



The Use of Shopping Apps to Maintain and Improve Loyalty in Emerging Economies: Vietnam Case Study

Nguyen Xuan Tien^{1*} Eiko Tomiyama² Hideho Numata³

^{1*}*Niigata Regional Revitalization Research Institute Graduate Institute for Entrepreneurial Studies, Niigata, Japan*

²*Graduate Institute for Entrepreneurial Studies, Niigata, Japan*

³*Faculty of Graduate School of Management, Kagawa University, Takamatsu, Japan*

*Corresponding Author. E-mail address: jms11202021nt@jigyo.ac.jp

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Abstract

Due to the global economic slowdown and social changes caused by the coronavirus pandemic, it has become important to maintain and improve customer loyalty for mobile sales apps, especially in emerging countries where there is room for further development. This study seeks to shed light on the ways in which trust, enjoyment, and perceived risk contribute to the maintenance and improvement of mobile loyalty in the emerging economy of Vietnam. To this end, we carried out a survey among consumers who use Vietnamese B2C sales apps. Conducted online among Vietnamese consumers between October 21-28, 2021, the survey gained valid responses from 700 people (response rate: 100%). We use SPSS to analyze the data from the questionnaire. The results show that in the Vietnamese market, trust and enjoyment have a positive effect on mobile loyalty, while the relationship between mobile loyalty and three demographic elements (sex, number of times purchased, and region) varies.

Keywords: Emerging economy, Enjoyment, Mobile loyalty, Perceived risk, Trust

I. INTRODUCTION

A. Social Background

A World Trade Organization (WTO) press release issued in April 2020 noted that trade in all regions was slowing as the COVID-19 pandemic disrupted economic activity and life around the world. As the novel coronavirus spread, countries vied with each other to embark on policies of national isolation, instantly paralyzing the global economy. This unprecedented crisis threw the vulnerability of the globalized world into stark relief, confronting the international community with the two thorny issues of the new normal and economic uncertainty. With ways of living and working changing, online activities have rapidly become essential to work, learning, meetings, sales, and entertainment.

The march of globalization has been a background factor in the economic growth of emerging economies, driving the expansion of trade and investment. Another characteristic of the economic development of such economies has been their ready acceptance of new trends, business models, and ideas from other countries. Mobile sales through apps are a constant point of contact with customers and can maintain and improve customer loyalty.

This study examines the maintenance and improvement of customer loyalty using mobile shopping apps in the Vietnamese market, which is experiencing the most remarkable growth of any emerging economy. We selected Vietnam as the focus of this study for two reasons. First, the high prevalence of smartphones in this economy. Smartphone prevalence in Vietnam, which has a population of 97.34 million, reached 63.1% in 2020-21. As part of its universal smartphone program, the Vietnamese government has pledged to work with digital technology companies to improve cybersecurity (Vietnam E-Commerce and Digital Economy Agency, 2020). The second reason is the state of information and communications technology (ICT) development in

Vietnam. As Vietnam is currently at the stage of global and regional economic integration, promoting ICT to facilitate this process is one of the government's policies (Vietnam E-Commerce and Digital Economy Agency, 2020).

B. Academic Background

Compared with Japan and the U.S., Vietnam's market is starting to grow rapidly and has scope for substantial development as a global market. Looking at mobile commerce (m-commerce) in particular, according to data published in 2021 by the iPrice Group, which provides comparisons of prices on various Southeast Asian e-commerce platforms, total sessions on Vietnamese online shopping apps reached a record high of 12.7 billion in the second quarter of 2020, an increase of 43% from the first quarter. M-commerce is defined as "any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of mobile devices" (Wei, Marthandan, Chong, Ooi, & Arumugam, 2009) M-commerce offers consumers a more convenient service than e-commerce, as it is easier to access (Wei et al., 2009).

