



Causal Relationship between e-Service Quality, Online Trust and Purchase Intentions on Lazada Group, An Asia's Leading E-commerce Platform

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Abstract

Purpose: The Covid-19 pandemic has accelerated and triggered changes in online shopping especially in an emerging market. This paper develops a modification of SERVQUAL model to examine the relationship between individual dimensions of e-service quality, online trust and purchase intentions in singular online shopping platform. **Research design, data and methodology:** Data from an online survey of 385 Lazada's shoppers were used to test the research model. The structural equation modeling technique was performed to test the research model. **Results:** The analytical results revealed that five dimensions of e-service quality were positively correlated with one another whereas some dimensions were negatively correlated with purchase intentions. The results of this study provide new insight into the literature as well as practical implications for marketers especially in Thai online market. **Conclusion:** This study develops the instrument dimensions of e-service quality through modifying the SERVQUAL model to examine the e-commerce context and to testify how these individual dimensions are interlinked with one another. It also suggests that responsiveness has two-sided affects that in responses which are too prompt and insistent could make the customer feel uncomfortable and perhaps ending up with no interaction and transaction.

Keywords : E-commerce Platform, Online Service Quality, Online Trust, Purchase Intentions, Thailand, Lazada

JEL Classification Code: A11, B22, C33

1. Introduction

Online shopping has become an indispensable part of the global retail framework and has grown tremendously over the last few years. With the outbreak in 2020 and subsequent lockdowns, the growth of e-commerce in Thailand grew tremendously. The pandemic has consequently accelerated a substantial transformation as internet access and adoption are rapidly increasing worldwide as well as the number of digital buyers and e-commerce players. Most of the success stories relied on platforms' characteristics, design, layout, price, type of product, and distribution strategy in order to

influence the customer experience. However, no amount of presence or low price could make up for the service quality issues, therefore, electronic service quality should be examined as a key contributing factor to purchase intentions (Zeithaml, Parasuraman, & Malhotra, 2002). Santos (2003) defined e-service quality as overall customer assessment and judgment of online service in the virtual retail platforms.

Service quality generally refers to a customer's comparison of service expectations and company's performance, furthermore, it is an elusive and abstract construct that is difficult to explain and measure (Cronin & Taylor, 1992). The prominent SERVQUAL model was

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developed by PZB (Parasuraman, Zeithaml, & Berry, 1988) in 1988 for assessing customer perceptions of service quality in service and retailing organizations. The SERVQUAL's five dimensions are tangibles, reliability, responsiveness, assurance and empathy. It has been widely used and tested in both academic and managerial practices as a means of measuring customer perception of service quality. Furthermore, during the rise of the internet in the past two decades, SERVQUAL model and its modified models, has been widely studied in the context of e-commerce settings (Zeithaml et al., 2002; Janda, Trocchia, & Gwinner, 2002; Lee & Lin, 2005; Ding, Hu, & Sheng, 2011; Abu-ELSamen, 2015; Al-Khayyal, 2021; Kalia & Paul, 2021; Jain, Gajjar, & Shah, 2021). The SERVQUAL model is still the most debated, popular and controversial measurement scales in the service quality marketing literatures (AlOmari, 2020; Park, Yi, & Lee, 2021). As Van Riel, Liljander, and Jurriens (2001) proposed that the scales would have to be reformulated before assessing overall customer satisfaction and Park et al. (2021) implied that there is no need to stick to the five dimensions of service quality. Therefore, this study aims to identify online shopping service quality using a modification of the SERVQUAL model and to examine the relationship between these e-service quality dimensions toward trust and purchase intentions.

In order to increase demand for online retailers' offerings, evaluating online service quality, identifying its underlying dimensions, understanding customer trust and purchase intentions are very beneficial for both online platforms and researchers, especially, during the time when consumers' shopping behavior shift towards online purchasing. The Covid-19 outbreak has created several additional challenges and opportunities worldwide as people progressively purchased goods or services online. The E-commerce market in Asia is expected to continue its lead over other world regions as several major online market platforms, Amazon, JD.com, Shopee and Lazada had a significant number of sales, a high inflow of new consumers and an increased number of visits. Thailand's internet penetration rate was 82% and users spend 8.4 hour per day on the internet with 74% of this group purchasing products online via mobile phones. Annual e-commerce growth is 42.8% and the average purchase value is US \$216 (Grant, Banomyong, & Gibson, 2021). Consequently, Thai consumers became more accustomed to the use of internet banking and financial services apps than prior the pandemic. As one of the important emerging markets in the region, such impressive statistic warrants examinations of the linkage between online service quality, trust and purchase intention.

Lazada Group is a Southeast Asian e-commerce company founded in 2012 and now part of e-commerce

giant Alibaba Group since 2016 as a groundbreaking territory for its SEA expansion plans. The marriage between Lazada and Alibaba may affect Lazada's long-serving customers even though the internal organization and structures remains the same. Since the outbreak of Covid-19, a growing number of online retailers such as Alibaba Group Holding Ltd.'s Lazada and Sea Ltd.'s Shopee, have piggybacked on the e-commerce sales days and About 86% of the roughly 4,000 people surveyed in Southeast Asia said they bought products online, according to the study by Facebook Inc. and Bain & Co (Lee, 2021). Nguyen, Tran, Nguyen, and Nguyen (2021) referred to Lazada as one of major e-commerce store in Vietnam and suggested that companies must choose a reputable site to build consumer confidence in product quality. Service quality may not have the same effects as online shoppers extensively experience online shopping during the pandemic. Lazada Thailand was selected for this study due to its high-ranking online shopping website not just only in Thailand but in Southeast Asia as well, therefore, this study could represent the overall service quality of Lazada as a whole. There are numerous studies on service quality in Western online environments and revealed that it is an important determinant of the e-commerce success. In Thailand online context, there are some studies indirectly involved in service quality; trust measurement model (Porntrakoon & Moemeng, 2017) and factors influencing consumer's loyalty (Huang & Lu, 2020). However, few studies have examined the relation among individual dimensions (as distinct constructs) of online service quality, online trust, and purchase intentions for an e-commerce platform.

