

# The Antecedents and Consequences of Consumers' online Perceived Trust

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**Abstract**—The article proposes a model that related online shopping experience, attitude, reputation, privacy policy, positive rating, word of mouth to purchase intention, mediated by perceived trust. Respondents to the questionnaires were restricted to consumers who had experiences in online shopping in the most recent months. A total of 450 questionnaires were distributed, of which 232 were successfully replied respondents, yielding a usable response rate of 51.5%. Multiple regression analyses were used for hypothesis testing. The results of the study show that attitude, reputation, positive rating have a significant impact on purchase intention. In addition, the mediating impact of perceived trust is partially supported. Suggestions for implications of the research and future research are also presented. (*Abstract*)

**Keywords**—perceived trust, purchase intention, attitude, reputation, positive rating (*key words*)

## I. Introduction

The increasing prevalence of the Internet is driving a booming online shopping market. The number of web shoppers and the amounts purchased are constantly increasing. Online shopping features primarily virtual shopping without a brick and mortar store. Consumers obtain information such as product specifications and prices through multimedia web pages and electronic catalogs. The information helps consumers make a decision. This type of online service is convenient and saves time, and can meet consumers' needs through two-way interactions. However, many hidden risks are hidden behind the rapid browsing, convenience, and cheap prices. There are many reports of consumers not getting the product or service as expected because consumers are unable to actually touch and see the products and verify their quality

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during online shopping. Nevertheless, many consumers are still willing to purchase commodities online. What exactly are the factors that inspire consumers' willingness to buy? This is a topic to be explored in this study.

Past literature indicate that there are many factors affecting consumers' online shopping intentions. Teo and Liu[1] states that many Internet users do not shop online because they lack confidence in online shopping. Kim, Ferrin and Rao[2], on the other hand, compiled the main causes for perceived trust as follows: privacy protection, safety, system reliability, information quality, reputation, word of mouth, presence of third-party seals, referrals, recommendations, buyers' feedback,

familiarity, Internet experience, e-commerce experience, disposition to trust, shopping methods, etc. To understand the influence of factors within the different aspects of online shopping, this article takes into consideration three different aspects (Personal level - shopping experience and attitude; Seller level - reputation and privacy policy; Third-party level - positive rating, word of mouth) and analyzes the intermediary role of perceived trust between each of the three aspects and the willingness to buy. By exploring these aspects, further factors affecting consumers' willingness to buy and trust can be clarified, and theoretical and practical suggestions for future reference can be formulated.

## II. Literature

### A. Shopping Experience

The shopping experience refers to the degree of experience that consumers accumulate from shopping online. Many consumers look at online shopping as a routine and hence become highly frequent web users. Empirical studies have indicated that the shopping experience has to do with the consumption behavior or preference. For example, Girard, Korgaonkar and Silverblatt[3] said that the shopping preferences of consumers and their shopping experiences will have a positive influence on their willingness to buy. Consumers' familiarity and their interaction with sellers also influence their willingness to buy[4]. In other words, when consumers have more shopping experiences, it is very likely that the experiences will influence their purchase intention. Thus, we formulated the following hypothesis:

H1-1: Shopping experience is positively associated with purchase intention

## B. Attitude

Fishbein and Ajzen[5] indicated that consumers will develop a willingness to buy when influenced by relatively positive attitudes toward a brand. From this we can infer that the more proactive consumers are in their online shopping attitudes or the more receptive they are towards shopping online, the higher their willingness to buy will be. Thus, we formulated the following hypothesis:

H1-2: Attitude is positively associated with purchase intention

## C. Reputation

The establishment of credit is a social process and is determined by the prior interaction between consumers and sellers [6]. Good credit is an important factor for reduced risk [7]. Credit is an intangible yet valuable asset that requires long-term investment of resources, i.e. the obligations and responsibilities already fulfilled by sellers toward other consumers in the past. Thus, we formulated the following hypothesis:

H1-3: Reputation is positively associated with purchase intention

## D. Privacy Policy

As far as online shopping is concerned, financial risk, the risk of the commodity itself, and information risk (security and confidentiality) are of particular interest to consumers [8]. When personal data and transaction details of consumers are leaked, it may result in fraud and other unnecessary problems. Safety and privacy are also important factors influencing consumers' purchase decisions [1]. Thus, we formulated the following hypothesis:

