THE PURCHASE OF ONLINE PRODUCTS: A REVIEW OF BARRIER EFFECTS ON TRUST INTENTIONS

Shahriar Jeddy[1*], Mohammad Reza Mashayekh[2], Ali Rostami[3]

[1]Payame Noor University, Teheran, Iran, jeddy.shahriar@gmail.com
[2] Payame Noor University, Teheran, Iran
[3] Payame Noor University, Teheran, Iran

Abstract

In Iran, there has been a quantitative and qualitative increase in online businesses in recent years. However, despite the daily growth of virtual business networks, Iranian consumers regrettably do not have the confidence in such businesses that should be expected, but are still willing to buy products in person through traditional channels; financial transaction values, as well as the number of Internet users, were reported to be very low compared to developed countries. Therefore, the objective of the study was to investigate and verify what factors affect trust in buying online products. Considering the objective, the study was an applied descriptive research method with an analytical approach. The Theory of Planned Behaviour (TPB) model was used to analyse the data using Partial Least Squares (PLS) Structural Equation Modelling (SEM). The sample size for the study was 71 individuals who were screened through an online survey of PNU (Payame Noor University) students. The reliability of the questionnaire was examined using Cronbach's alpha. The results showed that there was a statistically positive significance between lack of integrity, lack of benevolence, lack of competence, and intention to trust. Meanwhile, the intention to trust was statistically significant with purchase intention. Consequently, it was suggested that e-tailers should try to improve the dimensions of their trustworthiness for e-customers.

Keywords: lack of integrity, lack of benevolence, lack of competency, intention to trust, intention to purchase

JEL Classification: M30, M3

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1. Introduction

Since the advent of the digital age, the lifestyles of people and businesses have changed dramatically. People are more inclined than ever to use social virtual networks for various purposes such as e-entertainment, e-services, and e-shopping. They can save time and money and receive their services or goods with just one click. Through this virtual network, customers can conveniently compare the type of product, low price, and quality. On the other hand, most commercial companies from public and private sectors have invested heavily in digital marketing to sell more products and services to customers through this channel to gain more profits, maintain their market share, and showcase their brand in online markets. They also have the advantage of not being overwhelmed by a rush of customers at their counter, and in this way, they can also avoid inexplicable negotiations. In fact, using the Internet to shop or invest has become inevitable. Sahney et al. (2013) argued that website expertise has a positive impact on e-customers.

In Iran, the idea of establishing online shopping stores dates back to 2004 and 2006, while online shopping was not fully implemented until 2011 due to inadequate infrastructures. While the growth of online business has accelerated since then, according to local media, financial transaction values were very low; Iranian consumers had shown less confidence in shopping online via their smartphones or PC and still preferred to shop in the traditional way at the retailer's shop. Furthermore, the percentage of internet users was 39%, which is very low compared to developed countries. Such purchasing behaviour created confusion and additional costs for both retailers and buyers, ultimately leads to the reduction of cash flow and profitability in the market.

[*] contact author

But why? The answer to this question might simply lie in the lack of a trust relationship between e-customers and e-tailers (Grabner-Kräuter and Kaluscha, 2003). In other words, e-tailers prefer to sell their products online immediately without the necessary marketing mix and proper interaction with their e-customers. On the other hand, shoppers are afraid of losing their bank account and personal identity when they connect to the Internet, and therefore, website security and trust are of great importance to them, in principle. When shopping online, customers first have to disclose their personal and financial banking information, and then they may be exposed to the risk that the product they buy does not match the information on the webpage (McKnight et al., 2002), or that their banking and personal information is stolen by hackers in cyberspace.

Indeed, trust is one of the most important factors in e-customers' purchase intention (Grabner-Kräuter and Kaluscha, 2003; Grabner-Kräuter and Faullant, 2008; Gefen and Straub, 2004; Pavlou and Dimoka, 2006; McKnight et al., 2002). Lee and Turban (2001) found that lack of trust in online networks leads to lack of purchase intention. Therefore, trust can strongly motivate purchase intention in virtual networks (Jarvenpaa et al., 2000). Thus, the main objective of this paper was to find out what factors promote lack of trust in online purchase intention. In particular, the properties of trust were analyzed and the Theory of Planned Behavior (TPB) advocated by Ajzen (1985, 1991) was used for this purpose.

