

The Role of Digital Customer Experience and Relationship Quality in Customer Loyalty in Food Delivery Applications

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Abstract

The usage of digital platforms for food delivery increased enormously during the COVID-19 pandemic because of the restrictions on mobility such as enforced working from home or studying from home. However, little is known about customer loyalty in food delivery applications. This study aims to investigate the relationship between digital platform usage and customer loyalty in food delivery applications. We hypothesize that the digital customer experience will mediate the digital platform usage to customer loyalty. The relationship quality will moderate the digital customer experience to customer loyalty. Using a survey, this research collected 297 respondents as the sample. This research used linear regression to test this relationship. The results revealed that digital platform usage had a strong positive relationship with customer loyalty, and a positive relationship with digital customer experience. The role of digital customer experience as a mediating variable and relationship quality as a moderating variable had a positive influence on the model although not as strong as the direct relationship between digital platform usage and customer loyalty. Digital customer experience influenced customer loyalty through repurchase intention and positive word-of-mouth.

Keywords:

customer experience; customer loyalty; food delivery application; food delivery in Indonesia; relationship quality.

1. Introduction

We Are Social noted that 74.4% of internet users in Indonesia used food delivery applications per month which is the highest in the world (Lidwina 2021). Brazil followed in second with 66.6% of internet users using food delivery apps, then Malaysia, China, and the United Arab Emirates with 66.5%, 66.4% and 65.1%, respectively. It shows that food delivery applications have gained high popularity, especially during the COVID-19 pandemic (Lidwina 2021). Food delivery digital platforms involve multiple stakeholders such as customers, suppliers, and partners in one single platform, serving all stakeholders' interests (Müller 2019). The highest food delivery digital platform usage in Indonesia was through Go-Food and Grab-Food. Go-Food consumers in the last quarter of 2019 reached 20 million which has grown double from the same period in 2018. These results were achieved because Go-Food was focusing on increasing consumer satisfaction. In the last four years, the number of completed orders has grown thirty times to 50 million completed orders per month by the last quarter of 2019. The number of merchants registered at Go-Food increased seventeen-fold to 500,000 merchants with 16 million menu items available (Safitri 2020). IDN Financials (2020) reported that merchants actively participating in Go-Food promotion programs were able to increase their income by approximately 60%. Grab-Food also increased their range from 13 cities in 2018 to 178 cities in 2019 with more than 150 merchants. Based on Grab-Food data, the merchants have an 88% income increase five months after joining Grab-Food (Grab.com 2019). The purpose of this research is to investigate the customer loyalty in the digital transaction context and the impact of digital platform usage towards customer loyalty, using relationship quality as the moderating variable and digital customer experience as the mediating variable.

1.1. Objectives

Customer experience refers to reaction or feedback as a result of interaction with the company's products or services. Few literature studies have been directed to the customer experience (Meyer and Schwager 2007; Barari et al. 2019; Cambra-Fierro et al. 2019), however, the aims of the studies were not towards digital customer experience especially in the context of digital transactions. Therefore, this study will extend the current literature on digital customer experience from the consumers' perspective.

Relationship quality is a construct that has consistently been utilized in research exploring consumers' behaviour and their ability to maintain business relationships (Nadeem and Al-Ilmamy 2020). As reported in past research, relationship quality is a multi-dimensional concept and the most used dimensions in relationship quality are trust, satisfaction, and commitment (Nadeem et al. 2019). Although many researchers have studied relationship quality, limited attention has been directed to relationship quality as a moderating role in the digital customer experience. Thus, the aim of this study is to investigate the moderating role of relationship quality towards digital customer experience and customer loyalty.

Studies on customer loyalty has been limited to e-commerce purchases (Srinivasan et al. 2002) and off-line purchases (Ahmad et al. 2016), and not directed to customer loyalty in digital platforms. Therefore, the aim of our study was to investigate customer loyalty in the digital transaction context and the impact of digital platform usage towards customer loyalty. Therefore, it was important to study the maturity of digital platform usage especially from the consumers perspective.

