

Assessment of influencer's effects on customers' online purchasing behavior in Vietnam

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ABSTRACT

Today, the development of the Internet and social networks has changed the lives of human beings. The ability of these technologies to connect people in real-time expands the influence of some people in the community. Therefore, this study is conducted to test whether customers change purchasing behavior in online environments under the impact of those influencers by using Technology Acceptance Model (TAM). The study conducted a survey of 503 Vietnamese on Google Form from November 2020 to mid-January 2021. The collected data were analyzed using AMOS 24 with CB-SEM analysis method. The results showed a positive relationship between influencers and customers' online purchasing behavior. More specifically, customers are more likely to buy online if they trust influencers and their advertisements. This is the most influential factor among the three influencer traits (as source credibility): trustworthiness, expertise, and attractiveness. A remarkable point in this study is that Vietnamese people are more concerned with perceived ease of use when buying online than other factors in the TAM model. This is the basis for businesses to implement influencer marketing strategies and improve the competitiveness of their online business.

1. Introduction

Over the past decades, the procurement process has changed. Customers' purchasing behavior has been influenced by the advent of Information and Communication Technology (ICT), as well as the popularity of social media. The exponential adoption of social media is evident in the fact that there are 2,789 billion social media users globally, with a penetration rate of about 37% (Kemp, 2017). The rapid growth of social media has provided marketers new approaches to attract their customers (Bernhardt, Mays, & Hall, 2012). Fauser, Wiedenhofer, and Lorenz (2011) suggested that social media can be used to influence customers in all stages of the purchase decision process. On the other hand, traditional advertising is losing effectiveness and online influencers have become a powerful marketing weapon (Schivinski & Dabrowski, 2016). The social media platforms also provide the opportunity for customers to engage in two-way feedback with individuals they normally don't have face-to-face contact with, especially celebrities.

Internet or online shopping offers many benefits in terms of both the information search and the buying process (Rose & Samouel, 2009). Nowadays, people prefer to search and collect information passively through their influencers (Pham & Bui, 2020). According to Schickel (2000), people are always excited about celebrities. Celebrities are seen as a special part of the

virtual community, spreading information through various social media channels by sharing stories, photos, experiences, or opinions about many objects, services, and products, etc. (Alhidari, Iyer, & Paswan, 2015; Alsulaiman, Forbes, Dean, & Cohen, 2015). Atkin and Block (1983) argue that there are many reasons why influencers are so dominant. Among them, businesses use celebrities to help customers identify their brands and create a competitive advantage (Ilicic & Webster, 2015). In addition, celebrities play the role of “initiator” and “influencer” in the consumer purchasing process. They create awareness, develop the community’s interest in the brand and link it to the product (Malik & Gupta, 2014). People tend to believe a product that is endorsed by an influencer is a good product. In Vietnam, it is very easy to see the image of a celebrity linked with brands such as Son Tung M-TP and Oppo.

There is a significant relationship between celebrity endorsement and purchasing behavior, with celebrity trust-worthiness having the strongest impact. The research by Malik and Gupta (2014) shows that a product that is endorsed by a credible source can influence purchasing behavior and celebrity trust-worthiness is the most essential trait of a celebrity. In Vietnam, Nguyen and Nguyen (2017) demonstrated that customer attitudes towards the brand are positively influenced by three factors, including celebrity’s trust-worthiness. Therefore, Vietnam is a great market for applying online influencer marketing strategies. When the number of social media users is 65 million, the rate of searching for information about brands is very high at 85% and the online shopping rate is up to 75% (Kemp, 2020). Besides, the number of times a Vietnamese person over 18 years old clicks on ads on Facebook is 17 times per month. However, when there are too many brands/products used by the same influencers to promote on social networks, it can make customers doubt the reliability of the product. In addition, using a celebrity can overshadow products and influence purchasing behavior.