Firstly, this study intends to develop the instrument dimensions of e-service quality through modifying the SERVQUAL model to examine the e-commerce context in Thailand. Secondly, to develop a research model for testifying how these individual dimensions are interlinked with one another and their relationships with trust and purchase intentions while generating useful implications for online practitioners through the lens of Lazada contexts. Then, research design, methodology, and the approach are described. The test results provide a valuable discussion, implication, and potential future directions for online marketers and researchers.

2. Literature Review

2.1. Service Quality Dimensions

In earlier years of service marketing literature, there were various schools of service marketing thought and how service quality should be measured. Two of the most accepted notions were the Nordic School and North

American Perspective (Palmer, Lindgreen, & Vanhamme, 2005). Gummesson and Grönroos (2012) realized that service firms do not have products in the conventional consumer goods fashion; the equivalent of the product is an interactive process and its outcome. This led to a model of perceived service quality (Grönroos, 1984) with two fundamental dimensions, namely functional quality relating to the process aspect of service or how the service is delivered, and the technical quality relating to the outcome or what customers receive as a result of their interactions with the firm.

For the North American Perspective, Parasuraman, Zeithaml, and Berry (1988) conceptualize service quality as the relative perceptual distance between customer expectations and evaluations of service experiences and service quality using the most prominent service model namely, the SERVQUAL. The model includes the five dimensions (RATER) of reliability (ability to perform the promised service dependably and accurately), assurance (knowledge and courtesy skills to induce customer trust and confidence), tangibles (appearance of physical facilities, personnel and communication materials), empathy (caring and individualized attention to customer), and responsiveness (willingness and promptness to help).

The SERVQUAL scale and questionnaire has been described as the most popular standardized questionnaire (Caruana, Ewing, & Ramaseshanc, 2000), a popular model (Chakraborty & Majumdar, 2011), and the most popular standardized survey instrument designed to measure service quality (Kang & Bradley, 2002), and, to date, is one of the most influential service quality measurement instruments (Maghsoodi, Saghaei, & Hafezalkotob, 2019). These dimensions were then popularized and employed to measure e-commerce ecosystem in various contexts, including internet retail (Janda et al., 2002; Ding et al., 2011; Sharma & Lijuan, 2015), online securities brokerage services (Yang

& Fang, 2004), online supermarket (Marimon, Vidgen, Barnes, & Cristóbal, 2010), online banking (ELSamen, 2015), and FinTech services (Baber, 2019). Nevertheless, SERVQUAL model is still used in many applications and developments of the service quality fields (Maghsoodi, Saghaei, & Hafezalkotob, 2019).

2.2. E-service Quality

Several studies have tested and modified the dimensions accordingly and advised that research is needed for a modification of SERVQUAL when customers interact with technology rather than with a human (Parasuraman & Grewal, 2000). During the earlier years of e-commerce, most studies on e-service quality measurement have focused on rewording the SERVQUAL scale items (Lee & Lin, 2005). The original scale items SERVQUAL has been renamed and reworded with modified dimensions to fit into the virtual marketplaces; E-SQ (Zeithaml, Parasuraman, & Malhotra, 2000) WEBQUAL (Barnes & Vidgen, 2000; Loiacono, Watson, & Goodhue, 2002), e-SERVQUAL (Zeithaml et al., 2002), SITEQUAL (Yoo & Donthu, 2001), E-TailQ (Wolfenbarger & Gilly, 2003), ES-QUAL (Parasuraman Zeithaml, & Malhotra, 2005), and E-SELFQUAL (Ding et al., 2011). These key scales derive from intense and rigorous development efforts for years and worth to revisit comprehensively. Therefore, as mentioned in Samaradiwakara, Senamanthila, Dissanayake, Gunathilake, and Hayat (2020) that quality within the service sector is a subjective evaluation, we then categorized the extent studies of our research on online service quality and reflect various aspects which facilitate the examination of relative service quality dimensions in predicting their linkage between trust and purchase intentions. Table I summarizes key literature relevant to online services quality scales modified and derived from SERVQUAL model.

Table 1: E-service Quality Models

Authors	Models	Number of Dimensions	Key Dimensions	Main Focus
Zeithaml, Parasuraman, & Malhotra, 2000	E-SQ	11	Reliability, responsiveness, access, flexibility, ease of navigation, efficiency, assurance/ trust, security and privacy, price knowledge, sit aesthetics, customization/ personalization	Online shopping site
Loiacono et al., 2002	WebQual (1)	12	Informational fit-to-task, tailored information, trust, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, emotional appeal, consistent image, online completeness, and relative advantage	e-Commerce
Barnes & Vidgen, 2000	WebQual (2)	3	Usability, information quality and service interaction quality	Online book store
Zeithaml et al., 2002	e-SERVQUAL	7	Efficiency, reliability, fulfillment, privacy, responsiveness, compensation, and contact.	Online retailing
Yoo & Donthu, 2001	SiteQual	4	Ease of use, aesthetic design, processing speed, and responsiveness	Online shopping site
Wolfenbarger & Gilly, 2003	e-TailQ	4	Fulfillment/reliability, Web site design, customer service and security/privacy	Online shopping site