However, there have been few studies of loyalty to mobile apps, which is the focus of this study. The traditional concept of brand loyalty is defined as the preferential attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer (Engel & Blackwell, 1982). Anderson and Srinivasan (2003) define e-loyalty as the customer's favorable attitude toward an electronic business resulting in repeat buying behavior. It may also be defined as a customer's favorable attitude toward an e-commerce website that predisposes the customer to repeat buying behavior (Chang & Chen, 2009). As this definition takes into account the customer's

loyalty when their attitude is established, it gets closer to the true state of affairs. This study focuses on mobile shopping app loyalty (ML), based on consideration of the traditional concepts of brand loyalty and e-loyalty. ML is a customer's favorable attitude toward a shopping app that predisposes the customer to repeat buying behavior.

There are many existing studies of loyalty in the context of e-commerce, which have highlighted numerous elements involved in increasing e-loyalty. One example is a study examining the relationship between e-satisfaction and e-loyalty (Anderson & Srinivasan, 2003). Osera (2005) verified that customer loyalty in online B2C transactions is affected by seven factors: customization, reciprocity of contact, care, community, dynamic exploration, choice, and characteristics. Wang and Morimoto (2016) examine the delight factors (products, company image, and service) that shape customer loyalty on B2C sites. However, emerging markets, particularly the Vietnamese market, still have few elements that increase customer loyalty toward mobile apps. Based on this earlier research, this study focuses on trust, enjoyment, and perceived risk in regard to the apps and examines the impact of these three elements on mobile loyalty. The task in this study is to examine whether the aspects of trust, enjoyment, and perceived risk relating to mobile shopping apps in the Vietnamese market have any relationship to mobile loyalty, verify those relationships, and then examine whether demographics (sex, number of times users made purchases, and region) affected loyalty, trust, enjoyment, or perceived risk.

II. OBJECTIVES

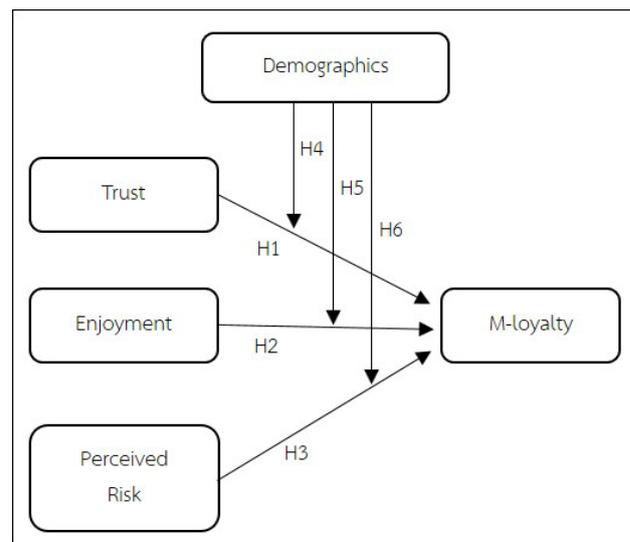
A. Trust and Loyalty

In the realm of social psychology, trust is defined as the product of a set of unambiguous beliefs in a person's integrity, benevolence, and ability (Gefen,

Karahanna, & Straub, 2003). Looking at the definition of trust in the online environment (referred to below as e-trust), according to Al-dweeri, Obeidat, Al-dwiry, Alshurideh, and Alhorani (2017), e-trust depends on the assurance of security, reputation, web searching, fulfillment, presentation (web quality), technology, and interactions. This study focuses on trust in B2C shopping apps. Trust here consists of a shopping app's ability to provide goods and services, and the app's reputation among other customers.

Tang, Tsai, and Wu (2005) and Al-dweeri et al. (2017) show that e-trust has a positive effect on e-loyalty. Thus, we propose the following hypothesis (Figure 1).

Hypothesis 1 (H1): Trust in mobile apps has a positive causal relationship with mobile loyalty (m-loyalty)



Source: Compiled by the author.

