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FACTORS AFFECTING THE ADOPTION OF SOCIAL MEDIA IN BUSINESS: EVIDENCE FROM INDIVIDUAL AND HOUSEHOLD RETAILERS IN VIETNAM

Thi-Minh Ngoc Luu, VNU University of Econonomics and Business, Vietnam National University, Hanoi
Phuong Mai Nguyen*, VNU University of Econonomics and Business, Vietnam National University, Hanoi
Thi Huong Dang, VNU University of Econonomics and Business, Vietnam National University, Hanoi
Phu Quy Dao, VNU University of Econonomics and Business, Vietnam National University, Hanoi

ABSTRACT

This paper used an integrated framework adapting from Technology Acceptance Model (TAM) and the Technological-Organizational-Environmental (TOE) framework adapted from a study by Tripopsakul (2018) to examine factors affecting the decision to adopt social media in business by individual and household retailers in Vietnam. Data were collected from 773 respondents through an online self-administered questionnaire survey in the three biggest cities of Vietnam (i.e. Hanoi, Ho Chi Minh City, and Danang) using convenient and snowball sampling method. Structural Equation Modelling (SEM) analysis was used to test the hypotheses. Results showed that social media adoption was significantly influenced by environmental context, perceived ease of use, and perceived usefulness, respectively. The technological and organizational contexts were proved to have a medium positive impact on social media adoption through perceived ease of use and perceived usefulness as two mediators. It is implied from the research findings that Vietnamese individual and household retailers mainly adopt social media because of the extrinsic forces rather than their intrinsic motives. Moreover, this study revealed that the more self-efficacy, innovativeness and IT experience that the Vietnamese retailers have, the more willing they are to adopt social media in business.

Keywords: Social Media Adoption, Vietnamese Businesses, Individual and Household Retailers.

INTRODUCTION

The emergence of social media and social networking creates a new information channel through mass interaction among users. This form of digital interaction helps information spread very quickly and effectively. In business, social media has a significant impact on marketing and customer relationship management by supplying customers with information about sellers, products or services, and enabling real-time interaction between sellers and buyers.

In Vietnam, social media has dramatically spread out during recent years, particularly in the retail sector. Due to the increasing use of information technology (IT) applications, the

Vietnamese retail sector is changing rapidly from the traditional brick-and-mortar business model to an internet-based one. Online retailers are becoming more popular than ever before with the entrance of numerous individuals and household businesses. These retailers have turned nearly one-third of the population, i.e., 30 million people, into online shoppers (Association of Vietnamese Retailers, 2019). More importantly, 48 percent of Vietnamese consumers are changing from brick-and-mortar retail stores and bazaars to online retailers to buy not only common goods but also luxury ones (Vietnamese E-commerce Association, 2019). According to a report by the Vietnamese E-commerce Association (2019), 36 percent of surveyed companies in research about e-commerce in Vietnam responded that they were fully aware of online shopping trends and currently implementing social media as a platform in the business. Consequently, e-commerce has boosted rapidly. The total revenue of e-commerce in Vietnam is shooting to 8 billion USD in 2018, representing a 30 percent increase compared to 2017 and a double increase than that in 2015 (Association of Vietnamese Retailers, 2019).

Regarding the business-to-business (B2B) e-commerce, the rate of online orders for companies has increased quickly. In 2018, 49 percent of the surveyed companies received orders through social network sites. Moreover, 45 percent of e-commerce companies highly appreciated the efficiency of selling products through social networks, while this figure was only 39 percent in 2017 (Vietnamese E-commerce Association, 2019). Besides the B2B segment of the retail sector, e-commerce also led to the evolvement of B2C and C2C segments. By the end of 2018, Statista (2018) reported that 49.8 million online shoppers in Vietnam. Online retailing in Vietnam becomes extremely attractive to not only individuals and small-and-medium-sized enterprises (SMEs) but also the big ones. The traditional household retailers, e.g., mother-and-pop stores, and bazaars, started to recognize fierce competition from online rivals when social media is becoming more and more popular. Unfortunately, a few studies have investigated how the individuals and household retailers in Vietnam are adapting to and adopting the new digital trend in retailing. This paper, therefore, aims to explore and explain factors influencing the social media adoption of individual and household retailers in the Vietnamese context to discuss practical implications for retailers and government institutions.

The rest of this paper is organized as follows. Section 2 provides related work about retailing, social media, and relevant models of social media adoption. The conceptual model and hypothesis development based on the integrated technology acceptance model (TAM) and the technological, organizational, and environmental (TOE) framework are briefly proposed in section 3. Section 4 mentions the measurement instruments and sampling method. The findings of our empirical study in the Vietnamese retail sector are presented in section 5 with the implications for practices. Finally, the limitations of our work are listed, followed by suggestions for future research.