The Technology Acceptance Model (TAM) has been widely used in technology research and successfully applied as a theoretical framework for predicting online purchasing intention and behavior (Gefen, Karahanna, & Straub, 2003a, 2003b; Pavlou, 2003; Shim & Lee, 2011). However, TAM is still constantly developing and improving. This study proposes a research model developed from TAM and extended by combining the Theory of Planned Behavior (TPB) and source credibility theory. This study examines the relationship between the components of influencer’s credibility, including attractiveness, trust-worthiness, and expertise (Erdogan, 1999; McCracken, 1989; Ohanian, 1991; Petty, Cacioppo, & Schumann, 1983) and TAM components. Next, this article also examines the factors of TAM that affect consumers’ online attitudes and purchasing behaviors in the Vietnamese context. The goal is to assess how well celebrity source credibility factors influence internet purchasing behavior, thereby helping select the brand’s right celebrity. Also, it supports in determining how to operate online shopping websites and how to motivate consumers to adopt online purchasing behavior in Vietnam. Since then, the article also tested whether influencers have the effect of changing purchasing behavior from traditional methods to online. The research concepts and hypotheses are presented in the next section.

2. Literature review

2.1. Source Credibility theory (SC)

Source credibility is a term commonly used to refer to the positive characteristics of the influencer that affect the recipient’s acceptance of a message (Ohanian, 1990). The information provided by these people can change the behavior of those affected by them. In this study, the mentioned sources are influencers, more specifically celebrities. Up to now, celebrities have always had a great attraction to the community. Celebrity image is widely used in marketing because marketers believe that celebrities can attract customers’ attention (Chung & Cho, 2017).

SC theory argues that the effectiveness of a message depends on the level of expertise and trust-worthiness of the endorser (Ohanian, 1991). Information from a credible source can influence behavior through a process known as penetration, which occurs when receivers accept a source that influences their attitudes and their living values. Rieh and Belkin (1998) argue that, on the Internet, perceptions of source reliability play an essential role in people's judgments. Zhang and Watts (2008) affirmed that SC is an important factor of message evaluation and information adoption in the online community. This study proposes three aspects of SC in the research model: trust-worthiness, expertise, and attractiveness developed by Ohanian (1990).

Trust-worthiness refers to the honesty, integrity, and trust of an endorser. M. J. Kim, Chung, Lee, and Preis (2016) found that customers experience more usefulness in an online shopping environment when they get information from a trusted source. Expertise is defined as the degree to which a provider is considered to be a source of valid claims. It refers to the knowledge, experience, or skills they possess. It does not really matter whether the endorsers are experts or not, but how the target audience perceives them (Ohanian, 1991). Attractiveness is defined by many researchers as a combination of similarity, familiarity, and likability of credibility sources (Maddux & Rogers, 1980; Steadman, 1969). Numerous studies have shown that celebrity's attractiveness has a positive effect on brand image, attitudes toward the brand and purchasing intention (Joseph, 1982; Mello, Garcia-Marques, Briñol, Cancela, & Petty, 2020; Ozanne, Liu, & Mattila, 2019); and it also becomes more favorable if the attractiveness of the endorser has increased (Kamins, 1990). Besides, attractiveness is not only about appearance but also requires the spiritual skills, personality, lifestyle, and talent of celebrities (Erdogan, 1999).

2.2. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was proposed by Davis (1985) and expanded in 1989. TAM seeks to explain users' adoption of information technology. Based on the Theory of Reasoned Action (TRA), the main purpose of TAM is to provide a basis for investigating the impact of external factors on internal factors such as beliefs, attitudes, and intentions of users (Davis, 1989). According to TAM, there is a causal relationship between user attitudes, intentions, and behavior. The mediating factors used to evaluate these relationships are perceived ease of use and perceived usefulness. TAM is constantly developing and perfecting over time by scientists. The results of the researches have shown a strong relationship between intention to use and perceived usefulness and actual usage behavior (Davis, Bagozzi, & Warshaw, 1989). TAM has been used extensively in studies. More specifically, the researchers used TAM to predict online purchasing intention and behavior for products such as books (Jin, 2014; Lin, 2007), clothing (Ha & Stoel, 2009), tourism (Assaker, 2020), health care (Kamal, Shafiq, & Kakria, 2020) and financial or banking services (Munoz-Leiva, Climent-Climent, & Liébana-Cabanillas, 2017; Suh & Han, 2003). In this article, SC components are used as external factors of TAM to demonstrate influencer's effects on customer purchasing behavior.