2. Literature review

To understand how digital platform usage can improve customer loyalty, this study proposes a research model to evaluate the effect of digital platform usage, and digital customer experience moderated by relationship quality, towards customer loyalty. The current study integrates various theoretical perspective generated from literature review to arrive at select constructs of the research model and establish relationships between them. The constructs used in this study are digital platform usage; digital customer experience; relationship quality; and customer loyalty.

2.1. Digital platform usage

Müller (2019) defined a digital platform as an organized common structure of products, services, and technologies, through which companies can create derivative products, services, and technologies. Digital platforms are likely to promote innovation and collaboration among partners by facilitating communication and coordination among numerous stakeholders. Many researchers have studied the digital platforms, but the studies were in the sharing economy context between digital sharing economy platforms and value creation (Nadeem and Al-Ilmamy 2020), digital platforms and the sharing economy (Sutherland and Jarrahi 2018), trust in digital sharing economy platforms from the providers' perspective (Li and Wang 2020), but these studies were not focusing on the impact of digital platform usage as the first step to participate in the digital transaction using digital platforms.

'Digital platform' in this study refers to specific mobile apps for ordering food and beverages which gained increasing popularity especially for customers looking for speed and convenience (Ganapathi and Abu-Shanab 2020). In the context of this study, the mobile apps refer to the Go-Food and Grab-Food apps which are widely used by consumers in Indonesia. Customers/users must register first into these mobile apps using their cell phone number to be able to use the apps for ordering food and beverages. Once registered, it is easy and convenient for the customers to browse the food and beverages to be ordered, including the restaurants within the delivery area (Ganapathi and Abu-Shanab 2020). The rating function embedded in the digital platform enables the consumers to evaluate the services provided and products sold through the digital platform (Sutherland and Jarrahi 2018). Users' perceptions are impacted by the quality of food and beverage ordering apps (Zhao and Bacao 2020), their positive experience in using the apps (such as ease of use, ease to browse the menu), the variety of food and beverages, and responsive customer service officers will have a positive impact on the intention of food and beverages app adoption. Yeo et al. (2017) stressed customers willingness to adopt mobile food and beverage ordering apps was affected by post-usage usefulness and perceived convenience motivations. Elvandari et al. (2018, as cited in Zhao et al. 2020) uncovered that the most significant factors influencing the adoption of mobile food and beverage ordering apps are order conformity, prices, service, and food quality.

2.2. Digital Customer Experience

Customer experience is defined as a customer's subjective reaction, response, or interpretation of a company's products and services through direct or indirect interaction (Jaakkola et al. 2015; Meyer and Schwager 2007, as cited in Barari et al. 2019). Direct interaction generally occurs when the customer purchases or uses the product/service. Indirect interaction usually involves unplanned encounters with the representation of a

company's products, services, or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, and reviews (Meyer and Schwager 2007). Firms may not be able to control or manage the customer experience since it depends on various factors such as customers' personal characteristics and preferences (Pekovic et al. 2020). Cambra-Fierro et al. (2019); Lemon and Verhoef (2016); and McColl-Kennedy et al. (2019) defined it as the customers' holistic perception of their experience, integrating the customers' reactions to all interactions and touchpoints that cover value creation, cognitive responses, and discrete emotions with the company over time. Digital customer experience is defined as series of interactions between a customer and a service provider (Bolton et al. 2018), which leave an accumulation of impressions and feelings from the sum of all digital touchpoint interactions between a customer and a business (Rasmussen and Henriksen 2019).

Customer experience quality in the digital platform may differ between offline or online channels. In offline purchases, customer will have direct interaction with the product and the seller whereby the customer will form an opinion on the quality of the interaction. In the online transaction, the interaction is not direct but through the digital platform; hence, the experience of the consumer will depend on the performance of the digital platform itself.