LITERATURE REVIEW

Retailing

Retailing includes a set of business activities that add value to the products and services sold to customers by linking the manufacturers to consumers. Two distinct models of retailing are the brick-and-mortar model, so-called the traditional one, and the Internet (Enders & Jelassi, 2000). The traditional model is mainly based on a physical store where the vendors interact face to face with the customers. While the online model allows the customer to access online information about the products, place an order, make the payment and in case of digital products,

e.g., software, music, and video have them delivered instantaneously through the Internet (Enders & Jelassi, 2000). The traditional retailing model is profoundly affected by widespread Internet usage since online retailers or e-tailers are achieving higher economies of scale in serving a few hundred thousand or even millions of customers. Moreover, the physical infrastructure absence makes the e-tailing business model highly scalable (Enders & Jelassi, 2000).

As the new generation of Internet and social network savvy consumers emerge, it could be assumed that they will be much more inclined to make their purchase through the Internet and social media channel than today's consumers, who are accustomed to shopping at physical stores (Enders & Jelassi, 2000). Thus, the e-tailing model is obvious to have much room for growth in the future.

Social Media and Retailers

Social media can be in different forms of online communication that people use to create networks, communities, and collectives, to share many types of content, such as information, ideas, messages and videos. Kane et al. (2014) described social media as a new class of information technologies that facilitate collaboration and interpersonal communication through the use of Internet-based platforms. Social media simultaneously support one-on-one and mass communications (Chen et al., 2013). Nowadays, are Facebook, Twitter, YouTube and LinkedIn are among the most popular social media platforms (Kane et al., 2014). Since its emergence in the late 1990s, social media has become an integral part of all of our lives with at least 3 billion current users in the world (Tripopsakul, 2018). Social media are significantly changing the way we communicate, collaborate, consume, and create value. It enables multiple communication ways not only between a seller and a customer but also customers' feedback on products for the general public (Tripopsakul, 2018). Nowadays, customers are no longer pure buyers and consumers, but also the contributors to the contents of products and services on social networks. Therefore, social media presents one of the most transformative impacts of information technology (IT) on business both within and outside firm boundaries (Aral et al., 2013).

Despite the heavy use of these social media by millions of people around the globe, their application for business is still in the early stages, and social media researchers have not settled on which technologies are classified as social (Kane et al., 2014). The term social media has been applied to a range of technologies, including blogs, virtual worlds, and wikis, which facilitate the creation and exchange of information and build on the Web 2.0 foundation (Akrimi & Khemakhem, 2012; Kaplan & Haenlein, 2010).

Furthermore, Kaplan & Haenlein (2010) classified social media into six specific categories based on the level of self-disclosure and social presence, including content communities (YouTube), social networking (Facebook), blogs and microblogging (Twitter), collaborative projects (Wikipedia), Virtual game worlds (World of Warcraft), virtual social worlds (Second Life).

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is the first and the foremost traditional adoption theory in the field of IT (Awa et al., 2011; Benbasat & Barki, 2007; Silva, 2007). It provides a basis for unveiling the impacts of external variables on adoption decisions with its basic postulates resting firmly on economic, utilitarian, and attitudinal grounds.

The TAM model was also used to study a variety of Internet technologies, such as World

Wide Web (Lederer et al., 2000), intranet (Alam, 2009; Alam & Noor, 2009), mobile commerce (Yang, 2005), or electronic commerce adoption (Alam et al., 2011; Lee et al., 2001; Olson & Boyer, 2003), because it was initially developed to study computer-based technologies (Yang, 2005). Furthermore, it has been extended its application to diverse types of IS, such as personal computing (Agarwal & Prasad 1999), and some other software (Venkatesh & Davis, 2000).

Technological, Organizational and Environmental (TOE) Framework

The technological, organizational, and environmental (TOE) framework developed by Tornatzky et al. has been widely used to analyse the adoption of technologies (Tornatzky et al., 1990). TOE framework describes factors that influence technology adoption; namely, technological, organizational, and environmental.

CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Previous studies have investigated the direct impact of factors in either TAM or TOE framework on social media adoption in various contexts. Some studies integrated TAM and TOE framework to measure the impact of the contextual factors on technology-based service adoption. Recently, (Tripopsakul, 2018) used TAM as mediating variables in the study of social media adoption as a business platform of young entrepreneurs in Thailand. Therefore, in this study, we adopt the research model from Tripopsakul (2018), and then immerse it in the context of the Vietnamese retailing sector. Our conceptual framework is depicted in Figure 1 (Source: adopted from Tripopsakul (2018)) as follows.

