

# Understanding of Antecedents to Achieve Customer Trust and Customer Intention to Purchase E-Commerce in Social Media, an Empirical Assessment

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## ABSTRACT

This study aims to analyze empirically three factors antecedents of trust they are system quality, information quality, and service quality. Customer trust is used in determining customer intention to purchase of e-commerce in social media (facebook). A number of respondents were 451. The results of this study concluded that three factors antecedents of trust directly had a positive impact to customer trust and indirectly had positive impact on customer intention to purchase in e-commerce transactions on social media.

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## 1. INTRODUCTION

Nowadays, the role of social media grows dominantly among the community and it gives an impact for the development of e-commerce. The influence of social media such as facebook and Instagram has offered a new way of shopping online. Facebook, for example, the users are making the best of it for the sake of buying and selling online, or at least the sites of e-commerce are participating by posting their services or products to disseminate through this social network.

Currently e-commerce and opinion-sharing website get special attention for many people caused by the emergence of Web 2.0 [1]. Web 2.0 refers to a perceived generation as the second generation of web-based services such as social media sites and wiki. One of the effects of Web 2.0 is that the activity of e-commerce has increased very high which would impact on the improvement of data [2]. Social media has a positive impact on the development of buying and selling goods and services. It also gives a positive impact on the development of knowledge sharing [3].

Facebook is a social web media with the most users currently, and its primary activity is for communication and interaction among users online. In the development of social media, its functions are shifted into business activities (such as selling online, advertising, gaming, and others). Several researchers conducted empirical research on the use of social media: Wu and Chen (2013) explained that the social impact and the quality of information through Facebook had a positive impact both directly and indirectly in determining the sustainability of one's intention in the learning process [4].

This study aims to analyze and create a conceptual framework that integrates information quality, system quality, and service quality, as antecedents of customer trust based on the successful model of

information system [5], in addition, this study also aims to explore the relationship between these factors, which may be the key determinant for the users to perform e-commerce activities in social media.

## 2. LITERATURE REVIEW AND HYPOTHESIS

Computing and information technology trust can be defined as credibility and the quality of being believable [6]. In this study, we developed antecedents of trust referred to the factors that influence the customer's confidence in using and adopting e-commerce services. A systematic review of the literature, three factors were identified that could affect customer of trust towards e-commerce that existed in social media, namely: system quality, information quality, and service quality. Each of these factors is described below.

### 2.1. System Quality

The quality of the system was an important factor that can provide a positive influence for the users of information systems to achieve sustainability in the use of such services [5], [7-9], such as web-based learning information systems [10], e-commerce web [8], and social media applications [11].

The researchers have conducted a study on the ease of use, reliability, and the flexibility to measure a quality system [5], [7], [11]. A quality system can reflect an effectiveness of a performance or a characteristic of an information system if it can be believed or not [5], [12], [7], [13]. Therefore, a quality system was in need for the user and can affect one's intention to use information systems [8], [14], [7], [11]. Thus, the following hypothesis is proposed:

H1. The quality of system positively influences on customer trust e-commerce in social media.

### 2.2. Information Quality

The quality of information is defined as the user's perception of a quality content in a service specific service [8]. Past studies have shown that the quality of information can affect factors related to the success of an information system [5], [15]. In another study, the quality of the information system may also affect the intentions of the user in terms of services of information system applications such as blogs [8], [13], or virtual communities [16], and social media. The following hypothesis is proposed:

H2. The quality of information positively influences on customer trust e-commerce in social media.

### 2.3. Service Quality

Understanding quality of service traditionally refers to the quality of the customer experience with the company. In some empirical studies that have been described by Parasuraman, Zeithaml and Berry (1988 and 1991) quality of service has been developed as an instrument to measure customer assessment of the services provided to the website activity and online services [17], [18]. DeLone and McLean (2003 and 2004) explained that service quality had a significant influence on customer satisfaction and as one of the determinants for the customer to decide the purchase again [5], [15]. Thus, we conclude the following hypothesis:

H3. The quality of service positively influences on customer trust e-commerce in social media.

