table 4. Although the Pvc values of some scales are quite low (< 0.5), they can be accepted at the value of 0.4 or higher, provided that the Pc value is greater than 0.6 (Fornell and Larcker, 1981). Thus, considering the value of Pvc and Pc of the scales, all scales meet the reliability requirement (Fornell and Larcker, 1981).

**Table 4**  
Scale testing result

Factor	Number of observations	Composite Reliability (Pc)	Average Variance Extracted (Pvc)	Reference resource
Ease of use (EU)	4	0.75	0.43	
Usefulness (UF)	4	0.77	0.46	
Enjoyment (EN)	3	0.73	0.47	
Attitude towards online complaint (ATC)	3	0.80	0.57	Fornell and Larcker (1981)
Complaint experience (CE)	4	0.76	0.52	
Service failure severity (SFS)	4	0.75	0.43	
Online complaint intention (OCI)	4	0.81	0.52	

Service recovery expectation (SRE)	4	0.81	0.52
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#### 4.2 Test the research hypotheses

Structural equation modeling (SEM) is used to test the research hypotheses. Table 5 presents the test result.

**Table 5**  
Research hypotheses test

Relationship	Unstandardized			Standardized estimated value	Significant level	Hypothesis
	Estimated value	Standard error S.E	Critical ratio C.R			
ATC ← EU	0.235	0.082	2.859	0.283	***	H1: accepted
ATC ← UF	0.210	0.081	2.598	0.265	***	H2: accepted
ATC ← EN	0.234	0.085	2.755	0.273	***	H3: accepted
OCI ← ATC	0.200	0.073	2.726	0.227	***	H4: accepted
OCI ← CE	0.233	0.076	3.049	0.285	***	H5: accepted
OCI ← SFS	0.298	0.087	3.423	0.324	***	H6: accepted
SRE ← OCI	0.529	0.091	5.819	0.579	***	H7: accepted

Based on the test result in the table, the relationships between factors are explained in detail as follows:

Hypothesis H1, H2, and H3 are accepted with a 99% significant level. This shows that ease of use, usefulness, and enjoyment have a positive influence on the attitude towards online complaints. A simple, easy-to-understand online complaint system can bring interesting experiences and benefits to customers; therefore, they keep positive attitudes towards online complaints. This finding is similar to the research of Davis (1989), Venkatesh (2000), Wang et al. (2006).

Hypothesis H4 is accepted with a significance level of 99%. The study has demonstrated a positive relationship between the attitude towards online complaints and the customers' intention to complain online when encountering a service failure. If customers have an attitude towards online complaints, they have the intention to complain online. This result is like the results of Richin (1983), Singh (1989), Bodey and Grace (2007), Fernandes and Santos (2008), Velázquez et al. (2010), Kim and Boo (2011), Andreassen and Streukens (2013), Albrecht et al. (2017).

The study accepts the hypothesis at a 99% significance level. This proves that complaint experience is positively correlated with customers' intention to complain online. In other words, customers who have had more complaint experiences in the past will drive more online complaint intentions. This result is consistent with the findings of Fernandes and Santos (2008), Velázquez et al. (2010), Kim and Boo (2011).

Hypothesis H6 is accepted at a 99% significant level. The study has pointed out a positive correlation between the failure severity and customers' intention to complain online when encountering a banking service failure. The higher the severity of the service failure, the higher intention to complain online. This result is similar to the discovery of Zaugg (2008), De Matos et al. (2009), Velázquez et al. (2010), Andreassen and Streukens (2013).

Finally, hypothesis H7 is accepted at a significance level of 99%. The number shows that customers' online complaint intention is positively correlated with customers' service recovery expectations. If customers intend to make an online complaint about an e-banking service failure, they will expect the service provider to adequately resolve the problem to enhance their satisfaction. The result of this study is similar to the findings of Grønhaug and Gilly (1991), Andreassen and Streukens (2013).

## 5. Conclusion

The study has demonstrated the factors that build customers' attitudes towards online complaints with e-banking service failures. They include ease of use, usefulness, and enjoyment. Also, the study has shown that customers' online complaint intention for e-banking service failures is influenced by attitude towards online complaints, complaint experience, failure service. The study has shown a positive relationship between online complaint intention and service recovery expectation for service failure. The research results are a useful scientific basis for e-banking service providers, helping e-banking service administrators to build an appropriate solution for customers' online complaint intentions.

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