Authors	Models	Number of Dimensions	Key Dimensions	Main Focus
Parasuraman et al., 2005	ES-QUAL	4	Efficiency, fulfillment, system availability and privacy	Online retailing
Parasuraman et al., 2005	E-RecS-QUAL	3	Responsiveness, compensation and contact	Online retailing
Bauer, Falk, & Hammerschmidt, 2006	eTransQual	5	Responsiveness, reliability, process, functionality/design, and enjoyment	Online shopping site
Ding et al., 2011	e-SELFQUAL	4	Perceived control, service convenience, customer service, and service fulfillment	Online self-service

With regards to e-service quality dimensions of shown in Table 1, a decade of developing electronic service quality scale has gradually declined, various scales and instruments have been singularly proposed to measure online service quality in different online contexts and most studies have developed and adapted the scales based on the modification of the SERVQUAL (Janda et al., 2002; Ding et al., 2011; Sharma & Lijuan, 2015; Rita, Oliveira, & Farisa, 2019). Also, recent studies have adopted the e-service quality dimensions from the existing models in Table 1 in online (Al-Khayyal, 2021; Kalia & Paul, 2021; Jain et al., 2021). Thus, based on the SERVQUAL model with consideration of characteristics of the online context, a common approach should be adapted, extended or reformulated to be able to assess online service quality (Delone & McLean, 2003; Lee & Lin, 2005). Therefore, this study derived the instrument dimensions of online service quality by partly reformulating SERVQUAL to access a better understanding of the complex relationship among e-service quality dimensions, online trust, and purchase intention.

3. Methodology

3.1. Research Model and Hypotheses

In a regular retail environment, high customer interaction and the ability to observe the products before making a payment could easily end up with the moment of truth, on the other hand, the online setting is more problematic to interact and impress the customers. Likewise, to access e-service quality, the model and scales used in this study depends on the existing literature and on the context of online service provided in Thailand. Janda et al. (2002) identified that their five-internet retail service quality dimensions (performance, access, security, sensation, and information) were distinct constructs. Therefore, this study applied the revised SERVQUAL scale items and proposed that e-service quality dimensions as distinct constructs include responsiveness, website quality, personalization, assurance, and fulfillment are illustrated with individual constructs of e-trust and purchase intentions in Figure I. This model would allow us to observe the efficacy of these dimensions for predicting consumer responses important to Lazada and other online retailers. The research model of relationship among the e-service quality dimensions, trust, and purchase intentions is illustrated in Figure 1. Then, research hypotheses are proposed and discussed.

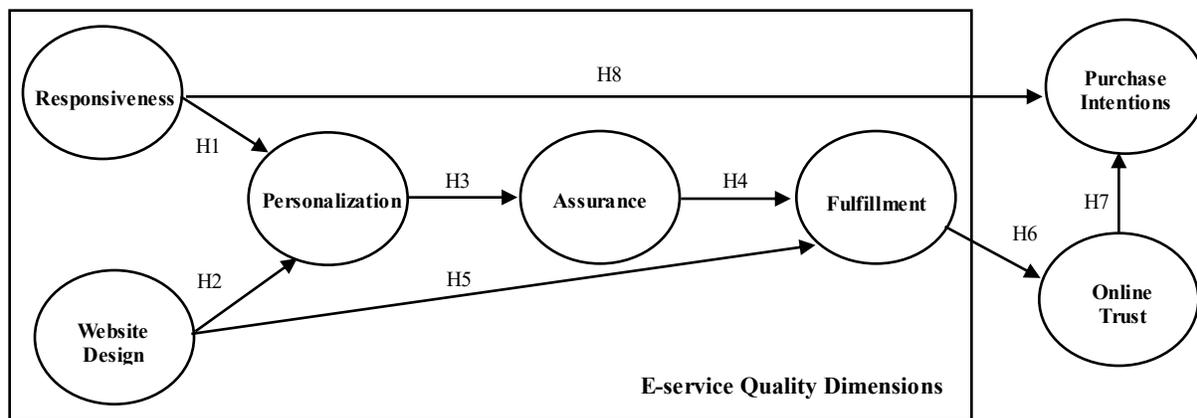


Figure 1: E-service Quality, Online Trust, and Purchase Intentions: A Research Model

3.1.1. Responsiveness and Personalization

In this study, responsiveness refers to prompt responses to customers' enquiries through given contact channels within a promised time frame and system abilities including information retrieval and search speed (Zeithaml et al., 2002; Parasuraman et al., 2005). Personalization refers to how much and how easily the site can be tailored to individual customers' preferences, histories, and ways of shopping (Zeithaml et al., 2000). Interestingly, Sheng (2019) reported that response volume and speed are important for effecting firm-customer interactions. Also, when a business delivering service in interactive encounters with customers, personalization emerges as the most important determinant of perceived service quality, and customer satisfaction (Mittal & Lassar, 1996). In the virtual e-service process, providing response to customers shows empathy or how personalized they are treated. Therefore, the hypothesis is proposed.

H1: Responsiveness is positively related to personalization.

3.1.2. Website Design and Personalization

Originally, dimensions such as tangibles and empathy as defined in SERVQUAL, are less applicable in the online environment (Balasubramanian, Konana, & Menon, 2003), the tangible elements should be focused on the website design since it constitutes the main access to platforms. Thus, website design and personalization have taken the place of tangibles and empathy accordingly. Website design related to the appearance or user interface design of the site (Wolfenbarger & Gilly, 2003) and website quality is seen as a necessary measure for online success (Kuo & Chen, 2011). Web design is like a showcase that attracts the consumer at first sight and invites them to come inside the store to check out the merchandise. The key for the business is to humanize the computer-being in order to make some connection with the human-being by enabling them to feel comfortable visiting a web site (Berthon, Pitt, Cyr, & Campbell, 2008) and to ensure them that the business is truly understand what they really want when searching. Therefore, the hypothesis is proposed.