Moreover, the secondary objective of this article was to investigate why consumers do not purchase online and which attributes of the trust dimension have an impact on trust intention and ultimately purchase intention. Addressing the lack of trust can lead to 1) cost reduction for both e-tailers and e-customers, 2) competitive pricing strategies and professional digital marketing by e-tailers, which in turn benefits e-customers, 3) fast processing and transactions without unnecessary haggling, which can increase profitability for e-tailers, and 4) mutual value created by trustworthiness between e-customers and e-tailers.

As there is an abundance of research in the existing literature on the various domains of online purchasing, few studies have been conducted specifically on the trust dimension for e-commerce purchase intention, and more studies need to be conducted (Kaur and Khanam Quareshi, 2015; Gefen and Straub, 2004; Turel et al., 2008; Kim et al., 2012). McKnight et al. (1998) identified three components, namely integrity, benevolence, and competence, and predictability as the main construct of trust that mediates the moral/ethical attributes of a salesperson (Ring and Van de Ven, 1994; Kaur and Quareshi, 2015). Mayer et al. (1995) found three elements in the literature, including integrity, benevolence, and competence, as the most commonly used and cited attributes of the trust dimension in relation to a fiduciary (Kaur and Quareshi, 2015). Therefore, in this article, only these three attributes were used as the main attributes of trust for the study.

2. Literature review

2.1 Conceptual model of theory and background

The Theory of Planned Behavior (TPB) presented in Figure 1 is an extended and modified Theory of Reasoned Action established by Fishbein and Ajzen (1975, 2011). It was first posited by Ajzen (1985) in relation to people's intentions when performing an action with a behavioral sphere, known primarily as the Theory of Planned Behavior. Since online shopping decision-making processes involve psychological, social, and behavioral aspects of consumers, TPB is often used to study people's perceptions that lead to behavioral actions (Ramus and Grunert, 2004; Lin, 2007). Therefore, this study chose the conceptual model of Theory of Planned Behavior to find relevant trust factors that contribute to the purchase of items through online social networks. The TPB model helped to better measure and explain the concepts related to online shopping.

This theory uses customer attitude, subjective norm, perceived behavioral control, intention, and behavior as the five main constructs to predict the outcome of people's social and behavioral actions (Ajzen, 1991). According to the TPB, a person will perform certain behaviors if he or she has actual control over the behavior (Ajzen, 1991). In the context of online buying behavior, when customers intend to buy, trust is the key element that should be considered. In fact, online trust is a key determinant of online transaction performance (Sahney et al., 2013, McKnight and Chervani, 2001;

Koufaris and Hampton-Sosa, 2004; Chen and Barnes, 2007; Elwalda et al., 2016; Yousafzai, et al., 2005). Therefore, the intention to trust is a prerequisite for online purchase decisions that ultimately lead to actual purchases (Kaur and Quareshi, 2015; Mc Knight et al., 2002; Jarvenpaaa et al., 2000; Oh et al., 2009). Consequently, in this model, the trust dimension and its attributes were included in the attitude construct, as trust is considered an attitude toward the e-provider (Komiak and Benbasat, 2006) to measure online purchasing behavior in the virtual network. By definition, integrity (honesty) refers to "the trustworthiness of information resources" (Inegbedion et al., 2016). From this, it can be inferred that it is truthful information that an e-provider displays on its website. Benevolence means "the beliefs that the trustee cares about the trustor" (Gefen and Straub, 2004), and competence (capability) defines the skills and abilities of the e-vendor (Kaur and Quareshi, 2015). By means of these discussed attributes and the model elaborated above, the next sections of the paper will cover the literature review, methodology, results and analysis, and conclusion.