### 2.4. Customer Trust

Confidence in e-commerce refers to the individual's beliefs and expectations about e-commerce. In Figure 1 shows that confidence in e-commerce is influenced by three things: service quality, information quality, and system quality. According to Alzahrani et al (2015), the study of the e-government indicated that confidence affected people's intention to use e-government [19]. Thus we conclude the hypothesis as follows: H4: Customer Trust positively effects on sustainability and customer intention to purchase e-commerce in social media.

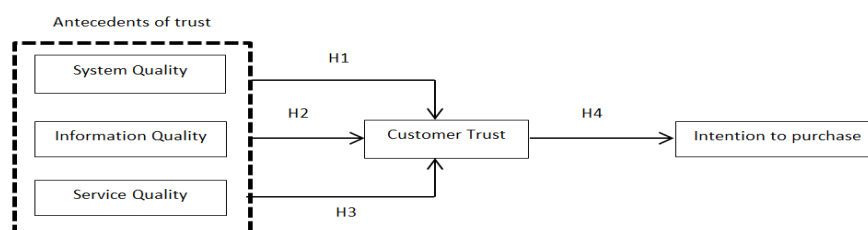


Figure 1. Hypothesis and research framework

### 3. RESEARCH DESIGN

Questionnaire in this study was based on previous studies [5], [20]. The questionnaire was divided into two parts. The first part of the nominal scale was used to collect demographic information, including gender, age, education level, and online shopping experience on Facebook. The second part being measured was the quality of information, quality system, quality of service, customer trust and intention to use e-commerce on Facebook. Each item was measured on a five-point Likert scale from strongly disagree (1) to neutral (3) to strongly agree (5). To ensure the validity of the content, all the items of measurement used in this survey were modified and validated using relevant research. Constructs and source items measurements included: the quality of information [8], [5], system quality and service quality [5], [8], customer trust [6] and the intention of use [20], [8]. Table 1 describes the complete demographics of the respondents in this study.

Table 1. Demographics of respondents

Characteristics of the subjects	Number	%
Gender		
Male	211	46.8
Female	240	53.2
Age		
Under 20 years old	120	26.6
20-30 years old	177	39.2
31 years old or above	154	34.1
Education		
High school	90	20.0
Under graduate students	229	50.8
Graduate students	132	29.3
Experiences		
Less than 6 times	50	11.1
6-10 times	306	67.8
More than 10 times	95	21.1

### 4. RESULTS OF THE DATA ANALYSIS

In this study, the model used to analyze the data and to test the hypothesis was partial least squares (PLS). The software used was SmartPLS 2.0. PLS is a technique of structural equation modeling based on the path analysis and regression analysis.

#### 4.1. Outer Models

In PLS, the relationship between indicators and latent construction is referred to as outer models [6]. To test the reliability on any existing construction (items construct) it needs Cronbach  $\alpha$  and composite reliability with a construction value is 0.7 or higher, which means that construction is acceptable and reliable. Table 2 shows the Factor Loads and reliability test.

To test the construct validity (construct validity), it was done in two ways: a test of convergent validity and discriminant validity test. Fornell and Larcker (1981) stated that a construction can be declared to have convergent validity if the load factor loads each indicator had a value greater than 0.5, and the value of average variance extracted (AVE) was greater than 0.5, and the value of composite reliability was greater than 0, 7 [21]. Table 2 shows that all the constructions were in accordance with the suggestions by Fornell and Larcker (1981) [21].

Table 2. Reliability analysis and convergent validity

Construct	Measurement item	Factor loading/coefficient	Cranach's Alpha	AVE	Composite Reliability
System Quality	SysQ1	0.751	0.812	0.862	0.935
	SysQ2	0.874			
	SysQ3	0.781			
Information Quality	InfQ1	0.901	0.816	0.842	0.940
	InfQ2	0.753			
	InfQ3	0.734			
Service Quality	SerQ1	0.753	0.924	0.751	0.901
	SerQ2	0.811			
	SerQ3	0.854			
Customer Trust	CT1	0.721	0.833	0.805	0.632
	CT2	0.705			
	CT3	0.711			
Customer Intention to purchase	CP1	0.742	0.874	0.767	0.938
	CP2	0.933			
	CP3	0.841			

4.2. Inner Model

In PLS, structures of lanes between the construction is called inner models [6]. To test the significance results of the hypothesis, the reference value used is the t-value. The results of hypothesis can be seen in Table 3 and Figure 2, while table 4 explains that the mediation effects test has a positive and significant impact.

