

# Perception toward Website Quality and Service Quality among Online Shoppers during the COVID-19 Pandemic

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## Abstract

The objectives of this research were 1) to study the level of website quality and service quality of online shoppers during the COVID-19 pandemic, and 2) to compare differences in perception of website quality and service quality by gender, age, and income of online shoppers during the COVID-19 pandemic. The sample group used in this study was 281 online shoppers during the COVID-19 pandemic. Simple random sampling was used, and data were collected using questionnaires. The statistics used included the frequency, percentage, standard deviation, t-test, and One Way ANOVA. The results showed that the majority of respondents were 188 (66.9%) females, aged 21 to 29 (38.1%), and 109 (38.8%) students. The level of perceptions of website quality among online shoppers during the COVID-19 pandemic was found at the highest level ( $\bar{x} = 4.35$ ), and the level of perceptions about the service quality of online shoppers during the COVID-19 pandemic was found at a high level ( $\bar{x} = 4.15$ ). The comparison results showed that respondents with different gender perceived no difference in the level of website quality and service quality. Respondents with different income levels perceived no difference in the level of website quality. Respondents of different ages had different perceptions of website quality and service quality. And the respondents with different income levels had a different perception of service quality.

**Keywords:** online shopping, website quality, service quality, Covid-19

## INTRODUCTION

The practice of Business to Consumers (B2C) today is that consumers focus on purchasing products through websites or online channels. The main reasons and purposes for consumers are that they can find product characteristics, check prices, read and review, and select goods or services through the internet, as well as being able to order, pay and deliver faster (Sinha, 2010). The internet or online has become a useful marketing tool to serve as a platform for both domestic and international transactions. Electronic retail sales reached \$695 billion in sales in 2013, more than \$840 billion in 2014, and reached \$1,506 billion in 2018. It can see that e-commerce has become enormous marketing potential. In Thailand, retail e-commerce continues to grow. The value of online merchandise trading in the country is as high as 3.2 trillion Baht and grows higher than 10% per year (Think about wealth, 2020). The key factor contributing to the continued growth of electronic commerce is the epidemic of the Coronavirus. To reduce the spreading of the virus

and reduce the risk of contracting COVID-19, the government imposes several preventive measures, including for employees to "work from home," to allow them to leave their houses whenever necessary and promote online shopping and home delivery (Thairath Online, 2021). The "work from home" measurement result in more people buying products through websites or online channels.

As previously mentioned, online shopping is very important to people in the midst of the COVID-19 pandemic (McAdams, 2020) and is an important marketing channel for businesses, retailers, wholesalers, consumers, and agencies. The COVID-19 crisis affects the world and every aspect of life, including consumer behavior, preferences, and shopping habits (Ali et al., 2021). It affects the shopping behavior and preferences of consumers in every country around the world (Ali et al., 2021). The quality of the website and the quality of its services play an important role in attracting and retaining shoppers online. The quality of the website and the quality of its service must be of a high standard to attract and influence consumers' online shopping decisions (Kalia, Navdeep & Tejinderpal, 2014).

Therefore, the researchers are interested in researching the differences between website quality and service quality among online shoppers during the COVID-19 pandemic. This is a collection of information from the perceptions of online shoppers during the Covid-19 situation about the quality of the website and the quality of service. It is for this reason that the quality of the website and the quality of service are critical factors for the survival and success of an online retailer's business. It is to enable businesses that sell online products to use the research results as a strategy for online business management and improve the quality of the website and quality of service to customers who shop online during the Covid-19 situation.

## **Research Objectives**

- 1) To study the level of website quality and service quality of online shoppers during the COVID-19 situation.
- 2) To compare the differences between website quality and service quality of online shoppers during the COVID-19 situation categorized by gender, age, and income.

## **LITERATURE REVIEW**

### **Website Quality**

Quality refers to the consumer's evaluation of what performance is expected and what is performed (Parasuraman et al., 1985). At the same time, a site or website is the central location of a relevant web page and is accessed by going to the home page of the website using a browser. On the other hand, website quality refers to the internet users' evaluation of websites, such as whether it fulfills their needs and contains all necessary information about products (Kouser et al., 2018; Rakprakok, 2015). According to Mona et al. (2013), customer perceptions of the quality of a website depend on the properties of the website in response to the needs of customers and create a good impression on customers, which demonstrates the overall excellence of the website. The quality of a website can be multidimensionally classified as security, enjoyment, data quality, ease of use, and service quality. Website design is an important factor that determines the features of a

website. And it is an important factor in achieving the success of the quality of services offered to customers through the website.