H2: Website design is positively related to personalization.

3.1.3. Personalization and Assurance

In the virtual environment of e-service, a company's interactivity with customers offers many opportunities to obtain their information, purchasing habits, and preferences, which makes it possible to offer customer personalized service. Assurance involves the confidence the customer feels in dealing with the platform and its reputation, products or services and truthful information (Zeithaml et al.,

2000). In e-service, the term assurance means security and credibility that a company provides to its customer (Cristobal, Flavian, & Guinaliú, 2007). Personalization and its consistency can retain the customer in e-service and customers will be reluctant to try other companies as their assurance is formed. Personalization may heighten privacy/security concerns because consumers worry about how their data are collected and used, and it can also benefit them in meaningful ways (Aguirre, Roggeveen, Grewal, & Wetzels, 2016). Hence, the hypothesis is proposed.

H3: Personalization is positively related to assurance.

3.1.4. Assurance and Fulfillment

Without face-to-face encounters in the online environment, assurance is an important supporting factor for customer's fulfillment. Service fulfillment generally refers to accurate products and detailed service descriptions that enable customers to get their promised product in a promised timeframe (Wolfenbarger & Gilly, 2003). Correspondingly, Fulfillment logistics is the part of the supply chain that involves transporting customer orders and shipments. Lee and Kim (2021) stated that the most critical factors in online shopping are goods pickup, the exchange of goods, and the return of goods. Therefore, the linkage between assurance and fulfillment is incorporated with security and privacy elements, confirm the purchase process, delivery process and communicating to customers. The dominant dimension in original SERVQUAL, reliability, has been cited as an important factor and was used as one dimension with fulfillment (Wolfenbarger & Gilly, 2003). Reliability in an offline context refers to ability to perform the promised service effectively (Parasuraman et al., 1988), hence, this translates online into on-time delivery and distribution, accurate product, and other fulfillment issues. Titiyal, Bhattacharya, and Thakkar (2020) revealed that assurance (privacy and security) and promised delivery date are the important performance aspects of e-fulfillment. Thus, the following hypothesis is formulated.

H4: Assurance is positively related to fulfillment.

3.1.5. Assurance and Fulfillment

Website design and fulfillment. In order to ensuring that the site looks appropriate and performs a smooth promised transaction, well-designed customer navigation tools are vital (Harridge-March, 2006). Navigation have been identified as key ingredients when users judged website quality, alerting web designers to focus more closely on this attribute (Kincl & Štrach, 2012). Similarly, well-developed navigation and information design with a great visual appeal of the website should provide an easy path for the customers

to explore the involved product information, such as, product quality, pricing, availability, timeliness, condition, distribution procedure, and ease of return. Relevant and quality information on the website is also important as it plays a role of salesperson (Zeithaml, 2002) which directly assist the customers in getting the product. Thus, the following hypothesis generated.

H5: Website design is positively related to fulfilment.

3.1.6. Fulfillment and Trust

While a range of studies has found linkages of trust and many other service quality dimensions, ease-of use (Monswu'e, Dellaert, & Ruyter, 2004), information quality (Berthon et al., 2008), past experience (Connolly & Bannister, 2008), offline presence (Horppu, Kuivalainen, Tarkiainen, & Ellonen, 2008), and online payment (Jain et al., 2021). Fulfillment is one important dimension that has been solely studied as one key dimension in an online marketplace context (Rao, Griffis, & Goldsby, 2011; Acimovic & Graves, 2015; Ishfaq & Bajwa, 2019). In the study of Kim, Jin, and Swinney (2009), evaluation of fulfillment/reliability influences e-satisfaction as well as e-trust and past experience through order fulfillment was an important determinant of the trust consumers have in the site (Urban, Amyx, & Lorenzon, 2009). Many studies posited that overall service quality is directly and positively related to consumers' trust of the website, however, in this study, we aim to examine individual dimension, and thus, the hypothesis is proposed.

H6: Fulfilment is positively related to trust.

3.1.7. Online Trust

Trust has various definitions and complex meanings that have been defined for decades by scholars and researchers in several different areas of social sciences; sociology and psychology, computer science, economics, law, and finance. One of the most reputable definition of trust that has been widely accepted is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p.712). Doney, Berry, and Abratt (2007) define trust in buyer/supplier relations as the perceived credibility and benevolence of a target of trust.

As products and services became more virtual, trust has gained the increased attention from many areas of studies and the meaning keeps expanding and even become more complicated based on the area of studies. For example, in the areas of marketing, trust is proposed as another

important antecedent of loyalty and is crucial for the development of customer relationships, trust and relationship commitment are the key components for building cooperative relationships between customers and firms (Morgan & Hunt, 1994) and the main factor behind customer maintenance is their trust in e-vendor (Reichheld & Schefter, 2000). In general, trust creates loyalty and sustains the long-term relationship between parties and when a buyer views the firm, salesperson, and distribution system as honest, reliable, consistent, and trustworthy (Doney & Cannon, 1997).

In the past two decades since the rise of internet adoption, research also applies trust theory to e-services and online platforms. Mukherjee and Nath (2007) noted that many researchers would argue that the new electronic environment is really just a different context for existing trust theories, while others claim that the new environment requires a re-examination of theories adapted to the realities of a radically transformed marketplace. To some extent, online trust is different from trust in general because of more parties are involved electronically and carry all responsibilities involving risk in transactions and to give the consumers an attitude of confidence, especially, when both first and second parties are physically separated. Creating trust online is very complex and not that easy to apply compared to creating trust offline because a non-human is involved. However, trust and trust online are correlated when it comes to the moment of engaging in online activities such as distribution process and monetary process. Jarvenpaa, Tractinsky, and Saarinen (1999) define trust in internet stores as a consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller.