Figure 1: Analysis Model Used in This Study

B. Enjoyment and Loyalty

Nishihara (2021) cites the enjoyment of shopping as an important element driving the use of mobile apps and their ongoing use (loyalty). Aside from enjoyment of the shopping process itself, this also includes, among others, enjoyment derived from looking, enjoyment derived from purchasing, and enjoyment derived from discovering new usages (Nishihara, 2021).

In other words, enjoyment of an app in this study refers to the feeling of enjoyment gained via the use of the shopping app in question (including enjoyment gained from looking, purchasing, discovering new usages, and getting bargains in sales). Menon and Kahn (2002) showed that consumers who have experienced a higher level of pleasure on a website demonstrate a higher level of approach behaviors toward the website, including the intention to patronize (revisit) that shop. According to Cheema, Rizwan, Jalal, Durrani, and Sohail (2013), enjoyment is an efficient reaction affecting performance. Customers can have fun searching products online. Online retailers should give importance to this hedonic factor when planning to develop their websites. Thus, we propose the following hypothesis (Figure 1).

Hypothesis 2 (H2): *Enjoyment of mobile apps has a positive causal relationship with m-loyalty.*

C. Perceived Risk and Mobile Loyalty

When purchasing goods or services, consumers harbor various concerns and anxieties during the decision-making process. This is because the product or service they intend to purchase will not always be satisfactory, so in this sense, the act of making a purchase involves risk and consumers are engaging in risk-taking behavior when they purchase a product (Kouyama, 1997).

This kind of risk arising when consumers use or purchase goods or services is called perceived risk, which can be regarded as a function of the possible consequences and the uncertainty of those consequences (Robertson, 1970). In online shopping environments, goods and services are all represented by information in the form of text, still and video image, and sound data. Perceived risk in purchases from online shops generally tends to be higher than in the case of purchases from physical stores and it has been argued that reducing perceived risk encourages use (Aoki, 2005).

Perceived risk in the context of the shopping apps in this study is defined as the risk arising when consumers use or purchase from the app in question. In addition, in the physical world, Hu (2012), Marakanon and Panjakajornsak (2014), and Marakanon and Panjakajornsak (2017) demonstrate a causal relationship between perceived risk and loyalty. Thus, we propose the following hypothesis (Figure 1).

Hypothesis 3 (H3): *The perceived risk of mobile apps has a negative causal relationship with m-loyalty.*

D. Demographics

This study focuses on three demographic factors, namely sex, number of times the user has purchased via the app, and region. The reasons for considering these three factors are as follows. First, with regard to sex, the features of consumption behavior in men and women differ greatly (Oda, 2007). Accordingly, we examine how the elements in this study vary according to the sex of online shoppers in Vietnam.

The next factor is the number of times the user has purchased via the app. According to Marza, Idris, and Abror (2019), a consumer's attitude and behavior differs according to their experience. The final factor is region. This study focuses on Hanoi and Ho Chi Minh City. Vietnam is a long, thin country, where regional history and culture have developed in different ways in the north and the south. Accordingly, consumption behavior in the two regions can be expected to demonstrate different features. In this study, we examine how the model changes according to the region. In the Vietnamese market, demographic factors and buying habits, among others, influence consumer buying behavior (Carpenter & Balija, 2010). We thus derived the three hypotheses below. Demographics in the Vietnamese market are expected to alter the relationships between m-loyalty and trust, enjoyment, and perceived risk.



Hypothesis 4 (H4): Demographics affect the relationship between m-loyalty and trust.

Hypothesis 5 (H5): Demographics affect the relationship between m-loyalty and enjoyment.

Hypothesis 6 (H6): Demographics affect the relationship between m-loyalty and perceived risk.

III. METHODS

A. Survey Overview

In this chapter, we verify the research model that we will use to show how the elements of trust, enjoyment, and perceived risk presented in the previous chapter affect loyalty. With the assistance of a platform developed by Macromill, Inc., we conducted an online questionnaire among Vietnamese consumers. One challenge when conducting social research online is that the views of those unable to access the web are not reflected in the results of the study. However, as this study focuses on awareness and trends regarding the use of online shopping apps, it is premised on respondents' ability to access the web, so it would be fair to say that no consideration of this issue is required.