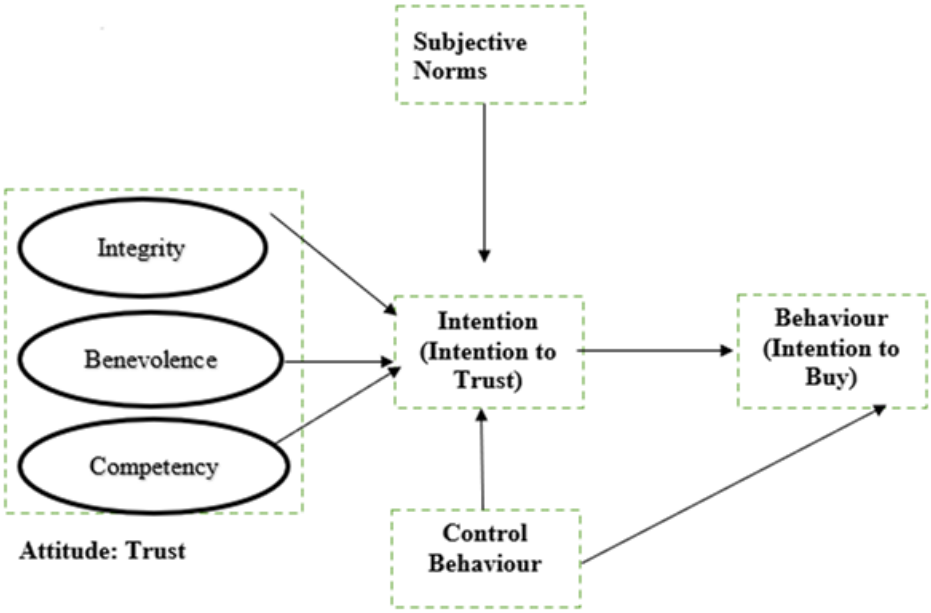

Fig. no. 1. Analysis Conceptual model of the study driven by theTheory of Planned Behaviour
Source: Ajzen (1985)

2.2 Attributes of the trust construct and hypotheses formulation

The e-commerce literature is replete with articles regarding online purchase decisions, using various theories and themes that examine from different angles what triggers a customer's decision to buy or not to buy online. Mayer et al. (1995) and McKnight et al. (1998) found competence, benevolence, and integrity to be the most important components of trust in the area of organizational behavior. Yousafzai et al. (2003) identified competence, integrity, and benevolence as the salient dimensions of trust in the e-banking domain. The attributes of trustworthiness were identified by Chong et al. (2003) as perceived benevolence, perceived integrity, and perceived competence.

Gefen and Straub (2004) also found the four attributes of the trust construct such as integrity, benevolence, competence, and predictability to be valid in connection with IT e-products, as well as e-services. The positive importance of integrity, benevolence, and competence in trust intention and purchase intention was studied by Kaur and Quareshi (2015). The influence of competence, integrity, and benevolence on customer trust intention was found by Gill et al. (2005). Oghazi et al. (2018) claimed that e-providers who offer a return policy for their services promote a sense of integrity among their e-customers by conveying their competence to meet their customers' requirements.

In a study by Morgan and Hunt (1994), they argued that trust occurs when a person has confidence in the reliability and integrity of another person (Deutsch, 1960; Rodriguez and Fernandez, 2017;

Moorman et al. 1993). Constantinides (2004) stated that website operators must signal integrity and credibility if they want to interact with their e-customers. Considering the above arguments and assumptions, the following hypotheses were made:

H1. Lack of integrity (LI) of the e-vendor has a significant influence on the intention to trust.

H2. Lack of benevolence (LB) of the e-vendor has a significant influence on the intention to trust.

H3. Lack of competence (LC) of the e-vendor has a significant influence on the intention to trust.