Many studies have shown an increasing awareness of how online trust has a positive contribution to the business and has a positive influence on customer shopping perceptions toward the online stores. Trust also plays a role in facilitating long-term customer relationships as it evolves over a series of transactions, and if the end-users' experiences are positive, trust is likely to stabilize and grow, encouraging end-users to shop online more extensively (Salo & Karjaluoto, 2007), drives consumer attitudes toward online shopping and intentions to shop online (Monswu'e et al., 2004). Online trust has been immensely studied in a relation with purchase/repurchase intentions and have been found to be correlated (Motwani, 2016; Moriuchin & Takahashi, 2018; Bhalla, 2020).

Online Trust and Purchase Intentions. The theory of reasoned action (TRA) (Ajzen & Fishbein, 1975) provides a background for understanding the relationship between attitudes, intentions, and behavior. The TRA is based on the assumption that human beings perform a given behavior intentionally based on their rational decisions (Ajzen &

Fishbein, 1980). Online purchase intentions can be simply considered as customers' anticipation to obtain desired products based on the knowledge they acquire from the website. Online trust has been immensely studied in a relation with purchase/repurchase intentions and have been found to be correlated (Motwani, 2016; Moriuchin & Takahashi, 2018; Bhalla, 2020) and has a strong positive direct effect on the consumer's internet transaction (Kim et al., 2009). High level of trust towards the online platform means that customers believe that the offered products and services will be honest, and truthful based on their personal needs (Ray, Ow, & Kim, 2011), making them more likely to make a purchase. Therefore, the hypothesis is proposed.

H7: Online trust is positively related to purchase intentions.

3.1.8. Responsiveness and Purchase Intentions

In the study of online service dimensions, responsiveness is the top key determinant among 16 factors (Yang & Fang 2004), and it is the only factors among 4 factors (Johnston, 1995) that have the greatest impact on both satisfaction and dissatisfaction. Nam, Sho, and Kim (2021) revealed that responsiveness in e-service quality is strongly associated with trust and trust, in turn, acts as a dominant predictor influencing purchase intention. Numerous studies have proven the applicability of service quality dimensions (with responsiveness included) as an overall measurement construct indicated positively and significantly affected purchase intentions (Zeithaml et al., 2002; Lee & Lin, 2005; Abu-ELSamen, 2015; Sharma & Lijuan, 2015; Lee, Md Ariff, Zakuan, & Sulaiman, 2016). This study anticipates a link between firm responsiveness and customer purchase intention since customers expect firms to promptly and appropriately respond to customer inquiries and those responses have a direct effect on buying intentions. In Thailand, quick response and 24/7 service has now become central for online business during the work from home period, therefore, the following hypothesis is formulated.

H8: Responsiveness is positively related to purchase intention.

3.2. Measurement and Data Collection

This empirical investigation focused on customers who have shopped at a particular company, Lazada, a major e-retailer with enormous growth during the pandemic and

which dominates Southeast Asia, especially Thailand. Online questionnaire was constructed and used as data collection tools. We investigated service quality models from relevant studies, adapted the measurement, making wording changes to tailor these scales to Thai online context. Items for measuring in this study employed several existing scales as well as founded on scale development work conducted during pretest. In summary, our scales contain various measures of the SERVQUAL model (Parasuraman et al., 1988), E-SQ (Zeithaml et al., 2000), ES-QUAL (Parasuraman et al., 2005), and e-TailQ (Wolfenbarger & Gilly, 2003). The survey instrument is a multi-item measures using a five-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). The pretest was conducted on 15 Lazada current consumers in order to ensure the clarity of the survey instruments on the questionnaire. With the establishment of content validity, the questionnaire was refined to fit the Thai online context and the instrument was deemed appropriately for data collection after a final review by our colleagues (see Appendix 1).

For data collection, online survey questionnaire and selective sampling procedures were performed on a survey portal, Google Form, and participation was completely voluntary and returned within a one-month time frame. The student subjects were initially selected in this study and then asked to snowball the questionnaire to other prospect online shoppers. The criteria for the sampled determined was that they recently have purchased products on Lazada platform.

Among the 398 returned questionnaire, 13 were excluded due to missing values. Of the 385 usable respondents, 18.2 percent were less than 20 years of age ($n=70$), 47 percent were 21-25 ($n=181$), 24.4 percent were 26-35 ($n=94$), and 10.4 percent were over 35 years old ($n=40$). About 52.2 percent of the respondents were students ($n=201$) and 47.8 were in workforces ($n=184$). Finally, about 71.7 percent of the respondents were female (276) and 28.3 percent were male ($n=109$).

The research model shown in Figure 1 was analyzed primarily using multivariate Structural Equation Modeling (SEM) technique supported by IBM-SPSS AMOS program v21. There were two-stage model-building process for this technique that proposed by numerous researchers (Ringle, Wende, & Will, 2010; Hair, Ringle, & Sarstedt, 2013). Firstly, analysis of factor loadings and the Cronbach's alpha coefficient for the multiple item scales was conducted to examine the reliability and validity of the measurement model, and presented in Table II. Secondly, structural equation model was performed to test the associations hypothesized in the research model.

