

# Online Food Delivery Service: The Link Between Food Quality, E-Service Quality, Trust, and Loyalty

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## ABSTRACT

The coronavirus (COVID-19) pandemic leads to a growth in the use of online food delivery (OFD) services. To avoid getting infected with the virus, customers prefer ordering food through online applications and trusted providers than directly visiting the restaurant. The competition in the OFD service industry in Indonesia is very tough; thus, understanding consumer loyalty is important for business players. Unfortunately, loyalty modeling in the food industry seems silent. Therefore, this quantitative study examines the roles of food quality, e-service quality, and trust on customer loyalty in the context of online food delivery (OFD) services. This study used an online survey of 433 OFD service customers from Bandung City, Indonesia. The data were examined using SmartPLS software. The result shows that both food quality and e-service quality positively affect trust, and trust has a significant effect on loyalty.

**Keywords:** *Online food, loyalty, e-service quality, trust, food quality.*

## 1. INTRODUCTION

The online food transaction value is growing vast and it is predicted to increase every year. It cannot be separated from the effect of information technological changes, especially the Internet. The development of internet technology provides changes to customers in finding information, comparing prices, and ordering goods or services [1, 2]. For business actors, this change provides opportunities such as improving service to customers, increasing productivity [3], and expanding their market [4].

The coronavirus (COVID-19) pandemic leads to a growth in the use of online food delivery (OFD) services, and it increased 67 percent globally between 2019 - 2020 [5]. In Indonesia especially, the total transaction of OFD was around 1.1 billion U.S. dollars in 2020, and it is estimated that by 2025, the transaction will reach 1.8 billion dollars. It implies that Indonesia has enormous value transactions of culinary products using this kind of service. The online food delivery business actors in Indonesia are various, not only small and medium casual dining restaurants but also international fast-food restaurants. Therefore, the competition of the OFD service industry in this country is very tough; thus, studying customer loyalty towards OFD services is reasonable.

Consumer loyalty and its determinants have been discussed by many [6], but loyalty formation is not yet fully understood. The factors that work for certain industries may not work for others since each of the industries has unique characteristics. Among the determinant factors, some researchers tend to agree that product, perceived value, and service quality are important shapers of loyalty [7].

In an uncommon situation like this coronavirus pandemic, people more consider their health. In purchasing food, especially, customers prefer to order food through online applications and trusted providers than directly visiting the restaurant [8] to avoid getting virus infected. Unfortunately, studies on the influence of product or food quality and e-service quality towards customer trust as well as customer trust towards loyalty are still rare in the OFD system context.

Therefore, according to this gap, this research aims to determine how both e-service quality and food quality influence customer trust and how customer trust influences customer loyalty in the OFD context. This study is expected to bring two implications. First, it can enrich the literature on customer trust and loyalty in the context of OFD services. Second, it can provide useful guidelines for culinary business actors to develop strategies in developing their business activity.

## 2. LITERATURE REVIEW

### 2.1 E-service Quality

E-service quality is customers' evaluation of websites or online applications to purchase a product or service. Customers always expect good quality websites or online applications when conducting online transactions [9]. Thus, e-service quality is a very important thing to take into account for businesses that sell their products and services online, especially the culinary businesses, whose interaction between customers and companies takes place using online media. [10] believe that the websites and online applications quality is fundamental to maintain customer loyalty, influence them to visit the company's website, and make them loyal customers. Therefore, having qualified websites and online applications is very essential for the success of an online business [11]. Besides, previous studies examine that e-service quality has a significant effect on customer trust [12].

### 2.2 Food quality

Food quality indicates all performance of food attributes that meet customer needs. This aspect is very vital in the culinary business [13]. Although previous studies have emphasized the importance of food quality, they have not found a consensus on the attributes that describe qualified food. [13] use taste, nutrition, ingredient, and variety to evaluate customer experience and consumer satisfaction with the culinary product. [14] use menu, size, presentation, and variety as basic indicators of food quality. Furthermore, [15] states that the factors of attractiveness, safety, and ingredients are general characteristics used by customers to determine food quality. Other scholars believe that the variety of menu, the appearance of food, taste, health aspects, freshness, and the food temperature are important factors in assessing the quality of food. Together, food quality and service quality are seen as a basic factor that influences customer expectations of restaurants as a culinary products provider [13].

