

Re-visiting the E-SERVQUAL and Expectancy Disconfirmation Theory in the Context of the Service Industry in Malaysia

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Abstract: The SERVQUAL model has been used for several years to illustrate the relationships between tangible, assurance, reliability, responsiveness, empathy, and customer satisfaction. This paper posits that the SERVQUAL model requires an extension to better explain the relationships between the factors that influence customer satisfaction. The main difference is that the revised SERVQUAL includes the dimensions that apply to the online service industry or e-commerce, thus the proposed e-SERVQUAL comprises fulfillment, efficiency, privacy, and system availability. In this paper, e-SERVQUAL pinpointed two underpinning theories which are e-SERVQUAL and Expectancy Disconfirmation Theory (EDT). This study delves into the foundation, expansion, and evolution of both theories particularly in the online food delivery service industry in Malaysia. The main objective of this paper is to present the reviews of the literature on e-SERVQUAL and Expectancy Disconfirmation Theory on the relationship between the elements that influence e-customer satisfaction. The study contributes to developing and improving the model that defines service quality in a digital service context. Correspondingly, it emphasizes the robustness of the theories and further enriches the academic literature.

Keywords: *e-SERVQUAL, Expectancy Disconfirmation Theory, e-customer satisfaction*

1. Introduction

During the Pandemic Covid-19 the Online Food Delivery (OFD) service is high in demand for most customers. Covid-19 has raised the demand for food delivery services as people cannot go to congested places due to lockdown back in the day. Nowadays, with the Endemic Covid-19, businesses have shifted partially from physical to online including food delivery services. Food delivery is a courier service that delivers food from retail restaurants or cafes to customers. Customers can make an order through the website or mobile apps of online food service providers. Customers nowadays use the OFD due to the lifestyle that developed from the pandemic Covid-19 and remarkably customers now are familiar with the application, interface, and website. Moreover, they feel it is more convenient to order food online which will benefit in time-saving orientation and sometimes get more online promotion from the service provider. The consumer can save time and do other things while the food is on its way to be delivered. Customers are given two options to order the food which is by website or mobile apps.

In Malaysia, OFD has started to upsurge since the Pandemic Covid-19 outbreak due to a total lockdown made by the government that customers cannot go outside freely. Service providers such as Grabfood, Foodpanda, ShopeeFood, Bungkusit, DeliverEat, Tapau, and OdaMakan are among the most popular food delivery services in Malaysia. Online Food Delivery (OFD) has become more competitive in the business nowadays. This has been possible due to OFD could satisfy the needs of people who live in city areas who are busy and prefer their meals to be delivered to their location. Therefore, to meet the needs of customers, a business needs to fulfill the customer's expectations. Among the most used food delivery service providers in Malaysia are Grabfood, and Foodpanda, which are the powerhouse in the OFD industry with a total number of apps installed is 100 million plus and 50 million plus respectively. It indicates that the number of apps installed is equivalent to the number of users but this data is only collected in the Google Play store (YellowBees, 2021).

Despite the large number of customers using the OFD, there are still some who are dissatisfied with the service. There are too many complaints were made that the authorities had to establish a special channel for customers of OFD to make a complaint with concern to any issue of OFD. According to the Ministry of Domestic Trade and Consumer Affairs, (2021), more than 1,900 complaints were received. In 2021, the ministry received

complaints from Foodpanda and Grabfood a total of 946 and 43 respectively (Yin, 2021). This indicates a significant number of consumers that are not satisfied with OFD service in Malaysia hence the business must improve their service quality to ensure the customer is well satisfied. Among the prominent issues highlighted are delivery issues, technical problems in the application or website, and the payment issue. Hence, this paper will begin by briefly reviewing the main construct (e-customer satisfaction), followed by the proposed variables (fulfillment, efficiency, privacy, and system availability), the underpinning theories to support the hypothesized link, and finally the findings. As a result, the study was conducted to examine the association between factors that influence customer satisfaction. This conceptual paper aims to further explore how the variables in the SERVQUAL model can be tested empirically. The service industry in Malaysia must understand the customer satisfaction level so that they can enhance a better service.