TTEC (formerly known as Tele Tech Holdings, Inc.), a leading global customer experience technology and services company, identified digital customer experience excellence from a customer perspective, consisting of six key components: channel flexibility; reachability; service convenience; purchase convenience; simplicity and ease of use; and personalization (Customer Strategist 2021). For the purpose of our research, we used purchase convenience, simplicity, and ease of use as the digital customer experience. Purchase convenience means the consumers are able to conduct the end-to-end transaction in the digital platform without problem or disruption. Simplicity and ease of use refers to the digital platform navigation, intuitive design, and simple guided journeys. It also means the digital platform is user friendly. Perceived convenience, simplicity, and ease of use in using the digital platform to conduct the end-to-end transaction will increase customers' intention to keep using the digital platform as a medium to conduct purchases. We suggest positive digital customer experience will increase customer loyalty and satisfaction.

2.3. Relationship quality

Relationship quality originates from relationship marketing, which mainly focuses on the formation of partnerships between the service providers and consumer (Tajvidi et al. 2017) to create value for both the service providers and the consumers (Nadeem et al. 2019). For example, interactions with the customer will be more positive if the quality of established relationship is higher, which can therefore contribute to customer loyalty. Relationship quality is a multi-dimensional concept that consists of trust, satisfaction, and commitment, and plays an important role in determining consumers' involvement and interests with products/services (Nadeem et al. 2019). Relationship quality is delineated as the intensity and tightness of a relationship (Nadeem et al. 2019). Trust is described as the customer's willingness and confidence to rely on an exchange partner (Nadeem and Al-Imamy 2020). Satisfaction is described as consumers' evaluation of the comprehensive performance of a product/service provider (Nadeem et al. 2019). Commitment is described as an exchange the partners believe the ongoing relationship is so important that it deserves effort to maintain it (Itani et al. 2019). These three constructs are the most used dimensions to describe the strength of customer and company relationship (Itani et al. 2019).

In an online setting, consumers face uncertainty as the product to be purchased cannot be seen or touched; thus, it is crucial to develop a good relationship with the customer. Nowadays, the customers have many choices and can easily switch the service provider if the customers are not satisfied with the product/services rendered by the service provider, because of low switching costs. We noted that the role of relationship quality in increasing customer loyalty within the digital transaction also received limited attention. Most of the studies related to relationship quality were conducted in an offline environment (Athanasopoulou 2009; Rafiq et al. 2013; Vieira et al. 2008). However, Walsh et al. (2010) revealed that relationship quality is equally important to retain customers in offline and online contexts, and the impact of the relationship quality dimension is very specific. Some researchers will look at the relationship quality as a global structure, but some of them often disaggregate the construct and measure the sub constructs individually (Nadeem et al. 2019). Walsh et al. (2010) stated that emotional commitment is generated through satisfaction and trust and is considered to be the determinant of customer loyalty in both offline and online environments. Therefore, in the research, we use trust and satisfaction as the dimensions of relationship quality, while commitment is elaborated further to measure customer loyalty. Therefore, this study measures the influence of relationship quality in moderating digital customer experience with customer loyalty, using trust and satisfaction as the dimensions. We suggest that relationship quality plays an important role as a moderator between digital customer experience and customer loyalty.

2.4. Customer Loyalty

Loyalty is described as an exceptionally held assurance of a customer purchasing a specific product repetitively in upcoming time no matter the promotional and conditional efforts. Loyalty is susceptible to shifting of brands (Ahmad et al. 2016) when the switching cost is low. Loyalty is often advantageous for both the sellers and the consumers and therefore consumers are willing and prepared to submit their loyalty and repurchase the products of the company that are able to deliver high product quality and services in contrast to competitors' offerings (Ahmad et al. 2016).

The creation of loyal customers is critical to the business as they contribute various positive effects. For example, loyal customers will spread positive word of mouth (WOM) for the company and are willing to pay higher costs to purchase products. Chang et al. (2009) defined customer loyalty as a commitment to repeatedly buy a preferred product/service and positive WOM consistently in the future. In general, online customer loyalty intentions are affected by various factors, such as customer satisfaction and relationship commitments. Therefore, in this study, we use commitment to define the customer loyalty behaviour using repurchase intention and positive word of mouth (WOM) as the dimensions to measure customer loyalty.