The key qualities of a successful website design include good looks, facilitation, and display of content that is properly processed and managed (Rozekhi, Hussin & Noor, 2014). The attractiveness and appeal of e-commerce websites will encourage consumers to engage in shopping and using the services through online shopping channels (Ganesh et al., 2010). According to Shaheen et al. (2012), website features have an important influence on online shopping intentions. In addition, information on the websites allows customers to compare and evaluate product options which will increase customer satisfaction and contribute to the intent to shop online (Hausman & Siekpe, 2009). The quality of information presented on the website for online shopping is an important factor. One study also found that data quality had the greatest influence on customer satisfaction across all dimensions of website quality (Kim & Jones, 2009).

### **Service Quality**

Service Quality refers to the total service experience assessment by a consumer both before and after receiving the service (Holdford & Patkar, 2003). It consists of tangible, reliability, responsiveness, assurance, and empathy (Phimonwittaya, 2014). Quality indicates what customers are satisfied with. It's something that customers always talk about from using products and services, which does not take into account only the usefulness, but also includes consumer sentiments, impressions, satisfaction, and customer loyalty (Loprasert, 2006). In addition, quality means a feature that meets an appropriate standard without any error, resulting in good results and satisfying the needs of users (Jangjaidee, 2009). A study by Phimonwittaya (2014) found that the quality of service is caused by accumulated expectations consumers receive from the service. This expectation is satisfied when the response is at an acceptable level. The quality of service is an extension obtained from the service. It means the service process and service agencies also take part in satisfying a person's expectations (Rust & Zahorik, 1993). A measure of service quality is satisfaction, which is a comparison of experience gained with expectations (Cronin & Taylor, 2015). Spechler (1988) stated that the measurement of service quality is an effective measurement of service quality. The model that determines the success of service quality consists of several key approaches: 1) customer satisfaction; 2) quality assurance 3) methodology, system, and technology; 4) service quality awareness; 5) training; 6) co-operation; 7) recognition and well known.

The above literature review led the researchers to be interested in studying the level of perceived website quality and service quality of online shoppers during the COVID-19 situation. This is to find out what the quality of the website is essential for website design, to improve the online shopping of wholesalers and retailers, and make them aware of the level of service quality that online sellers provide to their online shoppers that will affect repeat purchases and shoppers' loyalty. The researchers are also interested in comparing gender, age, and income differences with the quality of websites and the quality of service among online shoppers in the wake of COVID-19. The results of the study could be used to develop and improve the quality of the website to be presented and used as a marketing channel for online marketing.

## **METHODOLOGY**

### **Population and sample**

The population used in this study was people who had experience shopping online. Using Taro Yamane's (1973) formula for calculating the sample in the case of an unknown population with an error of 0.05, the sample size was 384 cases. A simple random sampling was used to collect data. There were 281 respondents, representing a response rate of 73.18%.

### **Research variables**

The variables for this study were divided into two categories: Independent Variable, which is the personal information of respondents who are online shoppers during the COVID-19 situation. Dependent variables are website quality and service quality.

### **Research tools**

The data collection tool for this research was a closed-ended questionnaire divided into three parts. Part 1: the respondents' personal data were divided into three items, namely gender, age, and income. These are the close choice of answer, and respondents choose only one answer. Part 2: questions related to the quality of the website, which consists of 5 questions. The question type is closed-ended with 5 points of Likert scale, where 5 points equal to the highest level, 4 points equal the high level, 3 points equal the moderate level, 2 points equal the low level, and 1 point equal the lowest level. Part 3, questions related to the quality of service, consists of 5 questions. The question type is closed-ended with 5 points of Likert scale, where 5 points equal to the highest level, 4 points equal the high level, 3 points equal the moderate level, 2 points equal the low level, and 1 point equal the lowest level. All questions were reviewed by three experts with IOC values between 0.67 – 1.00. There was a try-out questionnaire by collecting data from people who have shopped online during the Covid-19 situation, totaling 30 sets. The data were analyzed for Cronbach's Alpha confidence value of the questionnaire, and it was 0.89. Moreover, the data from 281 sets of the respondent had Cronbach's Alpha confidence value of 0.73. Cho and Kim said that if Cronbach's Alpha is greater than or equal to 0.70, it is considered acceptable. Therefore, the questionnaires for this study showed sufficient confidence for data analysis.