2. Literature Review

E- Customer Satisfaction

Customer satisfaction is a central part of businesses, it's a measurement of how well the business is running and how it satisfies the customer's needs and wants (Muhammad Maladi, 2019). A higher degree of customer satisfaction leads to the development of a lucrative relationship (Fuentes-Blasco et al., 2017). Customer satisfaction must be prioritized because eventually it will persuade customers to repeat purchases, allowing the business to thrive and compete (Jasin & Firmansyah, 2023). According to Puspasari et al., (2022) satisfaction of the customer is significant to keep their customers in the market. While according to Mongdong & Tumewu, (2015) Customer satisfaction refers to a person's feelings of excitement or dissatisfaction subsequently evaluating what they think of the good or service that they expected. Moreover, customer satisfaction means either enjoyment or disappointment as a result of analyzing the goods or services they consumed compared to customer expectations (Su et al., 2016). Customers will be very delighted if the presentation of the company's services matches what they expect. Customer satisfaction scopes are made up of various components. Numerous studies have examined customer satisfaction as a dependent variable as mentioned above. According to the Expectancy Disconfirmation Theory (EDT), the satisfaction of a customer is shaped by the perceived gap between expectancy and real experiences (Oliver & Desarbo, 1988). In electronic commerce, customers have specific expectations regarding the services they receive. These expectations include punctuality of delivery, precise order fulfillment, and privacy. If the business fails to meet these expectations can lead to unhappiness (Zeithaml et al., 2002). Several studies have examined the relationship between e-service quality and e-customer satisfaction within the online business environment. Improving the quality of the service is an encouraging strategy to ensure the businesses are more attractive and to boost customer pleasure (Fasihah et al., 2020). Farooq et al. (2018) reported on the perceptions of service quality and its special effects on customer satisfaction. Dalbehera (2020) explored academics' views on e-service quality and its influence on perceived value, satisfaction, and constancy toward e-library services.

Fulfillment

Parasuraman et al. (2005), fulfillment refers to the e-commerce website meeting its promises regarding the delivery of order and availability of the items. This concept encompasses various elements, such as the accuracy of service commitments, availability of the orders, and the timely delivery of correct items to customers (Wang et al., 2003). De Vos et al. (2015) expand on this by emphasizing the importance of accurately displaying products to customers, ensuring that the received product matches what was ordered, and delivering within the promised timeframe. Rafiq et al. (2012) identified fulfillment as the most crucial factor in online business. Multiple research has demonstrated the constructive impact of fulfillment on e-customer satisfaction in online shopping. Research by Singh Shergill et al. (2005) established that fulfillment enhances customer satisfaction, a finding supported by Kandulapati Shekhar Bellamkonda (2014) and Jain et al. (2017). Effective fulfillment practices not only improve a company's visibility but also help build a positive reputation, deliver a superior customer experience, and ultimately increase satisfaction (San et al., 2020). Additionally, several studies have validated the substantial and positive effect of fulfillment on e-customer satisfaction (Çelik, 2021; Ding et al., 2011; Kim & Kim, 2010; Rita et al., 2019). Consistently, these studies indicate that meeting promises, accurately and promptly delivering products, and fulfilling customer expectations are vital for ensuring satisfaction in e-commerce environments.

Efficiency

Efficiency refers to the easiness and speediness of consumers to use and operate an online platform, such as an auction site (Parasuraman et al., 2005). Zeithaml et al. (2002) emphasize that efficiency is a critical dimension reflecting customers' ability to explore and use the website, locate their products, and attain the information with little effort. Achieving efficiency involves having a user-friendly, well-organized website. Thus, evaluating efficiency is essential for evaluating the quality and functions of the website. Similarly, Wang (2003) describes efficiency as the capability of the customer to operate the website and find desired products effortlessly. Essentially, efficiency is a time-saving and convenient use of applications or websites, which includes how companies simplify and accelerate website or application access (Mayasari et al., 2020). Khan et al. (2015) highlight the significance of the efficiency of business websites. Several studies in the literature demonstrate a positive correlation between efficiency and e-customer satisfaction. For example, Khan et al. (2019) found a significant positive relationship between efficiency and customer satisfaction. Elsharnouby and Mahrous (2015) similarly reported that the efficiency dimension significantly influences customer satisfaction. Durmuş et al. (2015) also found that the efficiency dimension of e-service quality impacts e-customer satisfaction. Research by Leonnard (2019) further supports the notion that efficiency significantly affects e-customer satisfaction. Consequently, the literature consistently confirms that efficiency is closely correlated with e-customer satisfaction.