Influencer marketing is one of the most effective methods of attracting the community's attention towards the business's goals. Marketers take advantage of the value of trust-worthiness by choosing endorsers that many consider to be honest and trustworthy (Shimp, 1997). According to the research of Friedman, Santeramo, and Traina (1978), marketers choose trusted celebrities and are expected to be brand ambassadors. Oni and Ayo (2010) proposed that source trust-worthiness impacts perceived usefulness and ease of use. Then, Li (2013) demonstrated that source trust-worthiness induces cognitive and emotional responses, such as usefulness and ease of use, in adopting new technology systems. C. W. Chen, Chen, and Chen (2014) reported that source trust-worthiness positively affects perceived usefulness. Marketers need to choose high-trustworthy celebrities to increase the brand's credibility, therefore, increase awareness for the

online sales page. Furthermore, L. Chen and Aklikokou (2020) have demonstrated that trust-worthiness has perceived ease of use effect, even stronger than its effect on perceived usefulness. Therefore, the first hypotheses are stated as follows:

H1: Celebrity trust-worthiness has a positive effect on perceived usefulness

H2: Celebrity trust-worthiness has a positive impact on perceived ease of use

Expertise sources influence the perceived quality of product. A celebrity endorsed social media site that assures customers of its product quality. On the other hand, Speck, Schumann, and Thompson (1988) found that expert celebrities create a higher probability of product information retrieval than amateur ones, but the difference was not statistically significant. Li (2015) pointed out that companies use experts to strongly recommend the ease of use and usefulness of a new system so that employees can change their thinking according to experts' recommendations (Bhattacharjee & Sanford, 2006). Sussman and Siegel (2003) found that sources of expertise positively affect the usefulness of information systems. Companies provide reliable sources with a compelling message that motivates their employees to understand the usefulness and ease of using technology based on trusted expert recommendations. Liaw and Huang (2003) argued that when users prefer to use search engines to find information, they consider search engines to be easy to use. From the above studies, the expertise of the celebrity has influenced the user's perceived usefulness and ease of use of the technology system. A more highly specialized source/celebrity is more persuasive (Aaker & Myers, 1987) and aroused more purchasing intention by that brand (Ohanian, 1991). Information sharing about products and websites is also interesting by customers and has involved the making decision process. The hypotheses given here are:

H3: Celebrity expertise has a positive effect on perceived usefulness

H4: Celebrity expertise has a positive impact on perceived ease of use

The attractiveness of the source is closely related to the influencer's appearance that can enhance persuasion based on similarity, familiarity, likability, or desire for target customers (Kapitan & Silvera, 2016). The message from an attractive source is shown to be more convincing (Chaiken, 1979). Celebrities need to convey a message that is appealing to the user so that customers find the website useful and easy to use. Two next hypotheses are proposed:

H5: Celebrity attractiveness has a positive effect on perceived usefulness

H6: Celebrity attractiveness has a positive impact on perceived ease of use

TAM suggests that the intention to use new technologies will lead to the actual behavior of the customer. Several previous studies have experimentally confirmed the relationship between perceived ease of use, perceived usefulness, and attitudes in many organizational contexts (Schepers & Wetzels, 2007; Venkatesh & Brown, 2001; Venkatesh & Davis, 1996). They suggest that perceived ease of use and usefulness are the two most important factors in explaining the system's adoption. Studies have shown that perceived usefulness promotes users' attitudes and intentions (Ayeh, Au, & Law, 2013; Morosan, 2012). They also assessed perceived usefulness in influencing online purchases (Chiu, Huang, & Yen, 2010). High-quality posts and discussions allow customers not only to receive useful information but also to receive advice on a particular topic (Zheng, Zhao, & Stylianou, 2013). M. J. Kim et al. (2016) demonstrated that when online shoppers receive higher quality information, they can perceive the information as helpful. Potential customers who find a website helpful are more likely to have a more positive and sympathetic response to online shopping than those who don't. So the hypothesis was formed:

H7: Perceived usefulness has a positive effect on attitudes

H8: Perceived usefulness has a positive effect on purchasing behavior

In addition, Li (2013) found that when users of online shopping websites receive a compelling message with a higher level of information quality, they consider these pages as easy to use. Previous research has shown that ease of use influences attitudes (Castaneda, Frias, & Rodriguez, 2009). Similarly, Yu and Tao (2009) and Chiu et al. (2010) confirmed that ease of use directly affects attitude. Also, it is often believed that a system is considered more valuable if it is easy to use. For example, studies by Morosan (2012) and D. Y. Kim, Park, and Morrison (2008) provide strong empirical evidence for the positive relationship between perceived ease of use and attitudes in online systems. Therefore, the research hypothesis is proposed that:

H9: Perceived ease of use has a positive impact on customer attitude

2.3. Theory of Planned Behavior (TPB)

Theory of Planned Behavior (TPB) is designed to explain almost every human behavior and has been shown to be successful in predicting and interpreting human behavior across different application contexts (Davis et al., 1989). According to the TPB, human behavior is guided by behavioral intention as well as perceived behavioral controls. In contrast, behavioral intention is generally determined by attitudes toward behavior, subjective norms, and perceived behavioral control. The TPB has proven that customer attitudes impact their intentions, and in turn, impact the behavior they will take. Bentler and Speckart (1979) state that attitude not only influences intention, but also directly affects behavior without having intentions act as an intermediary influence. The concept of attitude presented is the evaluation of performing a specific behavior in relation to the attitude object, such as buying a product (Blackwell, Paul, & James, 2006).

According to Afendi, Azizan, and Darami (2014), attitude is considered to have a direct relationship with behavioral intention. Pavlou and Fygenson (2006) argue that attitude plays an important role in the formation of an intention to contribute to online shopping. From previous studies, attitude is the degree of an individual's positive perception of a behavior. A customer with a more positive attitude towards a behavior is more likely to do this. Accordingly, in the online shopping context, customers with more positive attitudes are considered to be more likely to shop together as a group. The final hypothesis is stated as follows:

H10: Attitude has a positive impact on purchasing behavior of customers

3. Methodology

3.1. Measurement and data collection

The proposed research model is built from source credibility theory and TAM expanded by combining TPB and the research above. The scales of trust-worthiness, expertise, and attractiveness are inherited from Dwivedi and Johnson (2013). The perceived usefulness scale for evaluating the influence of celebrities on online shopping is designed based on research by Zhu, Chang, and Luo (2016). The perceived ease of use scale is combined from the studies of Kucukusta, Law, Sahli, and Legoharel (2015), Kang and Namkung (2019) and Hwang (2009). The Attitude scale is based on the study of George (2004). Meanwhile, the purchasing behavior scale is inherited from Shah, Zahoor, and Qureshi (2019) research. All these scales have 03 observed variables.

The survey subjects are all adults living in Vietnam who are aware and make purchasing decisions themselves, and have exposure to the Internet and social media. Data was collected via questionnaires designed on Google Form and links were sent through Facebook groups. Because the survey was conducted during the Covid-19 pandemic, so, to ensure the safety and speed of this research, the technique of sample collection was a convenient sampling method. The collection period was from November 2020 to mid-January 2021. The collected data were analyzed using AMOS 24 software and CB-SEM analysis method.