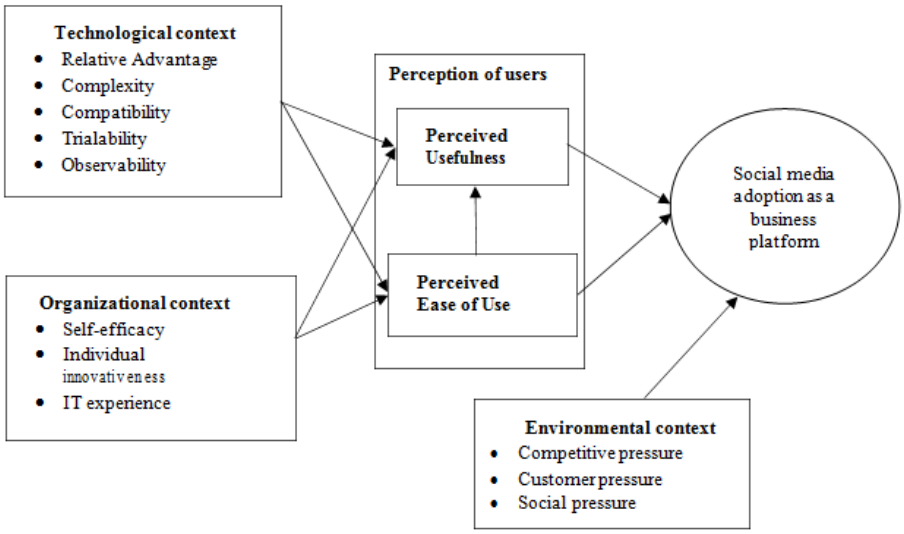

FIGURE 1
CONCEPTUAL FRAMEWORK

As shown in Figure 1, our research model includes three independent variables extracting from the TOE framework and two variables of TAM as the mediating variables. The dependent factor is the decision to adopt social media as a business platform. Constructs of the research model and hypotheses are developed as the following.

Technological Context

Technological context, in general, refers to the application or object of new technology adoption (Lippert & Govindarajulu, 2006). The technological context includes the internal and external technologies that are relevant to the firm, which includes both types of equipment as well as processes (Tornatzky et al., 1990). Numerous scholars have studied and confirmed the importance of a variety of first and second-order constructs that affect the technological context.

These factors include (i) relative advantage (the degree to which a technology is perceived as being better than the idea it supersedes); (ii) compatibility (the degree to which a technology is perceived as consistent with the existing values, past experiences, and needs of potential adopters); (iii) complexity (the degree to which a technology is perceived as relatively difficult to understand and use); (iv) trialability (the degree to which a technology may be experimented with on a limited basis); and (v) observability (the degree to which the results of a technology are visible to others).

The technological context is believed to have not only direct impact on the adoption of IT, social media, e-commerce (Alam et al., 2011)(Hajli, n.d.), but also the indirect impact through the mediation of perceived ease of use (PEOU) and the perceived usefulness (PU) of the potential adopters (Tripopsakul, 2018).

In this study, PEOU and PU are considered as mediators of the relationship between technological context and social media adoption of individual and household retailers. It is assumed that the more favourable the technological context, the more comfortable and more useful the adopters perceive about the use of social media in their business. Therefore, the two following hypotheses are proposed:

$H1a$: Technological context has a positive influence on perceived usefulness.
$H1b$: Technological context has a positive influence on perceived ease of use.

Organizational Context

Organizational context is defined in terms of resources available to support the acceptance of social media. Generally, these criteria include firm size and scope, top management support, organizational culture, complexity of managerial structure measured in terms of centralization, formalization, interconnectedness; and the quality and availability of the firm's human resources (Jeyaraj et al., 2006; Tornatzky & Fleischer, 1990; Bruque & Moyano, (2007); Tarafdar & Vaidya (2006), innovativeness of managers (Fityan & Huseynov, 2018), Ghobakhloo & Hong Tang (2013), self-efficacy and prior technology experience (Alshamaila et al, 2013).

Self - efficacy is defined as an individual's self-confidence in his or her ability to perform a behavior and predicts intentions to use a wide range of technologically advanced products (Bandura, 1982, 1977), Hill et al., (1986). Thus, individual confidence to use the computer and the Internet is more inclined to adopt the Internet. Besides, (Davis, 1989); Wang et al. (2003) find that self-efficacy and perceived ease of use are related.

A person's innovativeness is being able to adopt new technology, or system faster than others can do in the same social situations (Marcati et al., 2008). An innovative person is the one who tries to solve a problem by trying to change the structure where it is situated (Thong and Yap, 1995). Studies by (Fityan & Huseynov, 2018), Ghobakhloo & Hong Tang (2013) insist that when the business owners are more innovative, their intention to adopt social media will be higher.