### **Data analysis**

A statistic software package was used to analyze the data. The statistics used were divided according to the nature of the data and the purpose of the study. The analysis of the respondents' personal data, namely gender, age, and occupation, was analyzed utilizing frequency and percentage statistics. The analysis of the online shopping features, website quality, and service quality was analyzed utilizing mean and standard deviation. The criterion for interpreting the mean was adapted from Srisaat (1992), as follows: mean value of 4.21 – 5.00 is the highest level; the mean value of 3.41 – 4.20 is the high level; the mean value of 2.61 – 3.40 is the medium level; the mean value of 1.81 – 2.60 is the low level; and the mean value of 1.00 – 1.80 is the lowest level. The analysis of differences between website quality and service quality of online shoppers during the COVID-19 situation categorized by gender, age, and income, was analyzed utilizing t-test and One Way ANOVA with Scheffe's method.

## **RESULTS**

### **Demographic data analysis**

The results of the demographic data analysis of all 281 respondents found that most of them were women, representing 66.9%, aged 21 - 29 years old, which account for 38.1%, and had incomes less than or equal to 10,000 baht representing 39.5%, as shown in Table 1.

*Table 1: Demographic data of the respondents*

Demographic data		No. of Respondents	Percentage
Gender	Male	93	33.1
	Female	188	66.9
Age	Below 21 years old	67	23.8
	21 – 29 years old	107	38.1
	30 – 39 years old	59	21.0
	40 – 49 years old	31	11.0
	50 – 59 years old	15	5.3
	Above 59 years old	2	0.7
Income	Less than or equal to 10,000 Baht	111	39.5
	10,001 – 20,000 Baht	64	22.8
	20,001 – 30,000 Baht	52	18.5
	30,001 – 40,000 Baht	28	10.0
	40,001 – 50,000 Baht	20	7.1
	More than 50,000 Baht	6	2.1

### The perceived level of website quality

From the study of the perception of website quality of online shoppers during the COVID-19 situation, it found that the overall average was at the highest level ( $\bar{x} = 4.35$ ). The items related to "Purchase products and services from a website that can give advice if I have a problem" and "Purchase products and services from a website that is designed to be convenient and easy to buy" received the highest mean at the highest level ( $\bar{x} = 4.39$ ). The item related to "Purchase products and services by comparing the quality of websites from other websites that sell similar goods and services" had the lowest mean but still at the highest level ( $\bar{x} = 4.23$ ). Table 2 provides the detail of the perceived level of website quality.

*Table 2: The perceived level of website quality*

Item	$\bar{x}$	SD	Level
1. Purchase products and services from websites that are well designed and look good.	4.38	.74	Highest

2. Purchase products and services from websites that are secured and protect personal information.	4.36	.70	Highest
3. Purchase products and services from websites that can give advice if I have a problem.	4.39	.68	Highest
4. Purchase products and services from a website that is designed to be convenient and easy to buy.	4.39	.61	Highest
5. Purchase products and services by comparing the quality of websites from other websites that sell similar goods and services.	4.23	.70	Highest
<b>Total</b>	<b>4.35</b>	<b>.45</b>	<b>Highest</b>

### The perceived level of service quality

From the study of the level of perceptions about the service quality of online shoppers during the COVID-19 situation, it was found that the overall average was at a high level ( $\bar{x} = 4.15$ ). "Choose a seller of products and services that have security protection and customer privacy" had the highest mean at the highest level ( $\bar{x} = 4.43$ ). "Purchase products and services only from sellers who offer products and services as shown on the website" had the lowest mean at a high level ( $\bar{x} = 3.87$ ). Table 3 provides the detail of the perceived level of service quality.

Table 3: The perceived level of service quality

Item	$\bar{x}$	SD.	Level
1. Choose a seller of goods and services from a reputable website.	4.04	.82	High
2. Choose a seller of products and services that have security protection and customer privacy.	4.43	.65	Highest
3. Purchase products and services from sellers who have after-sales service.	4.24	.74	Highest
4. Purchase products and services only from sellers who offer products and services as shown on the website	3.87	.95	High
5. Purchase products and services from merchants who accept orders quickly after the order has been shipped.	4.18	.73	High
<b>Total</b>	<b>4.15</b>	<b>.50</b>	<b>High</b>

### The comparison of the level of website quality and service quality of online shoppers classified by personal data

#### Gender

The study of the level of website quality and service quality of online shoppers was classified by gender. Testing with t-test statistics showed that buyers of different gender had no different

attitudes towards website quality. The males had the attitude about the website quality at the highest level ( $\bar{x} = 4.30$ ), and the females had the attitude about the website quality at the highest level ( $\bar{x} = 4.37$ ). In addition, the results showed that males had a high level of attitude about service quality ( $\bar{x} = 4.14$ ) and females had a high level of attitude about service quality ( $\bar{x} = 4.16$ ), as shown in Table 4.