### 2.3 Trust

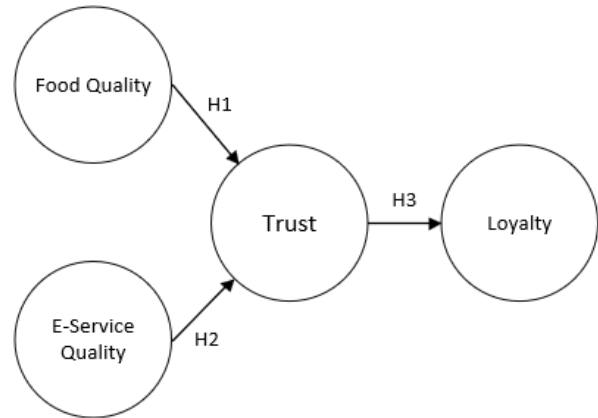
Trust refers to the confidence of customers in the services' quality and reliability [16]. It plays a crucial role in relationship initiation, formation, and maintenance. In the online shopping context, trust is a basic factor for beginning a transaction since customers perceive that the risk level in online transactions is higher than in the conventional ways, in terms of payment, transaction information, and products or services delivery. Therefore, online customers prefer making a transaction with those online retailers that they trust more [17]. Furthermore, past studies agree that

customer trust has a significant effect on the development of customer loyalty in both offline [17] and online shopping environments [18].

### 2.4 Online Loyalty

In a challenging and competitive business habitat like in the food sector, customer satisfaction alone is inadequate to guarantee business continuity, let alone increases business success [19]. The key to surviving and thriving in this ambitious environment is to have loyal customers. Loyalty is "a deeply held commitment to consistently repurchase a preferred product or service in the future despite situational influences and marketing efforts" [20]. It can be categorized into vendor loyalty, retail loyalty, service loyalty, and brand loyalty. Meanwhile, e-loyalty or online loyalty extends traditional loyalty by touching online technology as a mediating factor of the relationship between customers and companies. Researchers generally report online loyalty as customer loyalty on a website, indicated by his intention to access or revisit the website, order products or services, and recommend the website to others.

Figure 1 below depicts the relationships of all variables of this study.



**Figure 1** Model of research.

Hypotheses:

- H1: Food quality positively affects trust.
- H2: E-service quality positively affects trust.
- H3: Trust positively affects loyalty.

### 3. RESEARCH METHODS

All construct variables have been examined in previous studies. Food quality is measured by five indicators, e-service quality by eight indicators, loyalty by four indicators [13, 21], and trust by five indicators [13, 22]. All of the construct indicators were assessed using a 5-point Likert scale of 1 to 5: strongly disagree to strongly agree. An online questionnaire was distributed to customers in Bandung who have experienced buying culinary products using online applications or websites in the last five months. The data were gathered from January to February 2021, resulting in 433 valid responses for further analysis.

To achieve the research objective, the SEM-PLS approach was used. The analysis was carried out in three stages; firstly, outer model analysis, secondly, inner model analysis, and thirdly, hypotheses testing. The outer model analysis was conducted by observing

the factor loading, Cronbach's Alpha, and AVE values in order to ensure the validity and reliability of variables and indicators. Meanwhile, the inner model analysis or structural model analysis was carried out to ensure that the structural model is accurate and robust. The evaluation was conducted on several indicators which included: coefficient of determination ( $R^2$ ), predictive relevance ( $Q^2$ ), and Goodness of Fit Index (GoF).

### 4. RESULTS

The evaluation of the outer model was carried out by checking the validity and reliability of all constructs, measured using the loading factor, Cronbach's Alpha (CRA), composite reliability (CR), and average variance extracted (AVE). Table 1 describes that the loading factors of all items are higher than 0.6, both values of CRA and CR are higher than 0.7, and values of AVE are above 0.5 [23].