Intention to trust and purchase intention occur when a person makes himself vulnerable to another party who may be exposed to risk (Kaur and Quareshi, 2015). Jarvenpaaa et al. (2000) found that intention to trust the vendor increases when an e-consumer believes in the vendor's reliability, credibility, and trustworthiness. Thus, trust intention ultimately affects the e-consumer's willingness to purchase (Mcknight et al., 2002). Gefen and Straub (2004) postulated that trust attributes have a direct relationship with purchase intention. Yoon (2002) described that e-customers' trust may be far from their purchase expectations when they encounter a new website only in the initial stage, and that trust plays an important role in purchase intention in the online mode. In other words, online trust triggers purchase intention (Pavlou, 2003), and e-customers' attitudes influence their purchase intentions (Wang, 2002). Considering the above assumptions, the following hypothesis was formulated:

H4. Intention to trust (IT) influences purchase intention (IP).

3. Methodology and data

The main objective of this study was to investigate the factors that hinder trust in online shopping by identifying the relevant attributes of trust that were drawn from the literature to investigate. The study was conducted at Payame Noor University (West Branch) in Tehran/Iran in the winter of 2018 academic year. The study was conducted for a dissertation submitted as a partial fulfilment of the requirements for the MSc degree in Business Management with a major in Marketing. The research used field research, as well as descriptive and quantitative survey methods with an analytical approach.

The graduate degree students of Payame Noor (Tehran West Branch) Business School were selected as the population of the research, which included a total of 89 people. They were contacted and the online survey was distributed through the Internet and Telegram application Student Group Channel (http://www.telegram.org/). The reason for selecting these individuals was their ease and speed of access, and the fact that they were professional university graduates who were familiar with new digital technology and had at least one experience with online shopping in their lifetime.

The online questionnaire (survey) was used to collect data that was consistent with the previous research while studying the existing literature and modifying and confirming the validity of the questions by the supervisor. The Likert scale from degree 1) totally disagree, to degree 5) totally agree, was used to measure the respondents' opinion. Finally, 71 questionnaires were returned properly after missing data and outliers were removed, which was almost the same as Morgan's sample size determination table) N = 90, S≅ 73; Krejcie and Morgan, 1970). Next, the normality test was performed. For this purpose, skewness and kurtosis were measured for each construct using SPSS version 25. Because the skewness and kurtosis values for each construct ranged from +1 to -1 (Groeneveld and Meeden, 1984), the normality of the construct data was established in Table 1.

Table no. 1. Skewness & Kurtosis measurement of the constructs

Description	Mean	Std. Deviation Statistic	Skewness		Kurtosis		Minimum Statistic	Maximum Statistic	N
			Statistic	Std.Error	Statistic	Std.Error			
LI	17.20	4.612	0.227	0.285	0.348	0.563	7	28	71
LB	12.06	3.260	-0.329	0.285	-0.323	0.563	5	18	71
LC	14.58	3.905	-0.131	0.285	0.056	0.563	6	24	71
IT	11.48	3.680	0.208	0.285	-0.379	0.563	5	20	71
IP	12.80	4.496	0.359	0.285	-0.158	0.563	6	24	71

Source: Survey results

4. Results

4.1 Descriptive statistics

According to the demographic data obtained, 51.6% of the respondents were male and 48.4% were female. 83.3% of male respondents were aware of online shopping malls compared to 86.7% of female respondents. In addition, 83.3% of males liked online shopping compared to 80% of females. Regarding satisfaction with their online purchases, 77.1% of men were satisfied, compared to 62.2% of women. Similarly, 24.7% complained that they could not touch and feel the product when shopping online. In general, 71% of the respondents trusted online shopping, and finally, 86% showed their willingness to shop online in the future.

In a descriptive approach, 24.7% complained that they did not have the opportunity to see and touch the product closely before purchasing it when shopping online. 12.9% stated that the image of the product itself was not shown clearly and instead a good quality sample was photographed and included on the e-tailer's website. 14% stated that they were unable to speak directly with the e-vendors directly. 7.5% of the respondents claimed that they had to wait a long time to receive the product after placing the order. 5.4% stated that there were insufficient details and specifications about the product on the website. 4.3% stated that they had to argue with the delivery person about the poor quality of the product, as mentioned earlier. 4.3% feared the lack of security in online banking card transactions, and finally 2.2% pointed out that the visual design of the web pages was not attractive.