H1-4: Privacy policy is positively associated with purchase intention

## E. Positive Rating

Parasuraman, Zeithaml, and Berry[9] indicated that as soon as customers feel satisfied after the transaction, they will gradually develop loyalty and will refer the specific seller to other people. They will even be willing to pay a higher price. Satisfied or not, consumers will mentally rate sellers after they purchase something online. When a seller has more positive ratings, it means that the seller has received the approval of most consumers. The credit is highly likely to influence other consumers' willingness to buy. Thus, we formulated the following hypothesis:

H1-5: Positive rating is positively associated with purchase intention

## F. Word of Mouth

Arndt[10] said that discussions over a product among people will have an effect on their purchase decisions and influence their perceived risk. Bone[11] also indicated that word of mouth affects purchase decisions. As such, it is inferred in this study that negative word of mouth increases doubt about a specific product among consumers while positive one will have a positive influence on the purchase intention. Thus, we formulated the following hypothesis:

H1-6: Word of mouth is positively associated with purchase intention

## G. Perceived Trust

The study by Kim, Ferrin, and Rao[2] says that consumers' trust and perceived benefits increase their purchase intention while perceived risk reduces it. When consumers do not trust an online seller, they turn to other more trustworthy sellers or brick and mortar stores for consumption. This shows that trust is a prerequisite that determines whether consumers shop online. Factors such as shopping experiences, attitudes, reputation, privacy policy, positive rating, and word of mouth, on the other hand, must first influence consumers' perceived trust before they will influence the willingness to buy. Thus, we formulated the following hypothesis:

H2-1: Perceived trust is a mediator between shopping experience and purchase intention

H2-2: Perceived trust is a mediator between attitude and purchase intention

H2-3: Perceived trust is a mediator between reputation and purchase intention

H2-4: Perceived trust is a mediator between privacy policy and purchase intention

H2-5: Perceived trust is a mediator between positive rating and purchase intention

H2-6: Perceived trust is a mediator between word of mouth and purchase intention

The conceptual framework that guided our research is presented in fig. 1

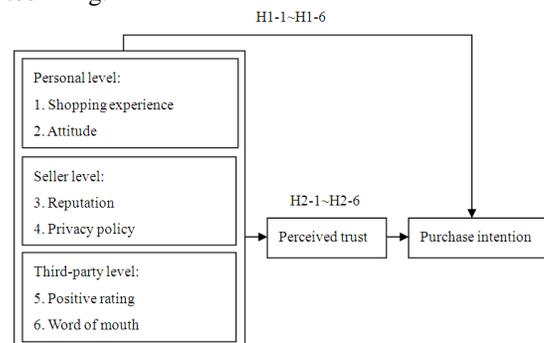


Figure 1. Research Framework

### III. Methodology

#### A. Sample

Respondents to the questionnaires were restricted to consumers who had experiences in online shopping in the most recent month. Convenient sampling was undertaken as a fast and easy way to collect data. A two-wave emailing method, supplemented by an email reminder, was adopted in data collection. A total of 450 survey questionnaires were sent out, of which 232 were completed and returned, representing a 51.5% return rate.

#### B. Questionnaire Development and Measures

Attitude and perceived trust are measured by Teo and Liu's [1] scales. Reputation and privacy policy are derived from Kim, Ferrin and Rao [2]. Word of mouth is measured by Kabadayi and Alan's [12] scales. Purchase intention is derived by Mat et al. [13]. Items for measuring positive rating are developed by the Author.

### IV. Result

#### A. Sample Description

The characteristics of the sample are presented in Table I. Table I showed that most respondents were male (male 52.6%; female 47.4%), in the age of under 25 (52.6%), with university degree (74.0%), spend under 2000 dollars each time (69.8%).