3.2. Descriptive statistics

Table 1

Descriptive statistics of the sample

Classification	Categories	Frequency	Percentage
Age (year old)	18 - 25	464	92.9
	26 - 40	30	6.0
	Over 40	9	1.8
Gender	Male	111	22.1
	Female	392	77.9
Location	North	87	17.3
	Central	61	12.1
	South	355	70.6
Education	High school and below	124	24.7
	College/Professional high school	33	6.6
	Bachelor	326	64.8
	Postgraduate	20	4.0
Income (million VND)	Below 10	448	89.1
	10 and over	55	10.9

Source: Data analysis

This study has collected 503 valid questionnaires and the target respondents were identified through a filter question: Have you ever purchased online? Among the participants, up to 77.9% of respondents are female. The majority of respondents are between 18 and 25 years old, accounting for 92.9%. Respondents mainly live in the South (70.6%), the other 02 areas account for a lesser proportion: Central (12.1%) and North (17.3%). The majority of the survey respondents have Bachelor's education, accounting for 64.8%, the rest are from high school and below, College/Professional high school and Postgraduate with respectively 24.7%, 6.6%, and 4.0%. Because most respondents are newly graduated students, their income will not be high, around 10 million VND (89.1%).

4. Research results

4.1. Confirmatory Factor Analysis

Table 2

Reliability and Convergent validity

Variables	CR	CA	AVE	MSV	Standardized Regression Weight
Trust-worthiness	0.845	0.852	0.645	0.441	0.749 - 0.827
Expertise	0.881	0.884	0.712	0.357	0.797 - 0.885
Attractiveness	0.886	0.889	0.721	0.412	0.757 - 0.901
Perceived Usefulness	0.856	0.876	0.664	0.654	0.728 - 0.792
Perceived Ease Of Use	0.865	0.875	0.682	0.654	0.754 - 0.810
Attitude	0.844	0.805	0.644	0.630	0.681 - 0.821
Purchasing Behavior	0.817	0.815	0.600	0.556	0.651 - 0.855

Source: Data analysis

In this study, we use the two-step modeling approach for SEM suggested by Anderson and Gerbing (1988). First, data was analyzed by Confirmatory Factor Analysis (CFA). Reliability testing was performed with an assessment of two indicators: Composite Reliability (CR) and Cronbach's Alpha (CA). Hair, Black, Babin, and Anderson (2010) suggested that to satisfy the reliability of the scale, the CR indexes should be greater than 0.7. Similarly, Nunnally (1994) confirmed that the CA indexes also needed to be greater than 0.7 for the scale to be considered good. The results in Table 2 show that the CR indexes range from 0.817 to 0.886, while the CA indexes are from 0.805 to 0.889. Thus, both indicators are satisfied and the scales are considered reliable.

Next, this study checked the validity of the data through convergent validity and discriminant validity. Convergent validity is considered through Average Variance Extracted (AVE) and standardized regression weight. Chahal and Mehta (2013) suggested that the standardized regression weights should be at least 0.5, preferably above 0.7. These indexes in Table 2 have a minimum value of 0.651, so all of them satisfy the requirement. On the other hand, Table 2 also showed that the AVE indexes were greater than 0.5 (Hair, Ringle, & Sarstedt, 2011) with the smallest index of 0.644 of the attitude scale. This shows that the scales in this study satisfy the convergent validity of research concepts. The scales are rated as good and suitable for further analysis.

Table 3

Fornell - Larcker criterion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trust-worthiness (1)	0.803						
Expertise (2)	0.533	0.844					
Attractiveness (3)	0.642	0.316	0.849				
Perceived Usefulness (4)	0.664	0.531	0.592	0.815			

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Perceived Ease Of Use (5)	0.634	0.573	0.507	0.809	0.826		
Attitude (6)	0.615	0.510	0.505	0.729	0.794	0.802	
Purchasing Behavior (7)	0.584	0.597	0.451	0.727	0.731	0.746	0.775

Source: Data analysis

The discriminant validity assessment needs to compare Maximum Shared Variance (MSV) with AVE. According to Hamari and Koivisto (2014), the MSV of the scales should be less than their AVE. All the values in Table 2 are satisfactory and demonstrate that the data are discriminant. The discriminant validity is also assessed by the criterion of Fornell and Larcker (1981), comparing the square root of AVE of each concept with its correlation values. If the square root of AVE is greater than the correlation values, then the discriminant validity is satisfied. The results in Table 3 are satisfied. Thus, the data is confirmed to be discriminant, so it is valid for further analysis at the next stage.