Moreover, the adoption of IT, e-services or a new Internet-based system also depends on the person's experience with the technology or the system or not. Experience rates a significant individual difference factor in technology acceptance research (Zmud, 1979); favourable experience about an innovation influences adoption of similar ones perhaps on accounts of stimulus generalization (Dabholkar, 1992). Previous studies proved that prior technology experience has positive impact on the adoption of cloud computing (Alshamaila et al, 2013), social media in business (Tripopsakul, 2018). Some studies examined the indirect impact of technology experience on decision to adopt a technology- based system through the mediation of perceived usefulness and perceived ease of use. People with prior experience of e-commerce are more skillful and can simplify their complexities to improve perceived usefulness (Agarwal & Prasad, 1999; Chau, 1996; Awa et al., 2012).

In this study, it is hypothesized that organizational context positively influences the perceived usefulness and perceived ease of use. Consequently, two following hypotheses are proposed.

H_{2a}: Organizational context has a positive influence on perceived usefulness.
H_{2b}: Organizational context has a positive influence on perceived ease of use.

Environmental Context

The environmental context represents the setting in which the firm conducts business, and influenced by the industry itself, its competitors, the firm's ability to access resources supplied by others, and interactions with the government (Lippert & Govindarajulu, 2006). It is common to include the pressures from competitors, customers, and the society as well in the environmental context (Tripopsakul, 2018). Other studies have proved that when the environmental context is favorable, the firms are more likely to adopt e-commerce (Alam et al., 2005), social media (Andzulis et al., 2012). Therefore, we hypothesize the relationship between the environment and the adoption decision of retailers as follows.

` *H_3: Environmental context has a positive influence on social media adoption as a business platform.*

Perceived Usefulness, Perceived Ease of Use

Perceived usefulness (PU) and Perceived ease of use (PEOU) are two primary components of TAM that determine the intention and actual adoption of a specific technology-based application. Perceived usefulness (PU) defines prospective user's subjective probability that using a specific application improves operations (Davis, 1989). It provides diagnostic lenses into how actual use and intention to use are influenced. While perceived ease of use (PEOU) measures the prospective user's assessment of the mental efforts required of the use of the target applications (Davis, 1989). PEOU is a distinct but related construct to PU; it impacts on near-term usefulness since improvement in it contributes positively to outcomes and ultimately defines PU. Studies undertaken by scholars to assess perceived usefulness and ease of use trade- off and to determine the impacts of external variables on these two mental determinants show mixed findings (Chau, 1996; Davis, 1989). Nevertheless, empirical findings confirm the positive relationships between ease of use and attitude towards use (Venkatesh & Davis, 2000) and show that PEOU is a crucial proven determinant of users' intention to adopt IT (Venkatesh & Davis, 2000), e-commerce and social commerce (Alam et al., 2011), social media (Triposakul, 2018).

In this study, PEOU is expected to positively influence PU, and the two factors are also

assumed to have a positive influence on social media adoption as a business platform by individual and household businesses. Thus, the following hypotheses are proposed:

H4: Perceived ease of use has a positive influence on perceived usefulness.
H5: Perceived usefulness has a positive influence on social media adoption as a business platform.
H6: Perceived ease of use has a positive influence on social media adoption as a business platform.

METHODOLOGY

Measurement

The measurement instruments of this study were adopted from literature on IT, e-commerce and social media adoption. Items of three factors in TOE framework (i.e., technological context, organizational context, and environmental context) came mainly from studies by Tripopsakul (2018), Alam et al. (2007), Ramdani et al. (2013), Tornatzky et al., (1990). The constructs of technological context include relative advantage (5 items), complexity (4 items), compatibility (3 items), and trialability (3 items). The organizational context is measured by three constructs including self - efficacy (5 items), individual innovativeness (3 items) and IT experience (3 items). To measure self-efficacy toward using social media, the instrument developed by Compeau & Higgins (1995), Bandura & Adams (1977) were adapted in the context of this study. Lastly, the environmental context has three constructs that reflect the pressure from competitors, customers, and society with 11 measurement items. Meanwhile, the measurement items for perceived ease of use (PEOU) and perceived usefulness (PU) were adapted from Davis' TAM model (Davis, 1989). The measurement of decision to adopt social media was modified from Ramdani et al. (2013). For each questionnaire item, respondents were asked to show their viewpoint about factors influencing social media adoption on a five-point Likert scale, from 1 = strongly disagree to 5=strongly agree.

Population

The study was concerned about individuals and household businesses in the Vietnamese retail sector. The logic behind choosing these two groups of retailers is that the retail sector in Vietnam is mainly characterized by a massive number of mother-and-pop stores and bazaars run by household businesses for a long time. The retailing system has been underdeveloped until the country entered WTO in 2007. Then, the entrance of international giants in retailing has modernized and dramatically changed the sector. Currently, another interesting phenomenon of the retail industry is the boom of online shopping trends that urges numerous individuals to become online retailers. Therefore, this study is expected to propose meaningful practical and managerial implications by focusing on these two groups of retailers.