TABLE I. CHARACTERISTICS OF THE SAMPLE (N=234)

Demo graphic items	Valid percentage	Demo graphic items	Valid percentage
Gender		Age	
Male	52.6%	Under 25	52.6%
Female	47.4%	26~35	40.5%
	100.0%	36~45	6.0%
		46~55	0.9%
			100.0%
Education		Purchase amount (\$NT.)	
Senior high school	7.0%	Under 2000	69.8%
University	74.0%	2001~4000	19.0%
Master	17.7%	4001~6000	8.6%
Doctor	1.3%	6001~8000	1.3%
	100.0%	8001~10000	0.9%
		Over 10001	0.4%
			100.0%

#### B. Adequacy of Measures

TABLE II. MEASURES DESCRIPTIVE AND RELIABILITY STATISTICS

Measures	Items	Means	Coefficient $\alpha$
Shopping experience	1	-	-
Attitude	4	3.565	0.820
Reputation	4	3.8725	0.803
Privacy policy	6	3.885	0.824
Positive rating	3	4.23	0.808
Word of mouth	3	4.053	0.809
Perceived trust	5	3.752	0.880
Purchase intention	4	3.5275	0.818

In this study, relevant research constructs are directly derived from existing studies. As their construct validities have been previously proven by scholars, they are dependable. The authors conducted the reliability analysis by way of Cronbach's alpha coefficient to measure the internal consistency reliability of the constructs. Alpha reliabilities of these scales range from 0.803 to 0.880, demonstrating acceptable consistency. Table II displays the descriptive statistics and reliability indices for all the constructs.

#### C. Model Specification

In this study, the authors performed four regression analyses to analyze their hypotheses. They are presented as follows.

Model 1:

- (1) Perceived trust =  $\beta_0 + \beta_1$  (shopping experience) +  $\beta_2$  (attitude) +  $\beta_3$  (reputation) +  $\beta_4$  (privacy policy) +  $\beta_5$  (positive rating) +  $\beta_6$  (word of mouth) +  $\epsilon$
- (2) Purchase intention =  $\beta_0 + \beta_1$  (perceived trust) +  $\epsilon$
- (3) Purchase intention =  $\beta_0 + \beta_1$  (shopping experience) +  $\beta_2$  (attitude) +  $\beta_3$  (reputation) +  $\beta_4$  (privacy policy) +  $\beta_5$  (positive rating) +  $\beta_6$  (word of mouth) +  $\epsilon$
- (4) Purchase intention =  $\beta_0 + \beta_1$  (shopping experience) +  $\beta_2$  (attitude) +  $\beta_3$  (reputation) +  $\beta_4$  (privacy policy) +  $\beta_5$  (positive rating) +  $\beta_6$  (word of mouth) +  $\beta_7$  (perceived trust) +  $\epsilon$

#### D. Correlation Matrix

The correlation matrix is shown in Table III.

TABLE III. CORRELATION MATRIX

Measures	1	2	3	4	5	6	7	8
Shopping experience	1	-	-					
Attitude	-0.054	1						
Reputation	0.062	0.297*	1					
Privacy policy	0.029	0.212*	0.512*	1				
Positive rating	-0.087	0.319*	0.361*	0.339*	1			
Word of mouth	-0.048	0.221*	0.226*	0.204*	0.342*	1		
Perceived trust	-0.043	0.338*	0.476*	0.442*	0.385*	0.266*	1	
Purchase intention	-0.09	0.332*	0.348*	0.254*	0.371*	0.262*	0.453*	1

\*p<0.01

## E. Results of Regression Analyses

TABLE IV. RESULTS OF REGRESSION ANALYSES

	Dependent variable			
	Regression(1) Perceived Trust	Regression(2) Purchase Intention	Regression(3) Purchase Intention	Regression(4) Purchase Intention
1 shopping experience	-0.039 (-0.719)		-0.072 (-1.215)	-0.061 (2.893)
2 attitude	0.156** (2.632)		0.176** (2.758)	0.132* (2.111)
3 reputation	0.247*** (3.719)		0.188** (2.632)	0.119 <sup>+</sup> (1.933)
4 privacy policy	0.213*** (3.315)		0.037 (0.527)	-0.023 (0.003)
5 positive rating	0.142* (2.258)		0.192** (2.825)	0.152* (3.687)
6 word of mouth	0.083 (1.415)		0.102 (1.621)	0.079 (2.701)
perceived trust		0.453*** (7.716)		0.280*** (3.480)
F Statistic	19.554***	59.544***	11.658***	12.959***
R <sup>2</sup>	0.345	0.206	0.239	0.290
Adjusted R <sup>2</sup>	0.327	0.202	0.218	0.268
ΔR <sup>2</sup>	-	-	-	0.033

<sup>+</sup>P<0.1, \*P<0.05, \*\*P<0.01, \*\*\*P<0.001

Table IV shows the results of the test. All of the F-statistics are significant at the  $p < 0.001$  level, thus showing good fit of the models to the data, whereas the constructs account for a sizable proportion of the variance in dependent variables.