Table 4

Model fit summary

Criteria	Values	Cut-off	Source
χ^2/df	2.684	< 3	L. T. Hu and Bentler (1999)
GFI	0.922	> 0.9	
TLI	0.948	> 0.9	
CFI	0.959	> 0.95	
NFI	0.936	> 0.9	
RMR	0.038	< 0.08	Taylor, Sharland, Cronin, and Bullard (1993)
RMSEA	0.058	< 0.08	

Source: Data analysis

Finally, the study conducted model fit testing. The goodness-of-fit of the model was done through values such as χ^2/df (chi-square/degree of freedom), RMR (root mean-square residual), GFI, NFI, TLI, CFI, and RMSEA (root-mean-square error of approximation) (Table 4). According to L. T. Hu and Bentler (1999), the indexes considered for goodness-of-fit assessment have achieved good results in accordance with the set criteria: $\chi^2/df < 3$; GFI > 0.9; CFI > 0.95; TLI > 0.9 and NFI > 0.9. Table 4 shows that the indexes such as $\chi^2/df = 2.684$; GFI = 0.922; CFI = 0.959; TLI = 0.948 and NFI > 0.9 achieved good results, so the model is fit. According to Taylor et al. (1993), 02 indexes (RMR and RMSEA) are less than 0.08, meaning the model is fit. The results of the study showed that RMR = 0.038 and RMSEA = 0.058; this confirms that all data are appropriate.

4.2. Structural Equation Modeling

After implementing CFA, the article evaluated the research model using the CB-SEM method (Covariance Based - Structural Equation Modeling). Figure 1 shows that all of the path coefficients (β) are positive. Table 5 provides that all of p-values are 0; therefore, the β coefficients are statistically significant. Thus, all proposed research hypotheses are accepted.

This research has demonstrated the relationship between influencers and customers' online purchasing behavior.