Sample and Data Collection

The research sample consisted of individual and household retailers in the three biggest cities of Vietnam (Hanoi, Ho Chi Minh city and Danang city). The snowball and convenient sampling method were applied. The list of household retailers was extracted from the database of Vietnam Association of Retailers (VAR). Meanwhile, individual retailers were randomly chosen

from the research team members' network.

Initially, 400 people in the list of individual and household retailers were randomly picked up to be directly approached through email, and social communication channels including Viber, Zalo, Facebook. An online Google Form format of the questionnaire was not only sent through email but was also posted on Facebook account of research team members and sent through Viber and Zalo applications to people on the list. These initial potential respondents were also motivated to introduce the survey to others in their network by spreading out the survey link. By doing this, our survey was recognized by more and more people based on the network of our friends and partners. We used this method of delivering the questionnaire rather than direct interviews with respondents because a mailing and online survey enable us to reach a higher number of individuals and households at a lower cost, while it puts less pressure for an immediate response on the potential informant, and gave respondents a greater feeling of autonomy. To reduce bias issue, we promised that we would keep all individual responses completely confidential and confirmed that our analyses would be restricted to an aggregated level that would prevent the identification of any person or business entity.

After three months, 794 individual and household retailers responded to the questionnaire, but 21 responses were eliminated due to missing values. Finally, 773 questionnaires were accepted for data analysis. The gender distribution of the survey respondents is 76.3 percent females and 23.7 percent males. 53.9 percent of the respondents have been in business for more than five years. Regarding the awareness of social media, nearly 85 percent of the respondents reported that they have ever heard about it, and approximately 60 percent of them are using social media platforms such as Facebook, YouTube to promote and sell their products.

Data Analysis Strategy

Confirmatory factor analysis (CFA) was run to test the presumed model on the basis of conventional fit indices i.e. Chisquare [$\chi 2$], Chi-square/df [$\chi 2$/df], Goodness-of-fit index [GFI], incremental fit index [IFI], Tucker-Lewis index [TLI], Comparative fit index [CFI], Root mean square error of approximation [RMSEA] using AMOS-22. Structural Equation Modelling (SEM) was run to test hypotheses on the direct and indirect relationship among the variables in the research model (H1-6).

FINDINGS AND DISCUSSION

Correlation Test

Table 1 showed that all variables were positively correlated with the remaining variables as the correlation coefficients range from 0.287 to 0.933. Thus, the measurement model satisfied the conditions for the model fit test in the next step.

TABLE 1
CORRELATIONS AMONG THE VARIABLES

N=773	Mean	SD	1	2	3	4	5	6
Technological_Context	3.79	0.59	**0.933**					
Organizational_Context	3.67	0.54	0.573**	**0.714**				
Perceived_Usefulness	3.74	0.64	0.720**	0.586**	**0.799**			
Perceived_Ease_of_Use	3.74	0.64	0.564**	0.493**	0.710**	**0.805**		
Environmental_Context	3.66	0.56	0.416**	0.454**	0.386**	0.284**	**0.788**	

Social_media_adoption	3.56	0.87	0.355**	0.246**	0.369**	0.360**	0.287**	**0.876**

Convergent and Discriminant Validity

The test of the measurement model includes the estimation of internal consistency, the convergent and discrimination validity of the instrument items. Firstly, we conduct confirmatory factor analysis (CFA) of the 14 constructs, employing 52 items in order to assess the unidimensionality of each new construct (Anderson and Gerbing, 1988). The measurement model provides a reasonable fit to the data (χ^2 (1473)=2334.323; GFI=0.905; IFI=0.928; TLI=0.943; CFI=0.945; RMSEA=0.048).

In this study, we used the composite reliability index of (Bagozzi & Yi, 1988) and average variance extracted index of (Fornell & Larcker, 1981) to calculate reliability of the measurement instruments. As shown in Table 2, both composite reliability index and average variance extracted index were higher than the required criteria for all the measures (CR>0.60; AVE >0.50) (Bagozzi & Yi, 1988). Moreover, CFA results of 14 constructs also indicated that all items had substantial and significant loadings on their corresponding factor, which provided evidence of convergent validity.

On the other hand, we performed CFA before testing the hypotheses in order to examine the fit of the six-factor model. The six variables in the model included technological context, organizational context, perceived usefulness, perceived ease of use, environmental context and social media adoption as a business platform. The hypothesized model demonstrated an acceptable fit (χ^2 (1255) = 3578.864, p=0.000, CFI=0.926, TLI=0.923, IFI=0.926, RMSEA=0.048).