Vietnam's e-commerce has been expanding over the last few years, particularly since the pandemic began. In addition to home-grown online shopping apps, Vietnam has many such apps developed with investment from overseas. According to data published by iPrice Group (2021), Vietnamese consumers demonstrate little loyalty to apps, with a deletion rate of 49%—the highest figure in Southeast Asia. However, the online shopping market has begun to see rapid growth in Vietnam and demonstrates ample scope for further growth as a global market. Accordingly, a study shedding light on

the features of consumption behavior and preferences among Vietnamese consumers has significance.

B. Questionnaire

The questionnaire we used examined m-loyalty, trust, enjoyment, and perceived risk. We drew up the questionnaire shown below (Table 1) based on consideration of the aforementioned matters.

Table 1: Questions

Please respond to the following statements based on the shopping app you use most frequently.	
M-loyalty (Chang and Chen, 2009)	<ul style="list-style-type: none"> • (ML1) I always try to use the app when I need to buy something. • (ML2) This app is my first choice when I need to buy something. • (ML3) I like using this app. • (ML4) For me, this app is the best shopping app with which to do business. • (ML5) I believe this app is my favorite shopping app.
Trust (Al-dweeri et al., 2017)	<ul style="list-style-type: none"> • (Trust 3) They deliver faster than expected. • (Trust 4) Their response to complaints is good. • (Trust 5) I feel the products available on this app are of good quality.
Enjoyment (Cheema et al., 2013)	<ul style="list-style-type: none"> • (Enjoyment 1) I can enjoy myself when shopping on this app. • (Enjoyment 2) I feel that shopping on this app is easy. • (Enjoyment 3) I like the shopping experience on this app. • (Enjoyment 4) I get excited when this app has sales campaigns. • (Enjoyment 5) I often find inexpensive items on this app.
Perceived Risk (Wu, Vassileva, Noorian, & Zhao 2015).	<p>If I purchase items via this app,</p> <ul style="list-style-type: none"> • (Risk 1) The quality of the products will not be as good as I had expected. • (Risk 3) The products could potentially endanger my health and safety due to poor-quality materials.

Table 1: Questions (Cont.)

Please respond to the following statements based on the shopping app you use most frequently.	
Perceived Risk (Wu, Vassileva, Noorian, & Zhao 2015).	<ul style="list-style-type: none"> • (Risk 4) The products could potentially cost me time and effort to repair or exchange them. • (Risk 5) My purchase could potentially have an adverse impact on my peace of mind. • (Risk 6) It will probably result in a financial loss, due to inadequate guarantees, high delivery charges, and transaction costs when sending money to the seller. • (Risk 7) It will probably lead to a loss of security or privacy for me, because my personal information will be disclosed when I make the purchase.

IV. ANALYSIS AND DISCUSSION OF SURVEY RESULTS

A. Analysis of the Questionnaire

We conducted the survey by means of an online questionnaire completed by Vietnamese consumers between October 21–28, 2021 and gained valid responses from 700 people (response rate: 100%). We asked respondents to select their answers to all questions from a five-point scale (Table 2). The respondents' attributes were as follows.

Table 2: Sample Attributes

Attribute		Number of People	Proportion (%)
Sex	Male	247	35.3
	Female	453	64.7
No. of Times App Used Previously	Less than 20	262	37.4
	20 or more	438	62.6
Region	Hanoi	211	30.1
	Ho Chi Minh City	223	31.9
	Other regions	266	38.0

A total of 247 (35.3%) were male and 453 (64.7%) were female. 262 (37.4%) respondents had shopped using the app in question fewer than 20 times, whereas 438 (62.6%) had used it 20 times or more. With regard to region, 211 (30.1%) respondents lived in Hanoi, 223 (31.9%) in Ho Chi Minh City, and 266 (38.0%) elsewhere (Table 2).

