

Proceeding

8th International Conference on Creative Technology



CreTech 2020

Multidisciplinary

to Drive Economy and Social

5-7 August 2020

Grand Pacific Sovereign Resort and Spa
Cha-am, Petchaburi, Thailand



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Content				
No.	Paper ID	Title	Author	Page
1	TR1801-13-2-1-1-20200531-133613	The comparison of parameter estimation for mathematical model of the reheating furnace pusher type.	Narongrid Rorsena	1
2	TR1802-10-1-1-2-20200616-102842	Effects of Trailing Edge Modification on the Performance of the S1223 Airfoil	Supakit Worasinchai	8
3	TR1803-04-1-1-1-20200723-152248	Simulation applied modeling for solving layout design	Suphatra Kritwattanakorn	16
4	TR1806-04-1-1-1-20200717-093256	Improvement of Mechanical Properties for ASME SA-192 Steel Finned Tubes Using Wire Arc Spraying	Montri Sangsuriyun	22
5	TR2802-05-1-1-1-20200602-104840	Effect of Deposition Time on the Structure of TiCrN Nanocomposite Thin Films Deposited by Reactive DC Magnetron Sputtering from Mosaic Target	Siriwat Alaksanasuwan	30
6	TR2803-05-1-1-1-20200710-115213	Molecular Classification of Cassava Bacterial Blight, <i>Xanthomonas axonopodis</i> pv. <i>manihotis</i> in Thailand	Chotiros Phaisomboon	37
7	TR2807-01-1-1-1-20200603-125430	The reduction of free fatty acid in coconut oil by using montmorillonite K-30 as the heterogeneous catalyst for biodiesel production	Siraprapa Chaleechat	44
8	TR2810-01-1-2-1-20200709-190857	Hydrogen sulfide gas sensor based on Cadmium and Zinc ferrite nanoparticles	Pranrawee Sukhan	52
9	TR2812-07-1-3-1-20200716-084850	Development of a computer-controlled nanoparticle generation for inhalation exposure study	Saksith Kulwong	57
10	TR2814-02-1-2-1-20200715-231358	Replacing fat with prebiotic in muffin and chilled storage conditions affecting organoleptic characteristics	Nutthaya Srisuvor	67
11	TR2822-01-1-2-2-20200721-152622	The study of microgels by utilizing light scattering technique	Nettraporn Doungsong	73
12	TR4801-04-1-1-1-20200612-095132	Surviving the Disruptive Era: A Case Study through Voices of Leading Hoteliers in Bangkok, Thailand.	Komm Pechinthorn	78



Content				
No.	Paper ID	Title	Author	Page
13	TR4804-01-2-3-1-20200713-204732	The impact of service quality and service recovery on customer satisfaction and brand loyalty : a case study of an e-commerce company in China	Jingwei Yang	85
14	TR5801-01-1-1-1-20200616-094037	The factors that influence students' decision towards work destination choices: A case study of public university	Komm Pechinthorn	92
15	TR5805-01-1-3-1-20200723-180551	Transition to online learning during COVID-19 pandemic: Impact on students' learning motivation	Jiraporn Yiamkhamnuan	97



The impact of service quality and service recovery on customer satisfaction and brand loyalty : a case study of an e-commerce company in China

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ABSTRACT

Customer satisfaction affects the loyalty of customers to enterprises, which is an important competitive advantage, especially in e-commerce enterprises. This research enhances the understanding the role of e-service quality and e-service recovery on customer satisfaction and customer loyalty in e-commerce business. This study provides managerial implication for an e-commerce company to improve its strategies. Respondents are 308 customers who used the most popular e-commerce company to online shopping. The research result confirmed the positive effect of e-service quality and e-service recovery on customer satisfaction and customer loyalty. The study also found that e-service recovery has stronger impact on customer satisfaction than e-service quality. This reflected that e-commerce company should focus on remedial service failure to improve customer satisfaction and loyalty.