Table 2. Summary of Measurement Scales

Constructs/Scales	Mean	S.D.	Factor Loading	Construct Reliability
Responsiveness (RP)				0.73
I think Lazada gives customer prompt service at acceptable response time	4.04	0.76	0.73	
I believe Lazada equips with system and personnel to handle the inquiry at all times	4.05	0.80	0.70	
I think Lazada has interactive features that can assist customer	3.91	0.84	0.74	
I think Lazada show a sincere interest and willingly performs supportive services in solving customer problems	3.92	0.80	0.79	
Website Design (WD)				0.70
Lazada constantly updates user interface with more variety of product	4.22	0.66	0.69	
The interface structure of Lazada is logical, user friendly, and easy to navigate for desired products	4.22	0.73	0.72	
Lazada displays visually pleasing layout	4.05	0.83	0.69	
Lazada features different types and formats of products presentation such as content, file, photo, video, and audio	3.99	0.79	0.71	
It is quick and easy with adequate security to complete a transaction at Lazada	4.15	0.73	0.57	
	3.99	0.77	0.74	
Personalization (PS)				0.74
Lazada gives me the feeling that I've got tailored service	4.06	0.82	0.77	
Lazada treats me well as if I am their first priority	4.05	0.79	0.78	
Lazada truly understand what I really want	4.03	0.79	0.71	
Lazada regularly provides me desirable products, promotions, and newsletter to my linking	3.92	0.82	0.74	
Assurance (AS)				0.74
When I search for products, Lazada provides me confidence and offers the necessity services such as accurate product/ delivery information and sellers' direct contact	3.91	0.86	0.81	
The reputation of Lazada gives me confidence about its products provided	3.94	0.83	0.80	
I believe that Lazada platform can help me solve the encountered problems with the precise procedure	4.09	0.79	0.65	
I feel secure in providing sensitive information for online purchasing	3.98	0.82	0.63	
Fulfillment (FM)				0.71
Lazada delivers the promised product as per the schedule	3.92	0.86	0.70	
I believe I can get in touch with Lazada whenever I have product and transaction problems	3.90	0.87	0.75	
Lazada is informative about the offered guarantees and warranties of the products	3.98	0.82	0.63	
Lazada is credible with more variety of products to offer	3.96	0.86	0.69	
From online shopping to distribution process, Lazada provided accurate product and delivery information and inform customers immediately if there are any problems	4.08	0.77	0.65	
Online Trust (TR)				0.72
Accurate promises about the product and service are being delivered	4.10	0.75	0.66	
Lazada is genuinely committed to distribute what I expect from	4.12	0.75	0.64	
Lazada provides an identity verification and authentication system to secure my trust	4.12	0.77	0.67	
Lazada make me feel safe in online ordering and banking transactions	4.20	0.71	0.67	
I have trusted in word-of-mouth recommendations about Lazada service delivery	4.12	0.73	0.59	
I have made an online decision based on the trust in Lazada	4.25	0.74	0.68	
Purchase Intentions (PI)				0.70
I consider Lazada as my first choice	4.06	0.84	0.74	
I was recommended to buy product from online store by my friends and family	4.00	0.79	0.65	
I intend to continue using Lazada for purchasing a product in future	4.23	0.70	0.63	
I would strongly recommend others to shop at Lazada	4.05	0.74	0.68	
Promotions, discounts and other offers affect your purchase				

4. Results and Discussion

4.1. Analysis Results of Structural Model

The analysis started by assessing construct reliability and validity. From Table II, the factor loadings for most constructs (that were adopted from literature) exceed the recommended level of 0.7, indicating acceptable item convergence on the intended constructs (Bagozzi & Yi,

1988). And, construct reliability for all factors in the measurement model exceeded 0.7, which Nunnally and Bernstein (1994) identified as an acceptable threshold. In addition, from Table III, correlation between constructs ranged from 0.48 to 0.70, with the correlations of no pair of measures exceeding the criterion (0.9 and above) (Hair et al., 2013), implying that all constructs exhibit discriminant validity of the measures.

Table 3: Constructs Correlations

Dimensions	No. of Items	1	2	3	4	5	6	7
Responsiveness (RP)	4	1.00						
Website Design (WD)	5	0.51	1.00					
Personalization (PS)	4	0.67	0.57	1.00				
Assurance (AS)	4	0.69	0.48	0.70	1.00			
Fulfillment (FM)	5	0.64	0.49	0.68	0.65	1.00		
Online Trust (TR)	6	0.64	0.60	0.64	0.62	0.64	1.00	
Purchase intentions (PI)	5	0.55	0.60	0.63	0.61	0.60	0.67	1.00

To examine potential links between constructs, the hypothesized research model was tested using the structural model. The observed normed χ^2 for this model was 2.25 ($\chi^2 = 1105.72$, $df = 492$), smaller than the three recommended by Bagozzi and Yi (1988). Other fit indexes also show sufficient fit even though the values (after using modification indices) for GFI and AGFI do not exceed 0.9 (the threshold value), they still met the requirement suggested by Baumgartner and Homburg (1996), and Doll, Xia, and Torkzadeh (1994): the value is acceptable if above 0.8 (GFI = 0.85, AGFI = 0.83, CFI = 0.85, RMSEA = 0.057). As this model was built based on previous research in Western context and applied in the Eastern environment, the measurement model exhibited an acceptance fit with the data collected.

This study examines the relationships between individual dimensions of e-service quality, online trust and purchase intentions in singular online shopping platform, LAZADA. The statistical significance of all the structural parameter estimates was examined to determine the validity of the hypothesized paths. Table IV lists the structural parameter estimates and the hypothesis testing results. The results revealed that five dimensions of e-service quality were positively correlated with one another whereas some dimensions were negatively correlated with purchase intentions.