The proposed research model is depicted in **Figure 1** followed by the hypotheses of which the theoretical logic for each hypothesis has been elaborated in the literature review.

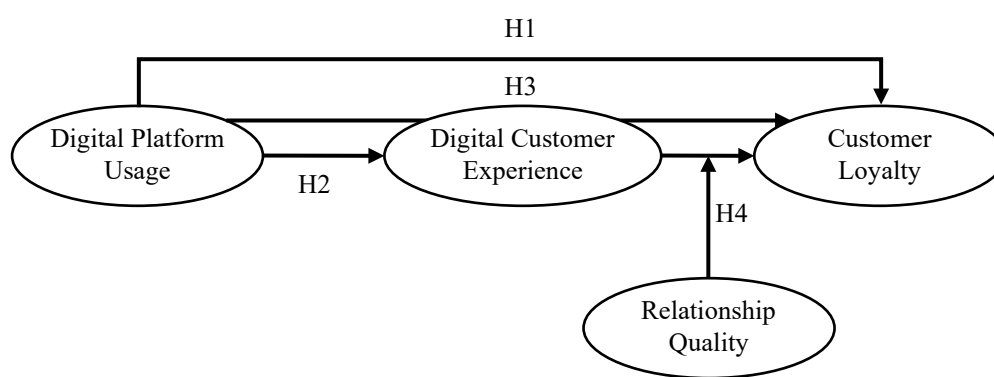


Figure 1. Research Model

H1: Digital platform usage has a positive relationship with customer loyalty.

H2: Digital platform usage has a positive relationship with digital customer experience.

H3: Digital customer experience mediates the relationship between digital platform usage and customer loyalty.

H4: Relationship quality moderates positively the relationship between digital customer experience and customer loyalty.

3. Method

Questionnaires were designed to measure the hypotheses of the four variables based on the Research Model depicted in **Figure 1**. The variables were operationalized using the following definitions, dimensions and indicators as shown in Table 1.

Table 1. Operationalized Variables

Variable	Definition	Dimension	Indicator
Digital Platform Usage (Müller 2019)	Customers use mobile application to purchase product (food and beverages) at a convenient time.		1. Customer always stick to food and beverages online application when ordering food and beverages online 2. Customer feels convenience in doing transactions using food and beverage online application.

Variable	Definition	Dimension	Indicator
Digital Customer Experience (Bolton et al. 2018; Rasmussen and Henriksen, 2019)	An experience felt by the customers when purchasing products (food and beverages) using mobile application including the functionality of the mobile application.		<ol style="list-style-type: none"> 1. Easy to find a product required in the food and beverage online application. 2. Customer feels ease in using the food and beverage online application. 3. Customer feels comfortable using the food and beverage online application.
Relationship Quality (Tajvidi et al. 2017; Nadeem et al. 2019)	The importance of maintaining a good partnership between seller and customers to build their trust, loyalty, and satisfaction.	Trust	<ol style="list-style-type: none"> 1. Customer feels secure using the food and beverage online application. 2. Customer feels confidence in the food and beverage online application.
		Satisfaction	<ol style="list-style-type: none"> 1. Customer feels satisfied buying products through food and beverage online application. 2. Customer feels the food and beverage online application is reliable by providing ratings of food and beverage quality and services. 3. Customer feels the food and beverage online application is reliable by providing complete food and beverage menus. 4. Customer feels satisfied with the service provided by the food and beverage online application regarding the order status information.
Customer Loyalty (Ahmad et al. 2016)	A customer commitment, to continuously use the same food and beverage online application in the absence of any promotion, and willing to spread good news of this food and beverage online application for free (Words of Mouth).	Customer repurchase intention	<ol style="list-style-type: none"> 1. Customer will definitely order food and beverages through the same food and beverage online application. 2. Customer will continue to use the same food and beverages online application regardless available promotion.
		Positive Words of Mouth	<ol style="list-style-type: none"> 1. Customer is willing to recommend the use of food and beverages online application to others who seek advice. 2. Customer will encourage friends and relatives to use the food and beverage online application. 3. Customer has favourable opinion about the food and beverage online application.