Keywords: E-service quality, E-service recovery, Customer satisfaction, Customer loyalty

1. INTRODUCTION

With the rapid development of B2C e-commerce, more and more people buy goods through e-shopping platform instead of a physical store [1]. China is the fastest growing internet market in Asia, and accounts for a large share of the global internet market. Ghalandari [2] identified that the quality of service provided determine customer satisfaction and attitude loyalty. Especially for the e-stores, the service staff did not contact with customers in person. E-service quality directly affects e-trust and e-satisfaction, and indirectly affects e-satisfaction through e-trust, which means that the higher the quality of e-service, the higher the e-trust and e-satisfaction of e-shop service. By promoting user-oriented network communication, marketing personnel help customers purchase goods and services provided on the internet. Through this kind of communication and assuming appropriate

customer participation skills, the process quality of internet products has been enhanced, and customers can perceive the result of high service quality provided [3]. Prior research does not extensively investigate the role of e-service recovery. Hence, the objectives of this research are: 1.) explore the effect of e-service quality and e-service recovery on customer satisfaction; 2.) examine the effect of customer satisfaction on customer loyalty; 3.) provide managerial implication to improve services.

Parasuraman et al. [4] introduced electronic service quality (E-S-QUAL) for measuring the service quality delivered by Web sites on which customers shop online. It includes: 1.) Efficiency, the ease and speed of accessing and using the site; 2.) Fulfillment, the extent to which the site's promises about order delivery and item availability are fulfilled; 3.) System availability, the correct technical functioning of the site; 4.) Privacy, the



degree to which the site is safe and protects customer information. They also propose recovery service quality scale (E-RecS-QUAL) consisting of three dimensions: 1.) responsiveness, effectiveness of handling problems and returns through the site; 2.) compensation, the degree to which the site compensates customers for problems; 3.) availability, assistance through telephone or online representatives.

Ghane et al. [5] studied the relationship between E-service quality and E-satisfaction. The study focused on 965 students from four universities and found that service quality dimensions are positively related to customer satisfaction. The quality of e-service has a direct and indirect impact on e-satisfaction [5]. Consistently, Shanka[6] found that the relationship between service quality dimension and customer satisfaction is confirmed through study on 245 customers of e-banking. The service quality provided has a positive impact on the overall customer satisfaction [6]. Service quality is the foundation of service integrity through customer satisfaction [7]. The improvement of service quality can satisfy and develop customer satisfaction, and ultimately retain valuable customers [4]. Therefore, this study proposes

Hypothesis 1: E-service quality has positive effect on customer satisfaction.

Jung & Seock [8] examined the effect of service recovery on customer's satisfaction on online shopping websites. Using Qualtrics.com, 368 participants were recruited for the main survey. This study confirms that within the context of service recovery, customers perceive distributive and interactional justice differently depending on the type of service recovery they receive. Customers' perceptions of justice significantly affect their post recovery satisfaction, and, eventually, customer satisfaction is improved by service recovery.

Therefore, this study proposes

Hypothesis 2: E-service recovery has positive impact on customer satisfaction.

As good service leads to a positive correlation between customer satisfaction and customer loyalty [9]. This means that the more satisfied customers are with the service, the more loyal customers are to the industry. Therefore, satisfying customers is important in developing loyal customers [6]. Additionally, the strong positive correlation between customer satisfaction and customer loyalty means that customers will recommend the company to others. Therefore, it can ensure that the company has a loyal and stable customer base, thereby reducing costs in acquiring new customers [10].

Since the severity of service failure is related to satisfaction, remedy for service failure in e-retailing company based on interactive fairness to dissatisfied customers can improve customer loyalty and alleviate the negative relationship between the severity of service failure and customer loyalty [1]. These customers are more likely to visit service providers in the future and share their positive experiences with others [11]. Therefore, this study proposes:

Hypothesis 3: Customer satisfaction has positive impact on customer loyalty.

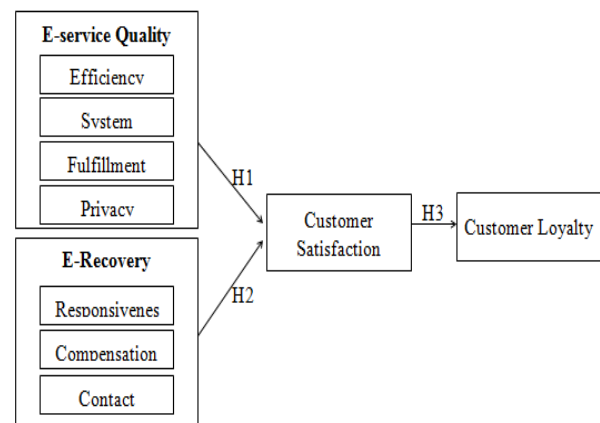


Figure 1: Conceptual framework



2. MATERIALS AND METHODS

This study randomly distributed 1,000 questionnaires to customers of the selected e-commerce company who experience service failure while shopping online. This study uses simple regression to verify hypotheses. The study found 308 valid questionnaires. 52 % (n=160) of respondents are female and 48% (n=148) of respondents are male. 31% of respondents are in the age between 26 to 35 years old. 76% of respondents obtained a bachelor degree. 39% of respondents have monthly income between 7,001 to 10,000 CNY. 29% of respondents use online shopping a few times per month. 35% of respondents spent between 200 to 500 CNY per month for online shopping.