The analytical results show that responsiveness ($\beta = 0.96$, $p < 0.001$) and website design ($\beta = 0.41$, $p < 0.001$) positively affects personalization providing support for H1

and H2. Moreover, personalization significantly and positively affects assurance ($\beta = 1.01$, $p < 0.001$) supporting H3. Furthermore, assurance ($\beta = 0.66$, $p < 0.001$) and website quality ($\beta = 0.22$, $p < 0.001$) positively affects fulfillment, so H4 and H5 are supported. Similarly, fulfillment significantly and positively affects online trust ($\beta = 0.82$, $p < 0.001$), thus, H6 is supported. Interestingly, all five dimensions of e-service quality are individually linked internally. Additionally, online trust shows a positive relationship with purchase intentions ($\beta = 1.76$, $p < 0.001$), therefore, H7 is supported. Conversely, H8 is also supported, indicating that responsiveness negatively affects purchase intention ($\beta = -0.47$, $p < 0.001$).

4.2. Discussion

The earlier review of existing literature indicated that numerous studies had explored e-service quality in terms of scale development and mostly had studied the relationship among all dimensions toward other constructs, i.e., overall e-service quality, customer satisfaction (Lee & Lin, 2005), customer loyalty (Abu-ELSamen, 2015), and word-of-mouth (Janda et al., 2002). This study developed instrumental dimensions of e-service quality through altering the SERVQUAL model and other related models in online context. The dimensions studied solely in a Lazada Thailand context included responsiveness, website quality, personalization, assurance, and fulfillment. Moreover, we

Table 4: Results of Estimation Structural Model

Path from	Path to	Hypothesis	Structural coefficients	t-value
Responsiveness	Personalization	H1	0.96	9.46**
Website Design	Personalization	H2	0.41	6.50**
Personalization	Assurance	H3	1.01	9.93**
Assurance	Fulfillment	H4	0.66	7.34**
Website Design	Fulfillment	H5	0.22	4.52**
Fulfillment	Online Trust	H6	0.82	6.04**
Online Trust	Purchase Intentions	H7	1.76	5.95**
Responsiveness	Purchase Intentions	H8	-0.47	-4.37**

Notes: * $p < 0.01$; and ** $p < 0.001$

believe that each distinct dimensions of e-service quality are internally connected to one another, consequently, a conceptual model to examine the linkage of individual dimension was developed, also, to examine how these dimensions affect online trust and purchase intentions. Our results provide empirical evidence that the five proposed e-service quality dimensions uncovered strong links between responsiveness, website quality, personalization, assurance, fulfillment, online trust, and purchase intentions. The analytical results are discussed below.

First, the dimension of responsiveness strongly affects personalization for Lazada. This analytical result is consistent with the study of Mittal and Lassar (1996) that delivering service in interactive encounters with customers, personalization is formed. Because one of the biggest barriers in online shopping is that the customer cannot physically see or feel the product consequently, online store must respond promptly in the best interests of customers in order to justify their individual needs toward the product.

Second, the website design dimension is also a noteworthy predictor of personalization that is in line with the study conducted by Berthon et al. (2008) which states that humanizing the computer-being through website design would connect the customer to feel more comfortable visiting a web site.

Third, the results showed that personalization highly affected assurance. Other study also found that personalization could benefit the customer in a meaningful way (Aguirre, 2016). This finding might be caused by the fact that they felt confidence and attached to the custom system that has consistently captured their preferences, making them more likely to rely on personalized services to make a purchase.

Forth, the assurance dimension is a significantly affected fulfillment. This result is consistent with Titiyal et al. (2020), which revealed that assurance and promised delivery date are the important performance aspects of e-fulfillment. Lazada should ensure the distribution of product information, contents and descriptions are well-embedded in product offered. Sufficient product information will guarantee the customer confidence in dealing with system, thus, accompanying Lazada's fulfillment service.

Fifth, the dimension of website design had a minor effect on fulfillment in this study, however its importance should not be undervalued. This finding is also in line with research conducted by Lee and Lin (2005) that website design had only a minor effect on overall service quality. Furthermore, because these respondents are repeat consumers and website design stays the same, there is a high possibility that their purchases are made through habitual decision-making process.

Sixth, the analytical result showed that fulfillment strongly affected online trust which is in line with the study

of Urban et al. (2009) that fulfillment was an important determinant of the trust consumers have in the site. Some online trust studies are dealing with Hofstede's cultural dimension, uncertainty avoidance (UA) which shows that the high UA of the consumer, e.g., Arab and Asian, is found to be connected with a stronger effect of the store's reputation on trust (El Said & Galal-Edeen, 2009). Moreover, trust fully mediates the relationships between perceived reputation, perceived capability of order fulfillment, and repurchasing intention (Qureshi, Fang, Ramsey, McCole, Ibbotson, & Compeau, 2009). So, the higher the customer satisfy with the right fulfillment process of Lazada, the stronger its trust and reputation will become.

Next, the dimension of online trust is unquestionably, significant predictor of purchase intentions. High level of trust towards the online vendor and its distribution system means that customers believe that the offered services will be honest, and truthful based on their personal needs (Ray et al., 2011), and has a strong positive direct effect on the consumer's internet transaction (Kim et al., 2009).

Lastly, since responsiveness has not yet been covered in any studies per se as a sole predictor of purchase intention, we were keen to inspect its affect. Conversely, the results revealed a negative significant relationship between responsiveness and intentions to purchase. An explanation for this outcome could be explained by the repetitive excessive responses. Furthermore, Lazada has operated for more than nine years in Thailand, these respondents could probably be repeat consumers that have been accustomed with Lazada procedure and their purchases are also made through a habitual decision-making process. They may have established some online trust and questions have already been answered in a review section and therefore they do not see the need to ask the sellers questions. Besides, with an auto-response function installed, an instant response does not mean the problem is solved just like human interactions and they could view this prompt response as an impersonal involvement that potentially drive customers away from the purchase intentions.