TABLE 2
CONSTRUCT RELIABILITY AND CONVERGENT VALIDITY

Construct & indicators	Loading	t-value	α/AVE/CR	Construct & indicators	Loading	t-value	α/AVE/CR
Technological context				Organizational Context			
Relative	0.912		0.959	Self – efficacy	0.986		0.885
advantage			0.87				0.51
Complexity	0.861	19.024	0.964	Individual	0.502	9.549	0.739
				Innovativeness			
Compatibilit	0.986	18.947		IT experience	0.552	9.557	
y							
Trialability	0.966	20.728		Self – efficacy			
Observabilit y	0.937	19.803		SE1	0.764		0.914
	Relative advantage			SE2	0.88	26.297	0.684
RA1	0.707		0.891	SE3	0.889	26.626	0.915
RA2	0.916	24.473	0.643	SE4	0.836	24.727	
RA3	0.688	18.51	0.899	SE5	0.758	22.044	
RA4	0.757	20.344		Individual innovativeness			
RA5	0.911	24.355		II1	0.794		0.85

	Complexity			II2	0.812	22.222	0.655
CL1	0.864		0.861	II3	0.822	22.37	7 0.851
CL2	0.8	26.569	0.614	IT experience			
CL3	0.721	22.828	0.863	IT1	0.792		0.834
CL4	0.741	23.717		IT2	0.796	20.972	0.627
	Compatibilit y			IT3	0.787	20.816	0.834
CA1	0.76		0.792	Environmental context			
			0.561				
CA2	0.749	21.634	0.793	Competitive	0.862		0.884
				pressure			0.621
CA3	0.738	21.255		Customer pressure	0.867	9.866	0.828
	Trialability			Social pressure	0.607	11.411	
TR1	0.861		0.887	Competitive pressure			
TR2	0.834	29.73	0.724	COP1	0.792		0.881
TR3	0.857	31.133	0.887	COP2	0.771	22.359	0.597
	Observabilit y			COP3	0.79	22.997	0.881
OB1	0.838		0.867	COP4	0.76	21.967	
OB2	0.817	26.987	0.685	COP5	0.748	21.581	
OB3	0.828	27.51	0.867	Customer pressure			
Perceived usefulness				CUP1	0.785		0.836
PU1	0.689		0.916	CUP2	0.789	21.737	0.631
PU2	0.761	21.482	0.638	CUP3	0.808	22.22	4 0.837
PU3	0.857	20.933	0.897	Social pressure			
PU4	0.824	21.669		SP1	0.818		0.856
PU5	0.849	19.479		SP2	0.792	23.019	0.667
Perceived ease of use				SP3	0.839	24.156	0.857
PEU1	0.819		0.868	Social media adoption			
PEU2	0.768	22.349	0.649	SMA1	0.873		0.934
PEU3	0.829	24.162	0.847	SMA2	0.889	34.024	0.768
				SMA3	0.878	33.263	0.93
				SMA4	0.865	32.386	

The results of factor loadings, average variance extracted (AVE) and composite reliability (CR) to evaluate the convergent validity of the variables are shown in Table 2. All of the composite reliabilities ranged from 0.793 to 0.964, satisfying the minimum cutoff at 0.60 (Bagozzi & Yi, 1988), while the estimates for the AVE from 0.510 to 0.870 crossed the threshold of 0.50 (Fornell & Larcker, 1981). All the factor loadings were found to be significant at the 0.001 level; thus, the loadings provided a significant contribution for each construct (see Table 2). Moreover, Cronbach's alpha values were above 0.70, representing higher internal consistency and validity of the constructs.

The square root of the AVE was compared with the values of the correlation between the constructs to examine the discriminant validity. (Chin et al., 2003) suggested that the square root of the AVE of each latent variable from its indicators should exceed that construct's correlation with other constructs. As shown in Table 2, the square root of the AVE of each latent construct is higher than that construct`s correlation with other constructs. Besides, to test the discriminant validity, the AVE estimate was compared with the squared value of correlation between the construct. All AVE values were greater than the squared correlations (Table 3), so the model fits the criteria for discriminant validity.

TABLE 3
DISCRIMINANT VALIDITY TEST

Variables	1	2	3	4	5	6
1. Technological_Context	**0.87**					
2. Organizational_Context	0.328	**0.51**				
3. Perceived_Usefulness	0.518	0.343	**0.638**			
4. Perceived_Ease_of_Use	0.318	0.243	0.504	**0.649**		
5. Environmental_Context	0.173	0.206	0.149	0.081	**0.621**	
6. Social_media_adoption	0.126	0.061	0.136	0.13	0.082	**0.768**

Note: The numbers in the cells of the diagonal line are the values of square AVE with squared correlation value.