B. Factor Analysis of Awareness of Shopping App Loyalty Improvement

1) Exploratory Factor Analysis

First, we used the principal factor method to conduct exploratory factor analysis of the 22 items (SPSS). Based on the criterion of having a factor loading of at least 0.400, we discarded 3 items (Trust 1, Trust 2, Risk 2) and then performed another factor analysis of the remaining 19 items. As the changes in the eigenvalues were 6.55, 2.72, 1.11, 1.02, and 0.70, we determined that a four-factor structure was appropriate. Accordingly, we assumed the four factors and performed factor analysis using the principal factor method with Promax rotation.

2) Confirmatory Factor Analysis

By means of exploratory factor analysis, we identified four factors: ML, Trust, Enjoyment, and Perceived Risk. To confirm this four-factor structure, we used AMOS 26 to perform confirmatory factor analysis (Figure 2). When we analyzed the covariance between the factors using our assumed model, the goodness of fit indices were χ^2 (CMIN)=333.365, df=80, p<.000, GFI=.95, AGFI=.935, RMSEA=.043, and SRMR=.0374, so we deem the conformity to be good.

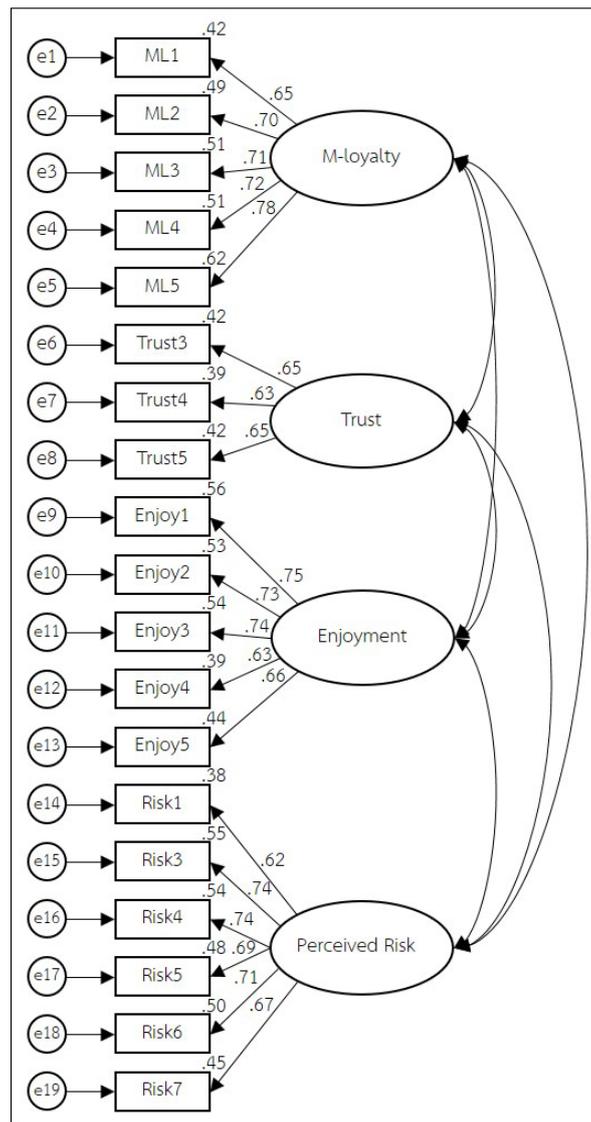


Figure 2: Confirmatory Factor Analysis

C. Results of Analyzing Subscale Relationships

We calculated the mean values of the items corresponding to the four subscales in our scale of mechanisms for maintaining and improving loyalty to shopping apps and obtained the ML subscale score (M=4.2477, SD=0.50549), Trust subscale score (M=3.8567, SD=0.62756), Risk subscale score (M=2.8536, SD=0.73029), and Enjoyment subscale score (M=4.2217, SD=0.45863).