Privacy

Privacy is the extent to which a website ensures the safety and protection of buyer details (Parasuraman et al., 2005). It involves safeguarding customer shopping behavior data, preventing the disclosure of personal information to external parties, and securing their financial details (Zeithaml et al., 2002). Customers tend to perceive higher service quality in e-commerce websites that implement robust privacy measures (Mamakou et al., 2023). In the e-commerce context, privacy pertains to protecting customer data during online transactions ensuring the confidentiality and security of sensitive information (Cheng et al., 2021). Similarly, Khan et al. (2019) describe privacy as the platform's ability to protect customer information from unauthorized access or misuse. Akin (2017) highlights that privacy features ensure the confidentiality of customer-provided information throughout the purchasing process, preventing unauthorized third-party access. Customer concerns about data processing, storage, and security issues (Libaque-Sáenz et al., 2021). For instance, Andrew et al. (2019) demonstrated that privacy significantly influences customer dependence and the agreement of online services, such as e-wallets. This finding aligns with recent research, consistently indicating a constructive association between privacy and satisfaction (Bozbay et al., 2016; Chang et al., 2005; Wang et al., 2019; Yoo & Donthu, 2001). The literature clearly shows that privacy positively influences e-customer satisfaction.

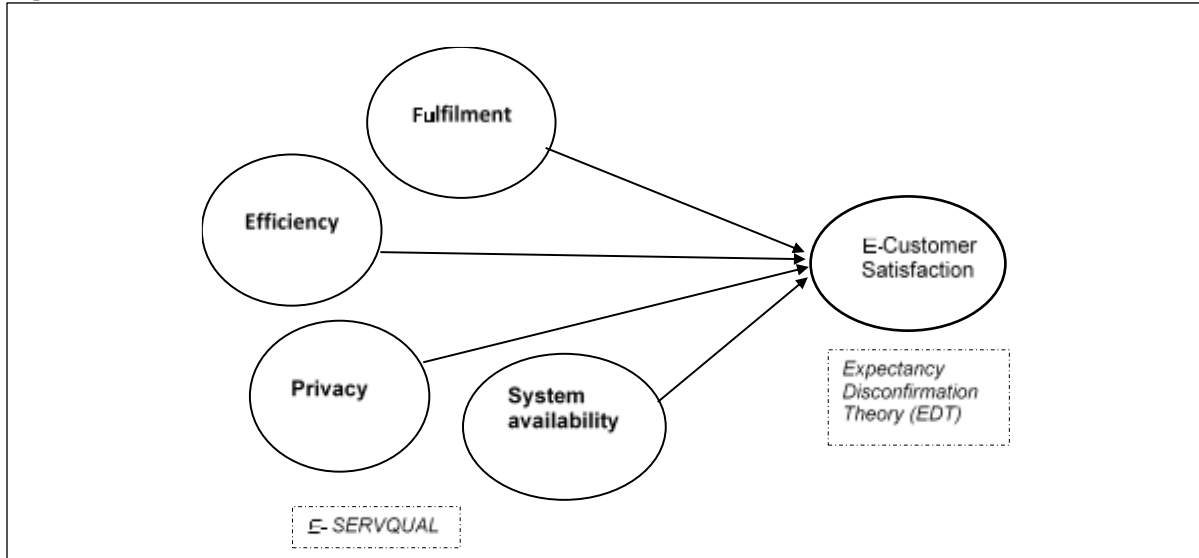
System availability

System availability pertains to the operational functionality of a website, including its effortlessness of accessibility (Parasuraman et al., 2005). This entails the speediness of a website to appear and load during the processing. Similarly, primary functions include website availability, stable transmission of the data, accuracy of ordering and minimal times (Bauer et al., 2006). Khan et al. (2019) describe system availability as the smooth and glitch-free technical operation of a website, ensuring seamless navigation and functionality. The ordering system is crucial as it enables customers to make orders, complete payments, and trail deliveries, highlighting the necessity of its availability and reliability. Rapid load speeds and user-friendly online payment systems are crucial to increasing the satisfaction of the customers, underscoring the prominence of system availability in improving the overall user experience (Cheng et al., 2021; Kang & Namkung, 2019). Studies on system availability have consistently demonstrated its constructive influence on e-customer satisfaction (Kim & Kim, 2010). Zhuang and Babin (2015) found that customers feel dissatisfied if a website's system availability needs to be improved. Additionally, San et al. (2020) identified system availability as the strongest predictor of customer satisfaction among various factors of electronic service quality. This highlights the importance of online retailers emphasizing system availability to meet customer expectations (San et al., 2020). The literature indicates that system availability has a substantial impact on e-customer satisfaction.

3. Research Methodology

The current study utilized an extensive literature review to investigate the development of two theories in this study, e-SERVQUAL and Expectancy Disconfirmation Theory (EDT). This paper aims to analyze the effect of electronic service quality on the level of satisfaction among online food delivery customers in Malaysia. This study explores the foundation, expansion, and evolution of both theories particularly in the online food delivery service industry in Malaysia.