The measurement items of all four variables are in a 5-point Likert scale (ranging from 1 for Strongly Disagree to 5 for strongly agree). For *E-service quality*, 22 items are adopted from Parasuraman et al [4]. It is divided to four dimensions, include efficiency, fulfillment, system availability, and privacy. For *E-service recovery*, 10 measurement items are adopted from [4]. It is divided to three dimensions, include responsiveness, compensation, and contact. For *E-loyalty*, 11 measurement items are adopted from Harris & Goode [12]. It is divided to four dimensions include cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. For *Customer Satisfaction*, three measurement items are adopted from Anderson & Srinivasan [14]. The items are: 1.) "I am satisfied with my decision to purchase from XXX."; 2.) "I think I did the right thing by buying from XXX."; 3.) "My choice to purchase from XXX was a wise one."

Factor loadings of e-service quality (>0.70), e-service recovery (>0.762), customer satisfaction (>0.935), and customer e-Loyalty (>0.912) are above 0.6 confirming validity [14].

The study found that e-service quality, E-service recovery, customer satisfaction, and customer E-loyalty have sufficient convergent validity and reliability. The average variances extracted (AVEs) for E-service quality (0.761), E-service recovery (0.655), E-loyalty (0.858) and customer satisfaction (0.888) were above 0.5, confirming convergent validity [15]. In addition, the composite reliability and Cronbach's alpha of variables exceeded 0.7, showing internal consistency for reliability. This study employed Cronbach's Alpha to test the internal consistency of measurement items of each variable. All variables have Cronbach's Alpha value above 0.8 which reflected that all variables have high internal consistency (E-service quality=0.961, E-service recovery=0.904, E-loyalty=0.949 and Customer Satisfaction=0.904).

3. RESULTS AND DISCUSSION

The current study conducted simple regression to test the direct effect of three hypotheses. The findings of hypothesis 1 suggested that E-service quality has positive impact on customer satisfaction ($p = 0.000$, $\beta = 0.969$). This study also confirm hypothesis 2 that E-service recovery has positive impacts on customer satisfaction ($p = 0.000$, $\beta = 0.849$). In addition, this study found that e-service recovery ($\beta = 0.569$) has stronger impact on customer satisfaction than e-service quality ($\beta = 0.298$). The current study found that customer satisfaction has positive impact on customer loyalty ($p = 0.000$, $\beta = .809$). Thus, hypothesis 3 is supported.

This paper explores the impact of E-service quality and E-service recovery on customer satisfaction and verify the relationship between customer satisfaction and customer loyalty. Employing quantitative approach induce the findings that all three hypotheses are supported.



The research confirms that the good e-service quality and great e-recovery have positive impact on customer satisfaction. Meanwhile, high customer satisfaction is prone to improve their loyalty.

The present study found that E-service quality has positive influence on customer satisfaction. Among four dimensions of E-service quality, the efficiency, system availability, fulfillment, and privacy dimension, fulfillment is the most critical. The correlation between the fulfillment and customer satisfaction is the highest at 0.770 while system availability has the lowest correlation with customer satisfaction at 0.658. Thus, e-commerce company should seek to improve fulfillment dimension of E-service quality. This finding is consistent with finding of Shanka [6] that found the quality service provided has a positive impact on the overall customer satisfaction.

This study adopted the three dimensions of E-service recovery measurement (E-RecS-QUAL) of Ravichandran et al. [4]. The three dimensions are responsiveness, compensation, and contact. The finding from the present study is consistent with Singh & Crisafulli [16] that found the online service recovery is the key driver of customer satisfaction. Similarly, Jung & Seock [8] also confirmed the positive relationship between service-recovery and customer satisfaction. The finding from the present study compensation (0.757) is highly correlated with customer satisfaction compared to other dimensions. Hence, compensation can be the most effective means of E-service recovery. Therefore, e-commerce company should let compensation as most important methods to resolve service failures and improve customer satisfaction. In addition, e-commerce company needs to make timely communication and show their responsiveness, and pay attention to the way of communication with customer so that customer's satisfaction will be improved from effective E-service recovery.