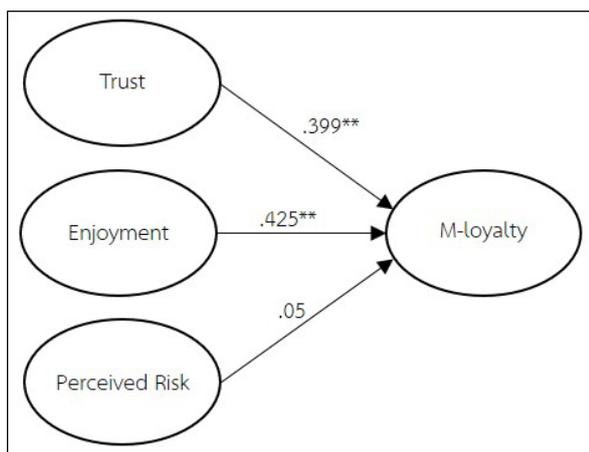
To examine internal consistency, we calculated the α coefficient for each subscale and obtained adequate values of $\alpha=0.827$ for ML, $\alpha=0.658$ for Trust, $\alpha=0.842$

for Risk, and $\alpha=0.819$ for Enjoyment. The four subscales demonstrated a significant correlation to each other at the 0.01 level. ML and Risk, and Trust and Risk demonstrated a significant negative correlation, while ML and Trust, and ML and Enjoyment demonstrated a significant positive correlation. Thus, we confirmed that trust and enjoyment are potential factors contributing to the maintenance and improvement of loyalty. Risk reduces loyalty and trust.

D. Results of Multiple Regression Analysis

To evaluate multicollinearity, we investigated the variance inflation factor (VIF) for all constituent elements. As the results indicate that all VIF values are less than 1.0 and there are no more than 10 VIF statistics, we confirmed that the likelihood of multicollinearity was low (Hair, Ringle, & Sarstedt, 2011). We judged the goodness of fit to be high, as the analysis of variance (ANOVA) results were significant, with adjusted R2 of 0.51.

This study's objective is to examine the effects of trust, enjoyment, and perceived risk in improving m-loyalty, to identify pointers for ways in which companies can differentiate themselves in the Vietnamese market. In this multiple regression analysis, we took trust, enjoyment, and perceived risk as independent variables, and m-loyalty as the dependent variable. Looking at the results of hypothesis testing, we confirmed that consumers' trust has a positive effect on m-loyalty ($\beta = 0.399$, $p < 0.001$), supporting Hypothesis 1 (Figure 3).



**The correlation coefficients are significant at the 0.01 level (both sides), ANOVA: $p < .001$, $R^2 = 0.51$

Figure 3: Results of Multiple Regression Analysis with ML as the Dependent Variable

We also confirmed that enjoyment has a positive effect on m-loyalty ($\beta = 0.425$, $p < 0.001$), supporting Hypothesis 2. We then found that perceived risk has no effect on m-loyalty ($\beta = 0.05$, $p = 0.08 > 0.05$), demonstrating that there is no connection between perceived risk and m-loyalty, contrary to Hypothesis 3.

E. Examination of Demographic Differences

We examined differences in sex, the number of times users had purchased via the app (less than 20 times and 20 times or more), and regions, to identify how demographic differences contributed to our research model. We ran t-tests on the subscale scores for online app loyalty orientation. The results for sex indicated that men scored significantly higher than women for ML1 ($t = 3.115$, $df = 698$, $p < 0.001$), Trust 3 ($t = 3.955$, $df = 698$, $p < 0.001$), Trust 4 ($t = 3.902$, $df = 698$, $p < 0.001$), and Trust 5 ($t = 4.027$, $df = 698$, $p < 0.001$). Next, the results for number of times users had shopped via an app indicated that those who had used it 20 times or more scored higher than those who had used it fewer than 20 times for ML1 ($t = -4.688$, $df = 698$, $p = < 0.001$), ML2 ($t = -6.031$, $df = 698$, $p < 0.001$), ML3 ($t = -5.177$, $df = 698$, $p < 0.001$), ML4 ($t = -3.270$, $df = 698$, $p = < 0.001$), ML5 ($t = 3.955$, $df = 698$, $p < 0.001$), Enjoyment 1 ($t = -3.504$, $df = 698$, $p < 0.001$), Enjoyment 2 ($t = -3.776$, $df = 698$, $p < 0.001$), Enjoyment 3 ($t = -2.932$, $df = 698$, $p = 0.003$), Enjoyment 4 ($t = -5.015$, $df = 698$, $p < 0.001$), and Enjoyment 5 ($t = -5.547$, $df = 698$, $p < 0.001$). Thus, according to the results of our analysis, there is a clear difference between the sexes in terms of trust in the apps. The mean value is higher among men than women. We also found differences in loyalty and enjoyment according to the number of times users had shopped via an app, with higher loyalty and enjoyment among those with more experience of shopping using the app. Finally, there were hardly any