Besides, we used Harman's one-factor test to examine the common method bias. The 18 items of technological context, 11 items of organizational context, five items of perceived usefulness, three items of perceived ease of use, 11 items of environmental context and four items of social media adoption were included in the test. The results showed that the first factors in the model explained 23.346 % of the variance. Thus, the common method bias did not occur in this study.

Hypothesis Test

Results shown in Table 4 indicated that the Chi-square/degree of freedom ratio statistic (χ^2/df=2.764<3) and p-value (p=0.051>0.05) well achieved the model fit requirements in the model. The goodness-of-fit index, GFI, was 0.936 and the adjusted GFI yielded 0.918 after adjustment was made for the degrees of freedom following the number of variables. This figure indicated that the estimated model predicts 91.8 percent of the variances and covariance's in the database. On the other hand, the value of the normed fit index (NFI=0.921), Tucker Lewis index (TLI=0.921), root-mean-square residual (RMR=0.127), and root-mean-square error of approximation (RMSEA=0.048) proved that the model had a good fit.

TABLE 4
GOODNESS-OF-FIT INDICES

SEM indicators	Suggested	Obtained
χ2 (Chi-square) χ2/df	-	3468.86
p value GFI AGFI TLI NFI RMR	<3	2.764
RMSEA	>0.05	0.051
	>0.9	0.936
	>0.9	0.918

	>0.9	0.921
	>0.9	0.921
	Close to 0	0.127
	<0.08	0.048

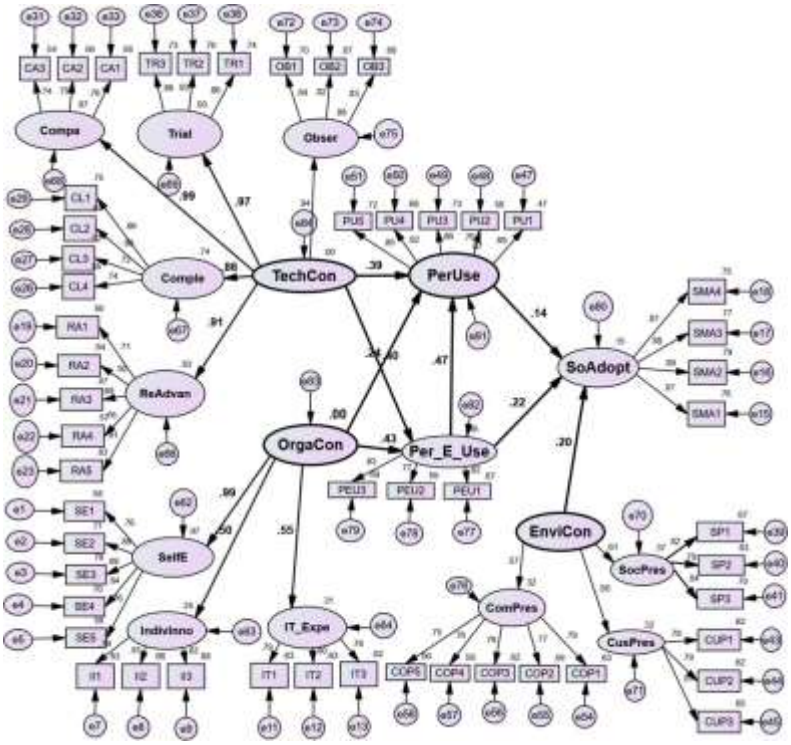

FIGURE 2
SEM ANALYSIS RESULTS

Figure 2 represented that the data adequately supported the estimated model. The details of SEM analysis results were presented in Table 5.

TABLE 5
STRUCTURAL EQUATION MODELLING RESULTS

Hypothesis	Path	Estimate β	SE	CR	p	Result
H1a	TechCon -> PerUse	0.379	0.036	10.573	***	Supported
H1b	TechCon-> Per_E_Use	0.476	0.046	10.301	***	Supported
H2a	OrgaCon-> PerUse	0.385	0.061	6.336	***	Supported
H2b	OrgaCon-> Per_E_Use	0.86	0.098	8.774	***	Supported
H3	EnviCon->SoAdopt	0.375	0.072	5.228	***	Supported
H4	Per_E_Use-> PerUse	0.379	0.035	10.899	***	Supported
H5	PerUse-> SoAdopt	0.229	0.101	2.265	0.024	Supported

The hypothesis testing results in Table 5 revealed the significance of all eight hypotheses. In this study, technological context was found to have a positive relationship with perceived

usefulness (β_{1a}=0.379, CR=10.573) and perceived ease of use (β_{1b}=0.476, CR=10.301) (Table 5). Therefore, H1a and H1b were supported. The organizational context was proved to have a positive relationship with perceived usefulness (β_{2a}=0.385, CR=6.336) and perceived ease of use (β_{2b}=0.860, CR=8.774). Consequently, H2a and H2b were also supported in this study. Hypothesis 3, which posited that the environmental context has a positive effect on social media adoption, was supported (β_3=0.375, CR=5.338). In addition, H4 (β_4=0.379, CR=10.899) was supported showing that perceived ease of use has positive influence on perceived usefulness. Similarly, it is undeniable that both perceived usefulness and perceived ease of use had a positive impact on social media adoption of individual and household retailers in Vietnam with the estimates of the two variables are β_5=0.229 and β =0.295, respectively. Then H5 and H6 are also supported.