We used the first two indicators from digital platform usage variable as respondent filters to ensure the quality of responses, they are: (1) users of Go-Food, Grab-Food; and (2) have a usage frequency of at least two to three times a week.

4. Data Collection

Data was collected through online questionnaires targeting Go-food and Grab-food users as a study population, with customers or individuals as the unit of analysis. The selection of Go-food and Grab-food as e-delivery food and beverage digital platforms were based on the establishment of these two platforms in terms of features and functions, and they have large base of users.

In this study, we used a non-probability convenience sampling method. According to Memon et al. (2020), we needed a sample between 30 and 500 for a behavioural study based on Roscoe's (1975) guidelines which have been a common choice for the last few decades. We collected the data over seven days. A five-point Likert scale that ranged from 1: 'Strongly disagree' to 5: 'Strongly agree' were designed as the measurement tools of the online survey. From 449 respondents answering the questionnaire, we kept 297 valid answers that met the statistical criteria for further analysis. The sample profile is shown in Table 2.

Table 2. Sample Profiles

Variable	Percentage
Gender	
Female	64%
Male	36%
Age	
16 – 24 years	10.4%
25 – 40 years	44.1%
41 – 56 years	39.1%
Above 56 years	6.4%
Education	
High School	11.8%
Under-graduate	55.9%
Post-graduate	32.3%
(Frequency) How often do you order food & beverages through the online application?	
Almost everyday	61.6%
2 – 3 times a week	38.4%
(Preference) What is your favorite F&B online application?	
Go-Food	53.5%
Grab-Food	46.5%

Simple regression using SPSS version 25 was applied to analyse the data and test the measurements, mediation, and moderation models.

5. Results and Discussion

5.1. Numerical Results

A casual model to test the hypotheses and results showed that customer loyalty was explained by digital platform usage. Digital platform usage affected the digital customer experience positively and significantly (Table 3).

Table 3. Results of the Structural Model

Hypotheses	β	t-value	p-value
H1: Digital Platform Usage → Customer Loyalty	1.209	12.239	.000

H2: Digital Platform Usage → Digital Customer Experience	0.74	12.803	.000
Mediator			
H3: Digital Customer Experience mediates Digital Platform Usage → Customer Loyalty	0.759	7.546	.000
Moderator			
H4: Relationship Quality moderates Digital Customer Experience → Customer Loyalty	0.54	4.214	.000

Note: $p < 0.05$, t-value: positive

Based on the hypotheses test results, digital platform usage significantly influences customer loyalty ($\beta = 1.209$, $p < 0.05$); hence, H1 is supported. In addition, digital platform usage also positively and significantly influences digital customer experience ($\beta = 0.740$, $p < 0.05$); hence, H2 is supported. Furthermore, customer loyalty is also influenced by digital customer experience ($\beta = 0.759$, $p < 0.05$); thus, H3 is supported. With regards to the moderator variable, customer loyalty is affected by relationship quality ($\beta = 0.540$, $p < 0.05$); thus, H4 is supported. See Figure 2.