**Table 1.** Loading factor, CRA, CR, and AVE

Variables and Indicators	Loading	CRA	CR	AVE
<b>Food Quality</b>		0.794	0.859	0.550
Presentation	0.703			
Variety	0.680			
Taste	0.821			
Healthiness	0.701			
Freshness	0.794			
<b>E-Service Quality</b>		0.858	0.891	0.539
Data Security	0.719			
Easy to use	0.673			
Apps reliable	0.736			
Informative	0.782			
Transaction safety	0.725			
Enjoyment	0.763			
Apps visualisation	0.736			
<b>Trust</b>		0.870	0.906	0.659
Food provider trustworthy	0.827			
Apps work properly	0.833			
Data safety	0.739			
Food quality	0.855			
Food hygienist	0.800			
<b>Loyalty</b>		0.757	0.845	0.577
Continuity	0.786			
Recommendation	0.783			
Giving positive review	0.718			
Willingness to pay more	0.750			

Further, the Heterotrait-Monotrait method is recommended to assess the discriminant validity of the

construct [24]. Table 2 shows that all of the values are lower than 0.9, which indicates that the construct discriminant validity is met.

**Table 2.** Heterotrait-Monotrait Ratio (HTMT)

Construct	1	2	3
1. E-Service Quality			
2. Food Quality	0.853		
3. Loyalty	0.738	0.613	
4. Trust	0.767	0.791	0.670

Next, the evaluation of the inner model was carried out by looking at the values of R<sup>2</sup>, Q<sup>2</sup>, and GoF. The results are presented in Table 3.

**Table 3.** GoF value

Variabel	Q <sup>2</sup>	AVE	R <sup>2</sup>	
E-Service Quality		0.539		
Food Quality		0.550		
Trust	0.178	0.722	0.524	
Loyalty	0.393	0.646	0.309	
Average score		0.614	0.416	
AVE x R <sup>2</sup>				0.256
GoF = $\sqrt{(AVE \times R^2)}$				<b>0.506</b>

The value of GoF is 0.506, which explains that the model fitness is large [25]. In addition, Q<sup>2</sup> describes that all construct values are positive, which makes them have a good predictive of relevance [26].

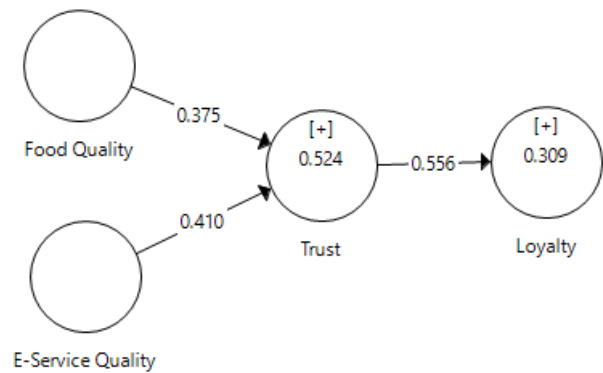
Table 4 shows the results of hypotheses testing. The t-values describe that both food quality and e-service quality have a positive and significant influence on trust; thus, both H1 and H2 are supported. Meanwhile, trust has a positive and significant effect on loyalty; thus, H3 is also supported.

**Table 4.** Structural estimates

Path (hypothesis )	$\beta$	t-value	Decision
H1. Food Quality -> Trust	0.375	6.846	Supported*
H2. E-Service Quality -> Trust	0.410	7.867	Supported*
H3. Trust -> Loyalty	0.556	13.134	Supported*

\* significant at p<0.05

Figure 2 displays the tested relationships between variables.



**Figure 2** The results of the tested model

### 5. DISCUSSION

This research discovers that food quality and e-service quality play a crucial role in developing customer trust in the context of online food delivery (OFD) service. They have a significant effect and positive association with customer trust. This finding is important since, in the Covid-19 pandemic outbreak, customers more consider their health risks when consuming a product or service. They can get infected by the virus from food, package, or delivering staff. Thus, they prefer to purchase food from trusted providers.

Next, path analysis shows that trust has a significant effect on loyalty. This finding supports the previous study which discovers that trust has a significant impact on the online environment [18]. In online transactions, especially during the pandemic, customer trust is important since health risk is the major cause of people choose not to dine in restaurants. They feel safer ordering food using an online delivery system. Thus, it is important for OFD service providers to reach customer loyalty and make their business more competitive by gaining customer trust.

### 6. IMPLICATION

This study denotes the importance of food quality and e-service quality in enhancing customer trust towards online food delivery (OFD) services. Both factors have a significant effect on trust; thus, food providers must improve the food quality such as nutrition, process, taste, product ingredients, and healthiness. Besides, the managers should also provide reliable, secure, and user-friendly applications in addition to posting informative and trusted information.

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