*Table 4: The comparison analysis of the level of website quality and service quality of online shoppers classified by gender*

Variable	Male (n = 93)		Female (n = 188)		t	p
	$\bar{x}$	SD.	$\bar{x}$	SD.		
1. website quality	4.30	.44	4.37	.45	-1.17	.24
2. service quality	4.14	.46	4.16	.52	-.29	.77

### **Age**

The results of a study on the level of website quality and service quality of online shoppers classified by age were tested using one-way ANOVA. It found that different ages had statistically significant different perception levels of website quality and service quality at 0.05. Table 5 shows the statistical analysis.

*Table 5: The comparison of the level of website quality and service quality of online shoppers classified by age*

Variable	S. S.	df	M. S.	F	p
<b>1. Website Quality</b>					
Between groups	2.21	5	.44	2.24	.05*
Within group	54.12	275	.20		
Total	56.32	280			
<b>2. Service Quality</b>					
Between groups	3.86	5	.77	3.18	.01*
Within group	66.68	275	.24		
Total	70.54	280			

When tested for differences in pairs of the mean values of the website quality and the service quality of different online shoppers, using the Scheffe' Method, it was found that the mean values of respondents of different ages had no difference in website quality and service quality among online shoppers.

### **Income**

The results of a study on the level of website quality and service quality of online shoppers classified by income level were tested using one-way ANOVA. It found that different income levels of shoppers had no difference in perceptions of website quality. However, it had a statistically significant different perception level of service quality at 0.05. Table 6 shows the statistical analysis.

*Table 6: The comparison of the level of website quality and service quality of online shoppers classified by income*

Variable	S. S.	df	M. S.	F	p
<b>1. Website Quality</b>					
Between groups	1.21	5	.24	1.21	.30
Within group	55.11	275	.20		
Total	56.32	280			
<b>2. Service Quality</b>					
Between groups	4.14	5	.83	3.43	.01*
Within group	66.40	275	.24		
Total	70.54	280			

When tested for differences in pairs of the mean values of the website quality and the service quality of different online shoppers, using the Scheffe' Method, it was found that the mean scores of respondents with income levels below or equal to 10,000 Baht had different levels of service quality compared to respondents with income levels of 10,001 Baht to 20,000 Baht statistically significant of 0.05. It means respondents with income levels lower than or equal to 10,000 Baht perceived a high level of service quality of online shopping ( $\bar{x} = 4.06$ ), and respondents with income levels of 10,001 Baht to 20,000 Baht perceived the highest level of service quality of online shopping ( $\bar{x} = 4.34$ ), as detailed in Table 7.

*Table 7: The Scheffe' Method of comparison*

Income	Mean	Lower than or equal to 10,000 Baht	10,001- 20,000 Baht	20,001- 30,000 Baht	30,001- 40,000 Baht	40,001- 50,000 Baht	More than 50,000 Baht
Lower than or equal to 10,000 Baht	4.06	-	-.28*	-.13	.01	.06	-.27
10,001-20,000 Baht	4.34		-	.15	.29	.34	.01
20,001-30,000 Baht	4.19			-	.14	.18	-.14

30,001-40,000 Baht	4.05	-	.05	-.28
40,001-50,000 Baht	4.01		-	-.32
More than 50,000 Baht	4.33			-

## DISCUSSION

The study found the overall average level of online shoppers' perceptions of website quality during the COVID-19 situation was at the highest level. The items related to purchasing products and services from a website that can give advice if I have a problem and the purchasing products and services from a website that is designed to be convenient and easy to buy received the highest mean scores at the highest level. In addition, the overall average of online shoppers' perception of the service quality during the COVID-19 situation was at a high level. As well as, the item of choosing a seller of products and services that have security protection and customer privacy had the highest mean score at the highest level. These findings are consistent with a study by Lee & Lin (2005) that web design reliability, responsiveness, and trust influence the overall service quality and customer satisfaction. These factors are highly relevant to the purchase intent of the customer. It is also consistent with research by Zhang & Tang (2006) that the emergence of the internet and e-commerce has brought many new ways to market and sell products. It is an essential tool for the success of any business with low cost and good website design. The service quality of online merchandising affects customer perception of the quality of online purchases and sales. There are five important dimensions of service quality for selling products online: website design, reliability, responsiveness, trust, and website transformation.