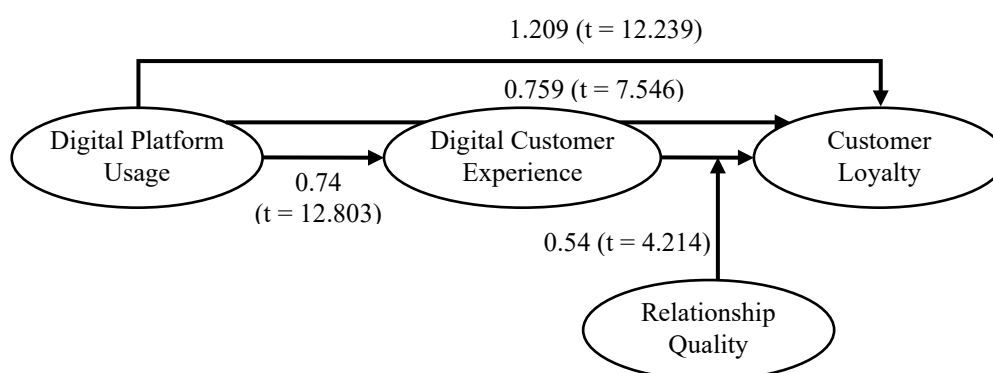


Figure 2. Structural model with results

Nadeem and Al-Imamy (2020) pointed that there are three types of mediation: i) complementary mediation where the direct effect is significant and its direction is the same as the indirect effect, ii) competitive mediation where a direct effect is significant but pointing in different directions, iii) full or indirect mediation where a direct effect is non-significant, and an indirect effect is significant. In this study, the first type of mediation model was achieved where the direct effect of digital platform usage on customer loyalty was positive and significant; the indirect effect of digital platform usage through digital customer experience was also positive and significant. Therefore, it can be ascertained that the relationship between digital platform usage and customer loyalty is mediated by the digital customer experience. The results of the mediation test are presented in Table 3.

To test the moderating effect of relationship quality between digital customer experience towards customer loyalty, we conducted a parametric test that yielded t-values and p-values to verify statistical significance. The results indicated relationship quality seems to significantly moderate the relationship between digital customer experience and customer loyalty ($t = 4.214$, $p < 0.05$). Therefore, it can be ascertained that the relationship between digital customer experience and customer loyalty is moderated by the relationship quality. The results of moderation test are presented in Table 3.

5.2. Proposed Improvements

The results of this study represent limited research that investigated the influence of digital platform usage on improving customer loyalty. This study answers the limited research on the influence of digital platform usage and customer loyalty. Unlike previous research that investigated the influence of digital platforms in the sharing economy context (Nadeem & Al-Ilmamy, 2020; Sutherland & Jarrahi, 2018; Li & Wang, 2020), this study

investigated the influence of digital platform in the digital transaction context and used current users of two digital food and beverages applications as a sample to measure customer loyalty. The results showed that digital platform usage significantly and positively influences customer loyalty. The results correlate with the respondents' profile whereby 83.2% of our respondents are Millennials (44.2%) and Gen X (39.1%) who are considered frequent users of digital platforms. Educational background is dominated by undergraduates (55.9%), followed by postgraduates (32.3%) and 11.8% still at high school.

Previous studies on digital platforms focused on digital platforms in relation to the sharing economy (Sutherland and Jarrahi 2018). The current study focused on the relationship between digital platform usage and digital customer experience and found that digital platform usage significantly and positively influenced the digital customer experience through usage accumulation.

Although not many studies focused on customer experience in digital platforms, this study found that digital customer experience was demonstrated to significantly mediate the relationship between digital platform usage and customer loyalty. Interestingly, this was consistent with a study by Barari (2019) in the online retailing context, who pointed out that service failure causes negative cognitive experience whereby dissatisfied customers may spread negative word of mouth. The intention of repurchase will be affected if the customer is dissatisfied with the service provided through digital platforms.

We found evidence that the two dimensions of relationship quality (trust and satisfaction) had a positive impact on customer loyalty as a moderating construct. This finding is consistent with research by Agag (2017) in e-commerce settings who measured relationship quality using two dimensions (trust and satisfaction) and found that relationship quality had a positive effect on customer intention to repurchase and customer loyalty.

The limitations of this study can be seen in the sample of only 297 respondents, from only two food delivery applications. This certainly is not generalizable for customer loyalty towards food delivery applications in Indonesia. The current study used the customers of food delivery application as the unit of analysis; hence, future studies may use food sellers as the unit of analysis to find out the impact of customer loyalty on their revenue and the impact of promotion on customer behaviour. The current study only employed two indicators for the digital platform usage construct that possibly led to a low Cronbach's Alpha value. Future research can add more indicators to increase the data reliability.