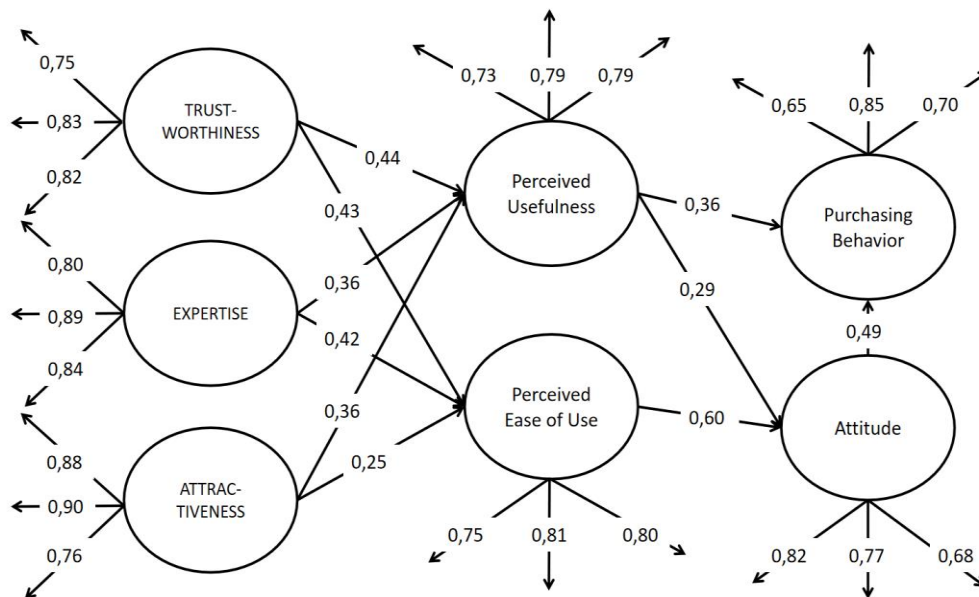


Figure 1. Research model evaluation

Source: Data analysis

Next, this study evaluated the relationship between the concepts in the model. This study shows that the celebrity's trust-worthiness is the most important factor affecting the perceived usefulness and ease of use of a customer for a website. According to Figure 1, the relationship between trust-worthiness and usefulness ($\beta = 0.440$) and ease of use ($\beta = 0.426$) is rated the highest. Therefore, Vietnamese businesses need to choose reputable celebrities in order to increase the effectiveness of their marketing campaigns. Obviously, source trust-worthiness positively affects the usefulness and ease of use of a customer's thinking about a product in C2C communication (Zhu et al., 2016).

Expertise is also highly appreciated when it correlates with usefulness $\beta = 0.365$ and ease of use $\beta = 0.418$ (Table 6). We can see the requirement of choosing a celebrity; besides being highly trust-worthy, it requires a high level of expertise. Therefore, online shopping businesses that are appreciated by highly expert influencers will strongly influence the perceived usefulness and ease of use of the customer for their website. The index of the relationship between attractiveness and usefulness ($\beta = 0.361$) and ease of use ($\beta = 0.255$) is rated the lowest. So while attractiveness contributes to the increase in the number of customers, it is not a strong factor. In general, the study results are similar to the study of Kang and Namkung (2019), when the components of influencer (as source credibility) tended to influence the perceived usefulness of customers more strongly than perceived ease of use.

Table 5

SEM results

Hyp.	Path			β	S.E.	C.R.	P-value	Evaluation
H1	PU	←	TR	0.402	0.045	8.860	0.000	Accepted
H3	PU	←	EX	0.290	0.037	7.832	0.000	Accepted

Hyp.	Path			β	S.E.	C.R.	P-value	Evaluation
H5	PU	←	AT	0.304	0.040	7.647	0.000	Accepted
H2	PEU	←	TR	0.404	0.046	8.864	0.000	Accepted
H4	PEU	←	EX	0.345	0.038	8.998	0.000	Accepted
H6	PEU	←	AT	0.224	0.039	5.743	0.000	Accepted
H9	AU	←	PEU	0.535	0.053	10.027	0.000	Accepted
H7	AU	←	PU	0.268	0.048	5.567	0.000	Accepted
H8	PH	←	PU	0.338	0.056	6.059	0.000	Accepted
H10	PH	←	AU	0.488	0.065	7.523	0.000	Accepted

(PU: Perceived Usefulness; PEU: Perceived Ease of Use; TR: Trust-worthiness; EX: Expertise; AT: Attractiveness; AU: Attitude; PH: Purchasing Behaviour)

Source: Data analysis

The results in Table 6 show a strong effect of ease of use versus usefulness when influencing customer attitudes. Specifically, the relationship between ease of use and attitude is higher ($\beta = 0.597$), while usefulness affects attitude at $\beta = 0.287$. This is a very interesting finding because it is completely contrary to previous studies such as Ayeh et al. (2013) and Li (2015). Obviously, the Vietnamese are more concerned with ease of use than usefulness. Therefore, businesses must pay more attention to designing websites that are easier to use than just focusing on content.