Figure 1: Theoretical Framework



In Figure 1 illustrates the hypothesized link between four independent variables comprised of fulfillment, efficiency, privacy, and system availability, and their impacts on e-customer satisfaction. In this paper, e-SERVQUAL identified two underpinning theories which are e-SERVQUAL and Expectancy Disconfirmation Theory (EDT).

4. Underpinning Theories and Findings

E- SERVQUAL

Parasuraman and Berry (1980) created the theoretical framework known as SERVQUAL. It is to evaluate and analyze the level of service that businesses offer. It is a popular technique for measuring and raising the quality of the service delivered by businesses. The foundation of SERVQUAL is the idea that consumers assess the level of service they receive based on five elements which are tangible, assurance, reliability, responsiveness, and empathy (Parasuraman et al., 1985). Table 1.1 shows, that since its creation in the 1980s, the SERVQUAL model has undergone several updates and adjustments. Some of the significant changes in SERVQUAL's development. In the early 1990s, several studies hypothesized that the SERVQUAL consistency dimension was unnecessary because it was fully covered by the other four dimensions. Furthermore, in the late 1990s, as technology usage increased for service delivery, researchers questioned whether the SERVQUAL theory applied to online services. A redesigned model dubbed E-S-QUAL was then put forth in response, and it now incorporated three further dimensions, website design, security and privacy, and reliability. After that, Zeithaml created a 22-item version of the SERVQUAL questionnaire in 2002 to reduce respondent fatigue and boost response rates. (Buttle, 1996).

To make the SERVPERF model more useful and user-friendly, it was also simplified to a 22-item questionnaire in 2005. Lastly, The SERVQUAL model was revised in 2010, aiming to address some of the critiques of the original theory, such as the absence of a strong theoretical underpinning and the failure to consider the role of emotions in service quality. In 1985, the SERVQUAL model, developed by Parasuraman and colleagues, introduced five critical dimensions for assessing service quality: tangibility, assurance, reliability,

responsiveness, and empathy (Parasuraman et al., 1985). Recognized as a preeminent tool for evaluating and enhancing service quality, the SERVQUAL model has been widely applied in numerous studies (e.g., Cook & Thompson, 2000; Kansra & Jha, 2016; Khan et al., 2019; Kitapci et al., 2014; Van Der Wal et al., 2002), underscoring its significant impact in the field. In 1992, Cronin and Taylor (1992) advanced the SERVQUAL model by creating the Service Performance (SERVPERF) framework, responding to criticisms about the SERVQUAL model's conceptual underpinnings and its approach to measuring service satisfaction. Initial adaptations were directed to the expansion of models such as WebQual in 2000 by Barnes et al. (2000), concentrating on the quality of information and usability. However, criticisms regarding WebQual's comprehensiveness prompted further refinements. Yoo and Donthu (2001) responded by developing SITEQUAL, which emphasized user-friendliness, in terms of design, speediness and safekeeping.

Nevertheless, it also faced criticisms for potentially overlooking critical aspects of the online buying process. In 2003, Wolfenbarger and Gilly (2003) presented the Electronic Retail Quality (eTailQ) model, which included dimensions such as reliability/fulfillment, website layout, customer service, and security. Despite its utility, eTailQ was criticized for neglecting the hedonic aspects of internet shopping and its dimensional structure. To address these issues, Zeithaml et al. (2002) introduced e-SERVQUAL, a scale designed to analyze the perceived service quality in online retailing. Subsequently refined by Parasuraman et al. (2005) into the E-S-QUAL and E-RecSQUAL scales, which evaluate website service quality through variables such as efficiency, fulfillment, system availability, and privacy. According to Parasuraman et al. (2005), electronic service quality involves the degree to which a website facilitates efficient and effective shopping, purchasing, and delivery in the context of online services. Understanding e-service quality is essential for identifying customer preferences in online transactions. As shown in Table 1.1 there is wide usage and recognition in the existing literature. Many researchers utilized the E-SERVQUAL model due to its consistency in measuring service quality. Despite the research on customer satisfaction as a dependent variable, there remains a scarcity of studies specifically to examine customer satisfaction from the perspective of OFD.