5.3. Validation

Data reliability was evaluated by assessing the internal consistency of the items representing each variable using Cronbach's Alpha with the threshold of 0.7 (Nunnally 1978) and results showed that except for the digital platform usage variable, the measurement scales were reliable as the Cronbach's Alpha values for the remaining variables were above the threshold value of 0.7. In addition, validity was tested using a Pearson correlation to correlate between each score item with a total score obtained from the respondents' answers to the questionnaire and the results showed all items were valid. Although the Cronbach's Alpha value for digital platform usage was below 0.7, the Pearson correlation test showed a valid result for all items under digital platform usage. The reliability and validity test is shown in Table 4.

Table 4. Construct Measurement, Validity, and Reliability

Constructs	Mean	Standard Deviation	Pearson Correlation	Cronbach's Alpha
1. Digital Platform Usage (DPU)				0.607
DPU1: Customer always sticks to food & beverage online application when ordering food & beverages online.	3.6633	0.88975	0.872**	
DPU2: Customer feels convenience in doing transactions using food and beverage online application.	4.03	0.76831	0.823**	
2. Digital Customer Experience (DCE)				0.848
DCE1: Easy to find a product required in the food and beverages online application.	4.0067	0.65756	0.859**	

Constructs	Mean	Standard Deviation	Pearson Correlation	Cronbach's Alpha
DCE2. Customer feels ease in using the food and beverage online application.	4.0067	0.68277	0.876**	
DCE3. Customer feels comfortable using the food and beverage online application.	4.0707	0.65118	0.893**	
3. Relationship Quality (RQ)				0.877
RQ1. Customer feels secure using the food and beverage online application.	3.8687	0.69233	0.808**	
RQ2. Customer feels confidence in the food and beverage online application.	3.9596	0.66148	0.791**	
RQ3. Customer feels satisfied buying products through the food and beverage online application.	3.9125	0.66709	0.809**	
RQ4. Customer feels the food and beverage online application is reliable by providing ratings of food and beverage quality and services.	3.8081	0.71674	0.78**	
RQ5. Customer feels the food and beverage online application is reliable by providing complete food and beverage menus.	3.7576	0.74104	0.771**	
RQ6. Customer feels satisfied with the service provided by the food and beverage online application regarding the order status information.	3.9731	0.61453	0.768**	
Customer Loyalty (CL)				0.834
CL1. Customer will definitely order food & beverages through the same food and beverages online application.	3.8047	0.73676	0.823**	
CL2. Customer will continue to use the same food and beverages online application regardless available promotion.	3.5690	0.96359	0.715**	
CL3. Customer is willing to recommend the use of food and beverages online application to others who seek advice.	3.7778	0.69587	0.814**	
CL4. Customer will encourage friends and relatives to use the food and beverage online application.	3.6330	0.71894	0.819**	
CL5. Customer has favourable opinion about the food and beverage online application.	3.8519	0.62461	0.774**	

Note: ** = valid

6. Conclusion

Understanding customer loyalty in digital platform usage for food delivery has become more important as food delivery application popularity significantly increased during the COVID-19 pandemic. The aim of this study was to investigate the factors that affected customer loyalty in food delivery applications. The results of this study confirm and contribute to the literature regarding customer loyalty in food delivery applications.

The conclusion of this study revealed that convenience in doing transaction was the main factor for customers to

use food delivery applications. Easy to use, easy to find products, and feeling comfortable in using food delivery application created positive digital customer experience as shown by the highest statistical mean of '4' compared with the other variables.

In terms of relationship quality, feeling satisfied with the services provided and being confident in using food delivery applications it became the customers' intentions to use food delivery applications. Although customers will continue to purchase through the same food delivery application, the intention to purchase through food delivery applications is affected by available promotions as shown by a statistical mean of 3.5690. In accordance with the findings, customer loyalty in food delivery applications is affected by digital customer experience as a mediating variable and relationship quality as a moderating variable.

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