Additionally, the standardized coefficient of e-service recovery on customer satisfaction is 0.569 which is more than that of e-service quality ($\beta=0.298$) so the impact of E-service recovery on customer satisfaction is stronger than E-service quality. This is consistent with Anderson & Srinivasan [13] that found that effective service recovery is especially important in services provided on the Internet. This is because online customers are difficult to attract and retain. However, customer still can feel the quality of product and service, thus, e-commerce company should pay attention more on E-service recovery.

The result of this study has suggested implications for e-commerce business operation and web-customer satisfaction. Online customers commonly have repeated experiences with various websites. This study focuses on the China famous website. The finding from the present study confirm that e-service quality and e-recovery are the two important factors to influence on customer satisfaction.

Also, this study confirmed the relationship between customer satisfaction and customer loyalty. This finding is consistent with finding of Ghane et al. [5] and Shanka [6] that found the customer's satisfaction has effective impact on customer loyalty. Therefore, e-commerce company should try to improve customer satisfaction to enhance customer loyalty.

4. CONCLUSIONS

E-commerce companies should focus on how to improve their e-service quality, including efficiency, fulfillment, system availability and privacy. This study found that system availability has the lowest correlation with customer satisfaction so e-commerce companies should pay more attention on efficiency, fulfillment and privacy as well as adopt ways to improve their e-service quality according to their actual situation.



The selected e-commerce company in this study needs to improve the search engine to make customers more convenient to find the products they need. The company should recognize that customers are very concerned about personal privacy. Respondents are worried that the selected e-commerce company will disclose their personal information so the company needs to improve the protection measures for customers to retain users, which will help to improve the service quality of the selected e-commerce company.

In addition, the selected e-commerce company should understand how to recover from online service failures as it is very crucial for service managers to design effective service recovery strategies. According to the present study, the contact dimension has lowest influence on customer satisfaction. Therefore, the e-commerce company should pay more attention on compensation and responsiveness to improve service recovery. The company should make effective compensation to customer, and provide online procedures in the form of FAQs, online help pages and discussion forums enable timely resolution of the service failure. Additionally, since the influence of e-service recovery is stronger than service quality, thus, E-service recovery is more important work for improving customer satisfaction.

This study also found that the selected e-commerce company needs to improve the compensation for users who have not successfully traded, so that the company can obtain higher rating in e-service recovery. In addition, the company needs to provide customers with better services and lower prices than competitors, and improve users' comprehensive evaluation of the company. The company needs to make customers feel that this purchase is very wise decision. Also, the company needs to strengthen the positive impact on its customers repeatedly because this can effectively improve customer loyalty.

In an e-commerce context, improve customer satisfaction and building e-loyalty are a difficult challenge. The difficult point is to differentiate themselves from competitors. The result confirms that loyalty of customer is directly affected by customer satisfaction, then, e-service quality and e-recovery are two key factors. Hence, the company should try to provide the sound e-service quality and e-recovery to increase customer satisfaction. It would enhance customer uses frequency of these services, intention to recommend, and likelihood of repurchase from these services in the future Ghane et al. [5].

There are several possible limitations to the research study. First, online questionnaire may cause discrepancies between reported behaviors and their actual behaviors. So, in future research, researcher should try to communicate with the respondents face to face. Second, this study did not provide details for service quality improvements, especially for E-service quality improvements as each website is not in the same situation. In future research, author should focus on how to improve e-service quality. Third, this study focuses on research how company deliver online recovery but did not address on the impact of online service recovery on customer perceptions and post-recovery behavior. So, further research shall focus on detail of service-quality, impact of customer perceptions, and post-recovery behavior

5. ACKNOWLEDGMENTS

I am grateful to many people who gave me guidance and help in the process of writing this paper. First of all, I sincerely thank to my advisor Dr.Sasithorn Suwandee², who is a respected and responsible scholar. I thank her for reading my paper, commenting on my ideas, helping me understand and enrich my ideas. I got a lot of encouragement and practical advice from her. Thanks for her suggestions and corrections to the



questionnaire. I would also like to thank my friends for their very cooperative participation in this study.

Most of all, without the love and patience of my family, it's impossible. I have to show my parents' support in particular. I want to express my heartfelt thanks to my family. My lovely family has been helping and encouraging me.

In addition, I would like to thank those who didn't mention their names. They gave me a lot of inspiration and encouragement until the completion of this independent study.

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