DICUSSION AND IMPLICATIONS

According to our findings, both technological context and organizational context had a higher positive influence on perceived ease of use (β_{1b}=0.476, β_{2b}=0.860) than that on perceived usefulness (β_{1a}=0.379, β_{2a}=0.385). It is implied that when the two contexts are favourable, retailers will perceive the ease of use more than the usefulness of adopting social media in their business.

Regarding the direct impact of independent factors, social media adoption was significantly influenced by environmental context, perceived ease of use and perceived usefulness, respectively. In other words, the decision to adopt social media in the business of Vietnamese individual and household retailers was mostly affected by the environmental context including the pressures from customers, competitors, and society as a whole. This finding is different from the results of Tripopsakul (2018) which found that perceived ease of use is the most critical factor in the decision to adopt social media by young entrepreneurs in Thailand. The findings of our study are explained by the low development level of the Vietnamese retail sector that the demand side has become the trigger for the transformation from the traditional retailing model to an internet-based one by adopting social media in business. Vietnamese individual and household retailers mainly adopt social media because of the extrinsic forces rather than their includes intrinsic motives.

The second factor directly influencing social media adoption was the perceived ease of use. This factor, in turn, was determined mainly by organizational context (β_{2b}=0.860) then by technological context (β_{1b}=0.476). It is implied from the finding that the more self-efficacy, innovativeness, and IT experience that the Vietnamese retailers have, the more willing they are to adopt social media in business. Our finding is consistent with the studies of Wamba et al. (2013) Rahayu et al. (2015), Ghobakhloo & Hong Tang (2013), Thong & Yap (1995) when in fact, some other researchers disagree this result. Lee et al. (2001) found out that innovativeness should be more domain‐specific than general since being innovative in general does not translate to the adoption of technology as the person may be technology-averse.

Among three factors directly influencing social media adoption, perceived usefulness is the least important. Our finding is unique in the Vietnamese context and different from other studies in developed countries. This finding can be explained by the insufficient knowledge of Vietnamese individuals and household retailers so that they are not fully aware of the benefits of social media for their business. Therefore, it is suggested that the Vietnamese government develop a transparent policy framework to encourage individuals and household businesses to participate in online B2C and C2C segment, and to protect them from fierce competition of the giants in the industry. The

social media platforms will only be helpful for online retailers in Vietnam if there is an effective and transparent regulatory system that minimizes the potential conflicts among online buyers and sellers.

CONCLUSION, LIMITATIONS AND FUTURE RESEARCH SUGGESTIONS

An undeniable fact is that social media is penetrating the business world at an increasing pace. In a developing country like Vietnam, it is estimated that the retail sector will continue to proliferate in the coming years. According to the Vietnamese Advertising and Retailing Forum 2019, the coverage of modern retailing system in Vietnam is still much lower than other regional countries (25 percent of total retailing sale volume, compared to 33 percent in the Philippines, 34 percent in Thailand, 60 percent in Malaysia and 90 percent in Singapore). However, we are witnessing the steady and quick growth of Vietnamese retail sector with the annual growth rate of 30 percent in 2018, and the sector is projected to reach 13 billion USD in sales revenue by 2020 (Vietnamese E-commerce Association, 2019). In such a context, it is crucial to understand the underlying factors for individual and household retailers to adopt social media in their business to develop strategies and guidelines for using it effectively. By using an integrated TAM-TOE framework in this study, we found that the adoption of social media by Vietnamese individual and household retailers is determined by environmental context, perceived ease of use and perceived usefulness, respectively.

This paper, thus, contributes to the existing literature on the adoption of IT, e-commerce, and social media in business by immersing the framework in the new context of a developing country in Asia. The findings of this study confirmed the influence of variables in TAM – TOE framework on the decision to adopt social media in business. However, some limitations of the research still exist. Firstly, the concentration of surveyed respondents in Hanoi, Ho Chi Minh City and Da Nang with snowball sampling method may lead to bias in explaining the research results. Future research, thus, should expand the sample size and use another method of sampling. Secondly, this study has not addressed the simultaneous direct and indirect impact of technological context and organizational context on social media adoption. It would be more meaningful if future research examines both the direct and indirect impacts of TOE factors on social media adoption.

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