Table 1: The summary of e-service quality evolution scales

Author	Theory	Dimension
Parasuraman et al. (1985)	SERVQUAL	Tangible, assurance, reliability, responsiveness and empathy
Cronin and Taylor (1992)	SERVPERF	Tangibles, reliability, responsiveness, empathy, and assurance
Barnes et al. (2000)	WebQual	Usability, information quality, and service interaction quality
Yoo & Donthu (2001)	SITEQUAL	Ease of use, aesthetic design, processing speed, and security
Wolfenbarger & Gilly (2003)	eTailQ	Reliability/fulfillment, website design, customer service, and privacy/security
Zeithaml et al. (2002)	e-SERVQUAL	Efficiency, compensation, reliability, fulfillment, contact, responsiveness, and privacy
Parasuraman et al. (2005)	E-S-QUAL	Efficiency, fulfillment, system availability, and privacy
Blut (2016)	E-SQUAL	Website design, customer service, security/privacy, and fulfillment
Xu et al., (2017)	e-SERVQUAL	Fulfillment, after-sales, agreement, information
Khan et al., (2019)	e-SERVQUAL	Fulfillment, efficiency, privacy/security, system availability, e-customer loyalty
Raza et al. (2020)	e-SERVQUAL	Site organization, reliability, responsiveness, user-friendliness, personal need, efficiency
Ashiq & Hussain (2023)	SERVQUAL e-SERVQUAL	Reliability, responsiveness, security, convenience e-trust

Expectancy Disconfirmation Theory (EDT)

Expectancy Disconfirmation Theory (EDT) is a prominent framework in marketing, initially developed by Oliver & Desarbo in 1988 to explain how customer satisfaction is identified by comparing perceived performance with pre-existing expectations. According to Oliver (2014), EDT postulates that customer

satisfaction is contingent upon the gap between expectations and experiences. Specifically, if a customer's expectations are met or exceeded, they experience pleasure; conversely, unmet expectations lead to dissatisfaction.

EDT outlines a five-step process from expectation formation to repurchase intention, explaining consumer satisfaction (C. H. Lin et al., 2005). Initially, consumers develop expectations about a product or service before purchase. Subsequently, they use the product or service and form performance perceptions based on critical attributes. These performance perceptions are then compared to their initial expectations, resulting in one of three outcomes: positive disconfirmation (performance exceeds expectations), confirmation (performance meets expectations), or negative disconfirmation (performance falls short of expectations). Based on this disconfirmation, consumers develop feelings of satisfaction or displeasure, moderate satisfaction outcomes from confirmation, delight from positive disconfirmation, and disappointment from negative disconfirmation. Ultimately, happy consumers are likely to reuse the offerings, whereas dissatisfied consumers are not. Studies by Lin et al. (2005) confirmed that expectation confirmation significantly influences satisfaction, which in turn positively affects the continued use of search engines and websites. Recent literature further demonstrates that EDT has been applied in various fields to investigate the impact of customer satisfaction on service quality (Matolo & Salia, 2021; Nugroho & Suprapti, 2022; Uzir et al., 2020).

Findings

A business should consider increasing its value of service quality from several dimensions such as responsiveness, assurance, tangibility, dependability, and empathy to satisfy the customer. Meanwhile, Mahadevan et al., (2019) stated that tangibility, reliability, responsiveness, assurance, and empathy are the factors that influence customer satisfaction. In addition, consistently introducing new features could increase customer satisfaction with the intense competition in the market for food delivery apps, app developers need to focus on consumer needs and perceive them as user-friendliness (Wen et al., 2022). Agreeing to Sarwar (2016) responsiveness plays a significant role in influencing customer satisfaction since every customer wants an instant response from the service provider. On the other hand, studies from (Mahadevan et al., 2019) found that responsiveness is rejected and not significant to customer satisfaction. Due to the inconsistency of findings by the previous author thus, this study postulates the additional factors such as fulfillment, efficiency, privacy, and system availability and their relationship to e-customer satisfaction. Numerous studies have confirmed the substantial and positive effect of fulfillment on e-customer satisfaction. Several studies in the literature demonstrate a positive correlation between efficiency and e-customer satisfaction. The literature clearly shows that privacy positively influences e-customer satisfaction and from the above extensive literature review had identified system availability as the strongest predictor of customer satisfaction among various factors of electronic service quality.

5. Discussion and Conclusion

Building on the insights obtained from the review of the development and pertinent of both theories in the setting of OFD service in Malaysia, findings revealed a substantial association between four constructs; efficiency, fulfillment, system availability, and privacy on e-customer satisfaction. This study addresses the need for additional variables or factors for a service provider to increase service quality and satisfy the customer. The result of the current study will help businesses to provide better provisions in the OFD industry. The study enriches the understanding of e-service quality and e-customer satisfaction with online food delivery by examining the crucial factors influencing e-customer satisfaction. The study contributes to developing and improving the model that defines service quality in a digital service context. The findings of this study will provide a deeper understanding of service providers in the e-commerce sector, especially in the OFD market. The study offers practical suggestions for creating effective marketing and branding strategies in the competitive online food delivery business. Understanding customer preferences and the impact of online presence helps firms to strategically position themselves and establish powerful brand identities.

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