4.2. Analytical Statistics

Structural Equation Modelling (SEM) was used to analyse the data using Smart-PLS version 3 to examine the correlation probability of the constructs and then confirm the assumptions based on nonparametric statistics (Hair et al., 2009).

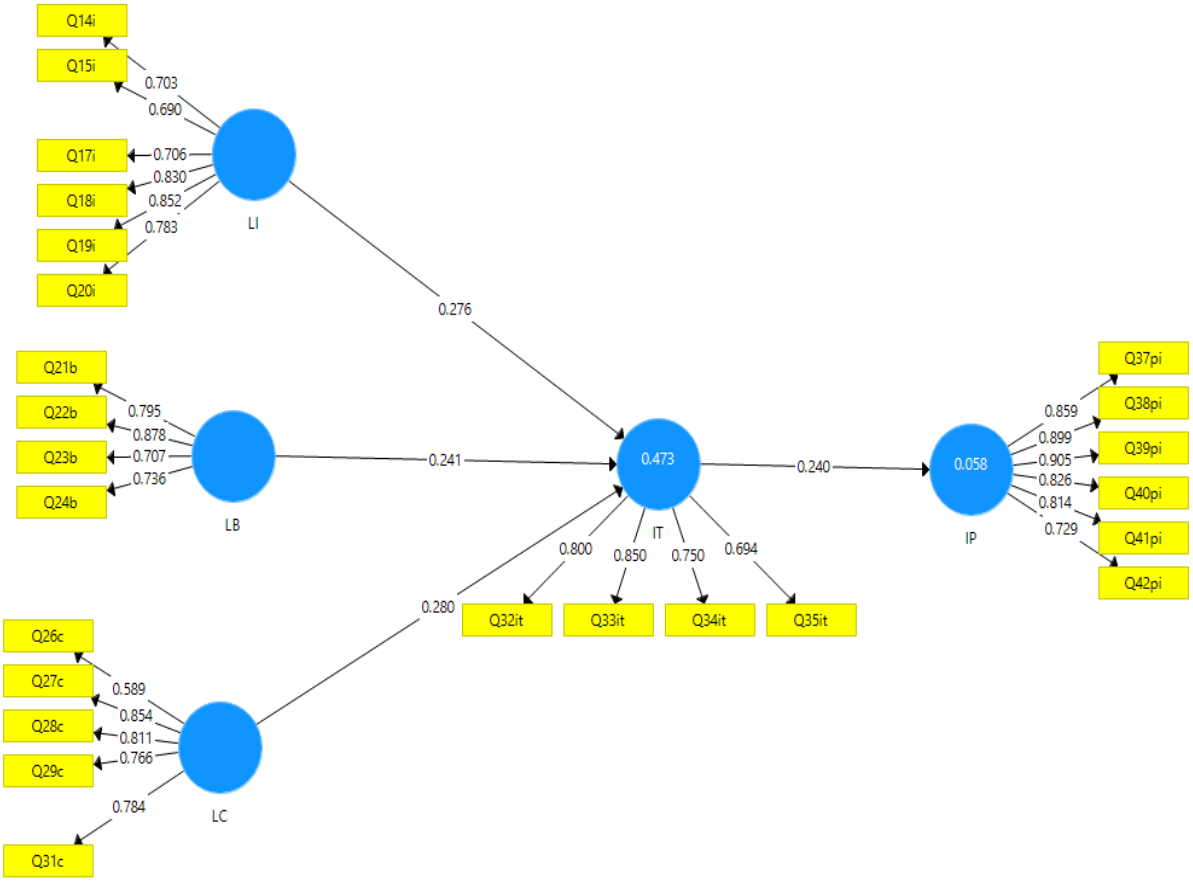

Fig. no. 2. Model of Trust in Online Purchase
Source: survey results

The reason for using Smart-PLS was the small sample size of the population, which was approximately 71 responses with error-free data (Hooper et al., 2008). SEM was used to find a relationship path between latent and observed variables (Sarstedt and Cheah, 2019). Partial least squares (PLS) analysis SEM was used to build the model in this study, and the model is shown in Figure 2.