From Table IV, the results of testing hypotheses 1-1 to 1-6 involved regression (3) are as follows: H1-1, which hypothesizes that the shopping experience is positively associated with purchase intention, is not supported. H1-2, which claims that attitude is positively associated with purchase intention, is supported ( $\beta = 0.176$ ,  $p < 0.01$ ).

H1-3, which hypothesizes that reputation is positively associated with purchase intention, is supported ( $\beta = 0.188$ ,  $p < 0.01$ ).

H1-4, which claims that privacy policy is positively associated with purchase intention, is not supported.

H1-5, which claims that positive rating is positively associated with purchase intention, is supported ( $\beta = 0.192$ ,  $p < 0.01$ ).

Likewise, H1-6, which hypothesizes that word of mouth is positively associated with purchase intention, is supported.

The results of testing hypotheses 2-1 to 2-6 involved four regression analyses are as follows:

Regression (1) attitude ( $\beta = 0.156$ ,  $p < 0.01$ ), reputation ( $\beta = 0.247$ ,  $p < 0.001$ ), privacy policy ( $\beta = 0.213$ ,  $p < 0.001$ ), positive rating ( $\beta = 0.142$ ,  $p < 0.05$ ), are significantly related to perceived trust. Regression (2) shows that perceived trust is positively related to purchase intention ( $\beta = 0.453$ ,  $p < 0.001$ ). Compare regression (3) and regression (4), the relationship between attitude, reputation, positive rating and purchase intention was weakened by the inclusion of perceived trust. It follows that H2-2 hypothesis—“perceived trust plays a mediating role in the relationship of attitude and purchase intention ( $\beta$  dropped from 0.176 to 0.132)” was supported. The

relationship between attitude and purchase intention was weakened by the inclusion of perceived trust. It follows that H2-3 hypothesis—“perceived trust plays a mediating role in the relationship of reputation and purchase intention ( $\beta$  dropped from 0.188 to 0.119)” was supported. The relationship between reputation and purchase intention was weakened by the inclusion of perceived trust. It follows that H2-5 hypothesis—“perceived trust plays a mediating role in the relationship of positive rating and purchase intention ( $\beta$  dropped from 0.192 to 0.152)” was supported. The relationship between positive rating and purchase intention was weakened by the inclusion of perceived trust. The other hypotheses are not supported.

## v. Conclusions

Results of this article show that the hypothesis that shopping experience has a positive influence on the purchase intention, yet the positive impact of perceived trust is not supported.

A possible reason is that consumers re-evaluate their experience each time they shop. Therefore, businesses should treat each transaction as a new case and attract consumer purchases by providing exceptional service. The hypothesis that attitude, reputation, and positive rating have a positive influence on the purchase intention and perceived trust is supported. This means that higher acceptance among consumers of online shopping, better reputation, and more positive ratings of a business will increase consumers' trust and purchase intention. As such, it is advised that businesses adopt appropriate approaches (e.g. communicating the message that online shopping is convenient and secure) to change the attitude that consumers have toward online shopping, enhance business reputation, and pay attention to the ratings consumers give them (proactively manage shopping issues) in order to effectively boost consumer purchase intention. Privacy policies only exercise a positive influence on perceived trust but do not have a significant influence on purchase intention. This indicates that privacy policies are unable to encourage consumers to shop. If a business wants to increase profit, other incentives (e.g. product features, price, etc.) must be taken into consideration. The hypothesis that word of mouth has a positive influence on purchase intention is not supported. This means that good word of mouth for a business does not help enhance the consumer's willingness to buy. A possible reason may be that word of mouth is not as instantaneous and wide-spread as ratings. We therefore advise that businesses attract customers in other ways.

The hypothesis that perceived trust plays the role of an intermediary among attitude, reputation, positive rating, and purchase intention is supported. This indicates that perceived trust is the premise to influencing purchase intention. Therefore, we advise that businesses utilize other methods that might build trust among consumers (e.g. third party

certification, details on the business, etc.) while at the same time taking care of the influences that reputation, positive rating, and attitudes have upon purchase intention. Hypotheses about shopping experiences, privacy policy, and word of mouth are not supported. Therefore, we advise that subsequent studies can be devoted to more advanced explorations of personality traits and emotional factors. This will help obtain other meaningful conclusions.

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