Table 3. Summary of the results of hypotheses testing

Hypothesis	Path	Standardized path coefficient	t-value	p-value	Supported
H1	System Quality	0.557	4.541	0.001	Yes
H2	Information Quality	0.768	8.279	0.001	Yes
H3	Service Quality	0.565	4.366	0.001	Yes
H4	Customer Trust	0.241	3.632	0.01	Yes

In Figure 2, it was explained that the three constructors consisting of system quality, information quality and service quality as the antecedents of trust have a positive impact on customer trust. Meanwhile, customer trust as a constructor has significant value and positive impact on customer intention to purchase.

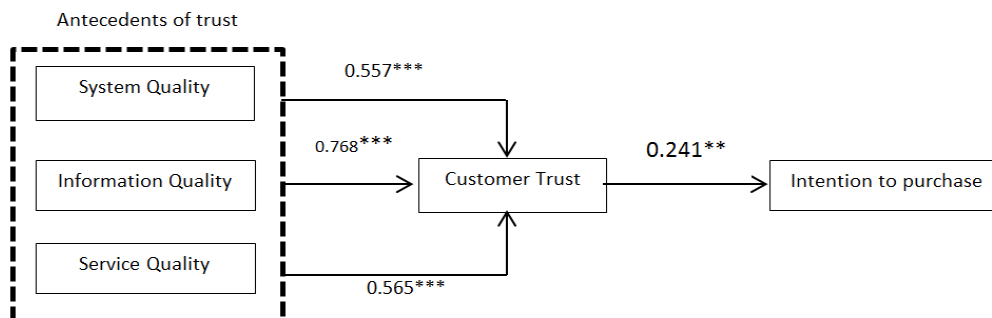


Figure 2. Results of hypothesis

In this study we used Sobel Test to analyze the effects of mediation. Significance was reached when the z-value was greater than 1.96, indicating a mediating effect [22][23]. In Table 4 explains that all the construction undergoing mediation tests had positive influence. In other words, the system quality, information quality and service quality had an indirect influence on customer's intention to purchase. So for e-commerce providers should pay attention to three things to keep loyalty to the customers.

Table 4. Mediation effects testing

Constructs	Construct relationships	T-value of path coefficients	Sobel test's z-value	p-value
SerQ-CT-CP	SerQ-CT	0.565	0.291	0.001
	CT-CP	0.241		
SysQ-CT-CP	SysQ-CT	0.557	0.294	0.001
	CT-CP	0.241		
InfQ-CT-CP	InfQ-CT	0.768	0.329	0.001
	CT-CP	0.241		

## 5. DISCUSSION

From the results of statistic test with 451 respondents, it can be concluded that the quality of system, the quality of information, and the quality of service of the providers of e-commerce through social media (facebook) has a positive impact towards customer trust, while customer trust have a positive impact on customer intention to purchase. In other word, antecedents of trust are influenced by all three of these factors, which in turn will affect the quantity of customer trust or customer intention to purchase. This has been stressed by several previous studies [5], that three of these factors are the basis for determining the success of an information system. In line with other studies, service quality, system quality and information quality give effect to the intention of customer use in the area of e-commerce and cloud computing especially in the field of software as services [24]. Social media gives influence on social integration, especially in the State of China [25], that the use of social media in everyday activities shall observe the third construction as antecedent trust.

Meanwhile, if an e-commerce on social media has reliability on the quality of system, quality of information and quality of service, it will greatly affect the number of visits to e-commerce which will certainly be a hedge against the quantity of purchases on e-commerce. In other word, the higher the quality of information, quality of system and quality of service on e-commerce in social media, the higher the impact on customer trust, so the higher the public confidence on e-commerce will have an impact on the sustainability of the user intention in making purchase transactions.

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