Since the outer charges of Q16i, Q25b, Q30c, and Q36it were less than 0.7, they were excluded from the model according to a rule of thumb to achieve a better model fit (Wong, 2013). After bootstrapping in Smart-PLS, the calculations of path coefficients resulted in Table 2.

Table no. 2. Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P values
LB -> IT	0.241	0.24	0.121	1.984	0.048
IT -> IP	0.24	0.268	0.118	2.024	0.043
LI -> IT	0.276	0.295	0.127	2.178	0.03
LC -> IT	0.28	0.278	0.107	2.616	0.009

Source: Survey results

Table 2 shows that the P values of all constructs <are 0.05. This means that 95% ensured that the relationship between LB-> IT, IT-> IP, LI-> IT, and LC-> IT was positively significant (Hair et al., 2014). The reliability and validity of the constructs were also assessed and the figures show the reliability and validity of the constructs in Table 3.

Table no. 3. Construct Reliability & Validity

	Cronbach's α	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IP	0.917	0.927	0.935	0.707
IT	0.779	0.79	0.857	0.601
LB	0.786	0.797	0.862	0.611
LC	0.822	0.837	0.875	0.587
LI	0.855	0.866	0.893	0.583

Source: Survey results

The Cronbach's alpha and composite reliability for all constructs are > 0.7, which is a good estimate of the reliability and validity of the constructs (Fornell and Larcker, 1981; Hair et al., 2014), and AVE, which should be > 0.5 to meet the expectation of average variance extracted (Wong, 2013; Henseler et al., 2009). Furthermore, the discriminant validity of the constructs measured by the Fornell-Larcker criterion (Fornell and Larcker, 1981) and the good estimates were observed in Table 4, as no numbers highlighted in red appeared in the output of the Smart-PLS software. When the observed variable of a construct differs in its content and nature from the other constructs, discriminant validity is observed in the model (Ok et al., 2005).

Table no. 4. Discriminant Validity

	IP	IT	LB	LC	LI
IP	0.841				
IT	0.240	0.776			
LB	0.100	0.592	0.782		
LC	0.215	0.570	0.524	0.766	
LI	0.228	0.620	0.740	0.591	0.763

Source: Survey results

For the model fit, the root-mean-square (RMS) theta showed a value of 0.190 in the estimated model, which is a good result. However, the NFI indicated 0.59, which corresponds to < 0.9. (Wong, 2013). Although some other external loadings and items were omitted from the model to obtain a better NFI result, but instead, the significance of the p-values of the constructs increased above 0.05, which made them deteriorate and the hypotheses were no longer significant. Therefore, this summary fit was considered an ideal fit of the model in general (Table 5).

Table no. 5. Model Fit

	IP	IT	LB	LC	LI
IP	0.841				
IT	0.240	0.776			
LB	0.100	0.592	0.782		
LC	0.215	0.570	0.524	0.766	
LI	0.228	0.620	0.740	0.591	0.763

Source: Survey results

However, to ensure that the goodness-of-fit of the model was met, a blind test was conducted in Smart-PLS to observe the cross-validated commonality of the constructs. The results presented in Table 6 showed the goodness of fit of the model as the Q2 values were > 0 (Hair et al., 2014). Predictive validity (Q2) and/or the Stone-Geisser indicator "assesses the accuracy of the fitted model" (Ringle et al., 2015).

Table no. 6. Construct Cross Validated Communality

	SSO	SSE	Q2(=1-SSE/SSO)
IP	426.000	180.230	0.577
IT	284.000	187.065	0.341
LB	284.000	182.970	0.356
LC	355.000	219.782	0.381
LI	426.000	250.027	0.413

Source: Survey results

To sum up the findings, the p-values of the relationships between the latent variables show that the hypotheses were confirmed. Three attributes of the trust construct, namely lack of integrity (LI), lack of benevolence (LB), and lack of competence (LC), had a positive significance and effect on intention to trust, while intention to trust (IT) also had a positive significance/impact on intention to purchase (IP). The results confirmed the assumptions of the previous article that trust has an impact on purchase intention in online shopping.