The comparison analysis of the differences between the personal factors of online shoppers during the COVID-19 situation. It was found that respondents of different gender had no difference in perceived level of website quality and service quality and respondents with different incomes had no difference in perceived quality of websites. Consistent with Sebastianelli, Tamimi & Rajan (2008), a sample of US consumers of different gender had no difference in the level of perceived quality according to the seven quality dimensions (reliability, accessibility, ordering services, convenience, product content, assurance, and credibility). Furthermore, research by Lee & Lin (2005) found that personal data is insignificant related to overall service quality and customer satisfaction with online or web-based purchases. But on the other hand, this finding is inconsistent with Akhlaq & Ahmed (2016) 's study that found gender is a key factor in determining a person's behavior towards online shopping and found a correlation between gender and factors in online shopping in Pakistan. Differences in online shopping patterns between genders due to the influence of online channels and purchasing factors. However, the investigation of this research took place in Muslim countries. Thus, Sütütemiz & Saygili (2018) replicated the study and reconfirmed that men and women had no difference in online shopping via the website.

The comparison analysis of the differences between the personal factors of online shoppers during the COVID-19 situation in terms of age and income showed differences in perceived level of website quality and service quality. The results are consistent with the research of Wan, Nakayama & Sutcliffe (2012) that consumers' age and experience of online shoppers influence their product searching, experience, and trust in online shopping. The results of the study show

that age and experience of online shopping are important factors. The factors make everyone have a good shopping experience through the quality website. As a result, there is an interaction between buyers and sellers, and the buyers trust the quality of products. On the one hand, a study by Punj (2012) found that income levels have an important influence on two objectives most consumers identify as reasons for shopping online, namely, saving time and saving money. The results show that higher-income consumers exhibit a greater tendency toward saving time than lower-income consumers, while the relationship between income level and saving money is less certain. The findings have important implications for customers, particularly during the situation of the epidemic of the COVID-19 virus.

In summary, the current research reveals the online shoppers' perceptions of website quality and service quality. The past findings also address other related issues that are necessary for online shopping that merchants should be cautious about when selling online. For example, both male and female consumers expressed concern about the importance of cash payment on delivery; the perceived risk when shopping online and payment method risks (Awan & Ho, 2017); transactional processes for measuring service quality of online shopping should consist of 5 dimensions: design, enjoyment, process, reliability, and response (Bauer, Falk & Hammerschmidt, 2006); the design quality of the website has a positive effect on the user's interest; care should be taken when it comes to language ambiguity used in website design (Cebi, 2013); online shopping is the fastest growing business but the quality of electronic services often affects online shopping behavior and this requires branding that may affect perceived risks and value to customers is critical and every business needs to be rigorously implemented (Tsao & Tseng, 2011); the self-efficacy in getting information (SEGI) of the buyer affect the perceived decision quality (PDQ) and the satisfaction of the purchase. Therefore, the seller must scrutinize the impact of advertisements on websites that may occur to consumers in obtaining information (Zha, Li & Yan, 2013).

## **Recommendations**

The findings from this research can be used to make decisions in website design quality and service quality for those who sell online or through websites. The suggestions can be used to improve the operation of the online business.

## **Suggestions for Future Research**

This research has several limitations. First, this study was done with a broad sample by collecting data from people who shop online during the Covid-19 situation, without specifying the specific characteristics of the respondents. Therefore, the answers are diverse. Future research should clearly identify the sample group so that it is easier to interpret the research results. Second, the statistics used in the research are basic statistics used to test differences between three individual factors. There may be other factors that may result in differences in both the quality of the website and the quality of service. Therefore, future research should include other personal factors, such as the level of education. Third, the statistic used is only a T-test and F-test. Future research should use advanced statistics to analyze the data such as Regression, MANOVA, or SEM. In this study, there are only the quality of the website and the quality of the service as variables. Future research should include other variables or include more dependent variables to analyze the relationship, influence, or effect between independent and dependent variables to make research more valuable and reliable.

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