differences between regions in terms of loyalty, trust, or enjoyment.

V. CONCLUSIONS AND DISCUSSION

This study examined how the three elements of trust, enjoyment, and perceived risk maintain and improve mobile loyalty. To ascertain what concepts trust, enjoyment, and perceived risk encompass, we conducted a questionnaire among Vietnamese consumers. We performed regression analysis of data gathered from 700 Vietnamese consumers. From the results, we found that trust and enjoyment have significant positive causal relationships to ML. While we found a correlation between perceived risk and ML, we were unable to confirm a causal relationship between them.

We also examined how the relationships of trust and enjoyment to ML vary according to demographics (sex, number of times users had shopped via an app, and region where consumers live). The results of t-tests indicated that trust in the apps is higher among men than women. It also became evident that consumers who had shopped using an app 20 times or more demonstrated higher enjoyment and ML than those who had used it fewer than 20 times. Consumer attitudes did not differ between Vietnam's regions (Hanoi in the north and Ho Chi Minh City in the south).

There was little prior research into consumer loyalty toward B2C shopping apps, so this study summarized the traditional concept of customer loyalty and e-loyalty before considering the concept of ML, on which the study focuses. Research by Al-dweeri et al. (2017) shows that e-trust has a positive effect on e-loyalty. Menon and Kahn (2002) showed that consumers who have experienced a higher level of pleasure on a website demonstrate a higher level of approach behaviors toward the website, including the intention to revisit that shop.

Focusing on shopping apps, our study verified that trust and enjoyment have causal relationships to ML. Perceived risk in purchases from online shops generally tends to be higher than in the case of purchases from physical stores and it has been argued that reducing perceived risk encourages use (Aoki, 2005). Marakanon and Panjakajornsak (2017) demonstrate a causal relationship between perceived risk and loyalty. In our study, we were unable to confirm a causal relationship between ML and perceived risk in Vietnam, whether in respect of attitudinal or behavioral aspects.

VI. RECOMMENDATIONS AND ISSUES

Our study revealed that businesses in the Vietnamese market should focus their energies on the aspects of trust and enjoyment to maintain and improve ML. While reducing perceived risk—the anxiety that makes consumers inclined to avoid purchasing or using a product—is an important strategy that companies should adopt, this study found no cause and effect in respect of improving loyalty. Looking at differences by sex, men demonstrated significantly higher trust in apps (systems) than women. In the Vietnamese market, businesses must increase trust among women via greater tailoring of apps to women's needs.

We found that greater experience of shopping using the apps had a significant relationship to both ML and enjoyment. To improve loyalty, businesses need to devise measures to prevent users from retiring from the apps (measures to increase the repeat customer rate). This means ongoing marketing strategies such as points-based membership systems and information about special offer campaigns, for example.

There were no significant differences in consumer attitudes between the different regions of Vietnam. Thus, when it comes to app strategies, there is no need to differentiate between regions with measures targeted specifically at the north or south of the country.

This study has a number of issues. In terms of the next steps in research into this study's focal area of loyalty, it will be crucial to look beyond B2C shopping apps and undertake ongoing observation of the elements required by apps seeking to boost customer loyalty in both physical and online retailing as an omnichannel strategy.

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