5. Conclusions, Implications, and Limitations

This study examines whether the relationship between five instrumental dimensions of modifying the SERVQUAL model, and its consequences, such as online trust and purchase intentions, are applicable in the context of online service provided in Thailand. This study identified service quality dimensions that are intercorrelated, affect one another and online trust, and significantly related to customer purchase intentions. The implications for practitioners and researchers of this study are discussed below.

5.1. Implications for Practitioners

Because this study based on one of the successful online platforms in Asia, Lazada, this study suggested that online companies with full resources should develop marketing strategies that focusing on multiple service quality dimensions equally as customers expect more and more from the online shopping environment during the Covid-19 crisis. For example, in order to enhance customer purchase intentions, besides an obvious improvement of each dimension, online stores should also maximize the use of social media that plays an important role as a trustworthy influencer that builds online trust. Second, online stores should pay close attention to constantly improve fulfillment service as the customers are now online more than ever. Website design is an important means to provide ease of use which would lead to a greater willingness to use e-commerce systems. Another essential implication of this study relates to responsiveness and personalization. As e-commerce related technologies become highly sophisticated and online retailers are able to perform personalized marketing, e.g., with certain technologies, online retailer could send out an advertisement stating like ‘you’ve tried out that’, and this type of technology investing may possibly push the customer to finally buy it online. On the other hand, customers who desire increased transparency, thus having high levels of privacy, are less likely to accept online profiling for personalization (Awad & Krishnan, 2006), reducing the chance to make a purchase online. Online retailers may employ a variety of information technology tools and distribution system operators to capture perceptions regarding trust, privacy concerns, the finding could be beneficial for crafting personalization strategies.

Another key suggestion from this finding is that a high level of responsiveness has two unintended consequences. Responses which are too prompt and insistent could make the customer feel uncomfortable and perhaps ending up with no interaction and transaction. For example, prize strategies such as sending some discount vouchers or discount code may encourage the customer to purchase and stimulate them to share their shopping experience, however, performing too often could also get ignored and shift away their interest in buying from other platform. Therefore, online stores should carefully consider the proper context in each strategy based on the current economic situations, trends, and available technologies. Thus, understanding and meeting customers’ expectations helps to improve e-services quality, purchase process, and redefining their online ecosystem toward the new normal digital era. This was a key finding not included in the research of Sheng (2019) which focused on response volume and speed having only positive effects on purchasing intentions.

5.2. Implications for Researchers

This study treated each dimension of E-service quality equally, but interestingly, the results suggested that there are possible relationships between these dimensions, e.g., the relationship between assurance and fulfillment are mediating the online trust, online trust as a moderator of all service quality dimensions, the direct effect between one another such as website design and assurance or responsiveness, and as an antecedent of one another. Another potential future research derived from this study can be inspired from the Venn diagram illustrating their possible combinations among e-service quality contracts and the arrows from one dimension to another represent the prospect relationship. (Figure 2).

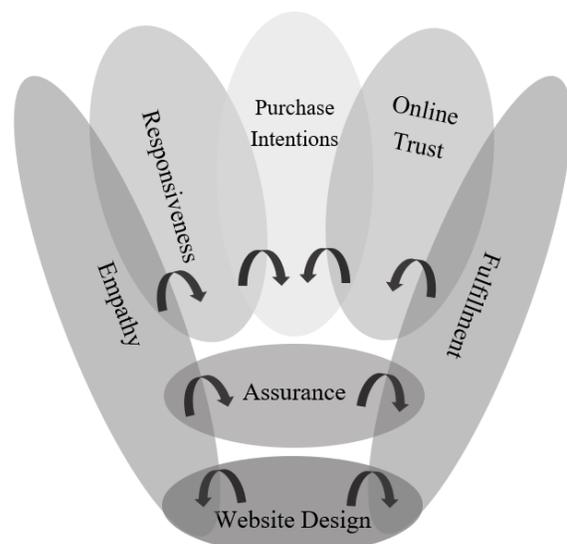


Figure 2: Proposed Research Model for Researchers

Because the results of this study display relations between constructs, the overlapped areas in this proposed model refer to the likelihood to co-exist between construct depending on how they combined, both high and low conditions (e.g., customer medium in responsiveness can have high outcome in personalization, or high in fulfillment can have high in trust). Finally, we hope that our discussions will stimulate and encourage our research communities to improvise more studies and engage in investigating different measurements regarding online context as it will definitely dominate the world in the near future.

5.3. Limitations

Despite the important contributions of this study, there are a number of limitations which may restrict the generalizability of its findings. Firstly, Lazada was used as

a sample platform which may not be representative of overall e-service quality in online ecosystem. Further research can apply the model to examine other types of online stores on social networking sites that also play an important role in the Thai online environment, i.e., Facebook market, Instagram platform, and Line application, or expand it into a cross-national studied where Lazada is popularized. Secondly, the model itself derived from many models regard SERVQUAL may not reflect truly to Thai online behaviors. We might need to come up with national e-service dimensions through Hofstede's cultural dimensions or, frankly, another updated and insightful national cultural dimensions are also encouraged. Third, although this study employed sample with experience in actual purchase on the website, obviously, with general products listed online, they may not encounter all proposed dimensions. The analytical results may not be a legit representative of the studies dimensions. Future research should look into high valuable products or services that may need multiple interactions to complete the transaction.

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