5. Discussion and conclusion

The purpose of this study was to investigate the factors that hinder trust in online shopping, because the question arose as to why customers do not trust e-vendors' websites when purchasing their goods. Trust plays an important role in online purchasing decisions and is a barrier (McKnight et al., 2002; Lee and Turban, 2003). Therefore, the most common attributes of the trust dimension, namely integrity, benevolence, and competence, have been identified and studied in the literature (Mcknight et al., 2002; Gefen and Straub, 2004; Hwang and Lee, 2012). When trust between e-customer and e-tailer increases, intention to trust also increases and consequently purchase intention increases and vice versa (Chen and Barnes, 2007; McKinney et al., 2002; Suh and Han, 2003; Oh et al., 2009; Chen and Dhillon, 2003).

In an analytical approach, the results of the study were consistent with similar findings in previous studies (Gil et al., 2005; Gefen and Straub, 2004; Mayer et al., 1995; Kaur and Quareshi, 2015; Elwalda et al., 2016). The findings of the study depicted that there was a positive impact and relationship between lack of integrity ↔intention to trust; lack of benevolence ↔intention to trust, and lack of competence ↔ intention to trust. Furthermore, the intention to trust showed a positive influence and relationship with the purchase intention. The conceptual model used to test the constructs used was consistent with the Theory of Planned Behavior (TPB) (Ajzen, 1985). Since this theory refers to a person's behavioral attitudes and actions, and purchase behavior is related to people's psychological attitudes and attitudes, this theory was applied to evaluate people's trusting attitude toward online shopping.

5.1 Managerial and theoretical applied implications

There are few studies in the existing literature that focus exclusively on measuring the trust dimension itself in the realm of e-commerce (Kaur and Quareshi, 2015), and this study helped to improve the validation of previous assumptions and conceptual modeling. Considering the above descriptive and

analytical findings, the following suggestions are recommended to practitioners to improve and promote their e-business activities with their e-customers as a solution. 1) The e-tailers should be ready to guarantee the refund or replacement of the faulty or damaged product as described on their website. 2) It is advisable for e-vendors to listen to their customers' complaints and requests during working hours by providing active WhatsApp, Telegram, and Instagram links to their websites and/or setting up a space for comments/comments on their networks so that they can know their customers' needs and solve their problems immediately.

In fact, they should even improve their customer relationship management (CRM) capabilities. 3) It is recommended that e-vendors take a photo of the real product, rather than a virtual image of a sample illustrated by Photoshops, etc. to avoid any misunderstandings. 4) It is recommended that e-tailers avoid disputes with their e-customers and instead try to deliver the product on time and free of charge if necessary.

As caring for the customer's needs gives the e-retailer a competitive advantage over its rivals and ensures that its e-store branding is consistent and superior in the e-marketplace. 5) It is advisable for e-merchants to apply for the local e-commerce trust logo from the relevant government agencies for the security of online payments and add it to their homepages to reduce the lack of trust of e-consumers in online purchasing.

All in all, e-vendors should enhance their integrity, goodwill, and competence, as well as the quality of digital marketing and trustworthiness, if they intend to sustain in the e-market and make profits as a reputable e-merchant in the future.

5.2 Limitations and future research

First, due to insufficient sample size, since there was no more time to collect additional samples, the study had to rely on the existing samples to analyze using Smart-PLS software, which is a suitable tool for small sample analysis; less than 100 cases (Hooper et al., 2008).

However, it is suggested that similar investigations should be conducted using Lisrel, AMOS, Minitab, MATLAB, SAS, and/or other software to predict outcomes with larger samples, such as more than two hundred individuals. Second, the structural equation modeling (SEM) of the study was conducted without considering gender as a moderator variable. Therefore, it would be advisable to examine the role of gender in future studies (SEM) to compare it with that of men. Finally, in this study, the trust dimension was measured by only three attributes. Familiarity or predictability is another attribute of trust that should be investigated in future research, as few studies have addressed this topic.

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