Table 6

Standardized total effects

	AT	EX	TR	PEU	PU	AU
Perceived Ease Of Use	0.255	0.418	0.426			
Perceived Usefulness	0.361	0.365	0.440			
Attitude	0.256	0.354	0.381	0.597	0.287	
Purchasing Behaviour	0.256	0.305	0.346	0.292	0.503	0.488

(PU: Perceived Usefulness; PEU: Perceived Ease of Use; TR: Trust-worthiness; EX: Expertise; AT: Attractiveness; AU: Attitude)

Source: Data analysis

According to Table 7, the indirect impact between trust-worthiness and attitude is the highest level ($\beta = 0.381$). On the contrary, celebrity attractiveness influences shoppers' attitudes at the lowest level ($\beta = 0.256$). This shows that trust-worthiness is an extremely important factor that influencers need to put on the top, especially in the online environment. From there, it helps to create a genuine, trustworthy image that helps reinforce consumer attitudes. In addition, although the level of the influence of the expertise and the attractiveness affecting the attitude is lower, it does not mean that these factors will be ignored.

Similarly, the indirect effect of trust-worthiness on purchasing behavior is also highest ($\beta = 0.346$). From there, we can see that trust plays the most important role in deciding celebrities' influence on customers' purchasing decision-making behavior. The results of indirect effects between attractiveness and expertise also reached at a lower intensity. Especially, attractiveness

has an even weaker effect than perceived ease of use (0.256 versus 0.292). Therefore, when making a decision to choose an influencer as a brand ambassador, businesses need to select whom with high self-trustworthy for increasing the influence on customer attitudes and behaviors.

Table 7

Standardized indirect effects

	AT	EX	TR	PEU	PU
Attitude	0.256	0.354	0.381		
Purchasing Behaviour	0.256	0.305	0.346	0.292	0.140

(PU: Perceived Usefulness; PEU: Perceived Ease of Use; TR: Trust-worthiness; EX: Expertise; AT: Attractiveness)
Source: Data analysis

Finally, this research assessed the influence of these factors on purchasing behavior. Figure 1 shows that attitude is the most important factor in purchasing decisions ($\beta = 0.488$). However, the relationship between usefulness to purchasing behavior is just as important with $\beta = 0.503$. Apparently, customers' attitudes had made usefulness's relationship with purchasing behavior stronger. This indicates that attitudes play a more important role in shaping the vast majority of Vietnamese online purchasing behavior.

5. Conclusions

E-commerce has grown rapidly with the advancement of technology. Along with that, social media and websites were born to serve the needs of human life. Changing habits from traditional to online shopping requires significant outside impacts such as influencers. Celebrities need to possess qualities including trust-worthiness, expertise, and attractiveness for attracting business investment as well as consumer attention towards online purchasing shops. Among the three factors above, the results of this study show that celebrity trust-worthiness plays a very important role in customer perception, contrary to Ohanian (1991). Therefore, priority should be given to celebrities to make a reputation for themselves, but do not forget to improve their expertise and attractiveness. Marketers can use this research as a reference when making decisions about the right brand representative.

Based on these results, online websites need to easily be designed to perform operations such as search, payment, etc. Celebrities need to convey clear messages about features of the site's ease of use and increased user awareness of its usefulness. The interesting finding of this study is that an easy-of-use website will attract more customers and create a friendly look for increasing the rate of visits. However, this is in contrast to studies by Koufaris (2002); Davis (1989); P. J. Hu, Chau, Sheng, and Tam (1999), which suggests that the perceived usefulness is a more important predictor of using the system. Therefore, businesses need to consider suitable ways of operating their website to attract more customers.

6. Limitation and further studies

The proposed model of this study proves the influence of celebrities on online purchasing behavior. This is a factor that changes traditional buying habits to online shopping. However, this study was done in Vietnam at the time that the Covid-19 pandemic was complicated. Therefore, the data collection was difficult and the convenient sampling method is not highly reliable. In addition, some necessary information has not been collected from the respondents. Specifically, information about the type of purchased products, the frequency of buying as well as specific information about online shopping websites through celebrity influence has not been collected due to the limitations of online surveying. However, this limitation is not too critical because the survey has gathered the

necessary information and selected the right target objects. In addition, another limitation is that the research model can only develop a certain number of components when combining SC theory, TAM, and TPB without studying the remaining variables in the original model. Future studies can supplement these components to help expand the research model.

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