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Factors Affecting Customer Satisfaction and Loyalty in Online Food Delivery Service during the COVID-19 Pandemic: Its Relation with Open Innovation

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Abstract: Online food delivery service (OFDS) has been widely utilized during the new normal of the COVID-19 pandemic, especially in a developing country such as Indonesia. The purpose of this study was to determine factors influencing customer satisfaction and loyalty in OFDS during the new normal of the COVID-19 pandemic in Indonesia by utilizing the extended theory of planned behavior (TPB) approach. A total of 253 respondents voluntarily participated and answered 65 questions. Structural equation modeling (SEM) indicated that hedonic motivation (HM) was found to have the highest effect on customer satisfaction, followed by price (P), information quality (IQ), and promotion (PRO). Interestingly, this study found out that usability factors, such as navigational design (ND) and perceived ease of use (PEOU) were not significant to customer satisfaction and loyalty in OFDS during the new normal of COVID-19. This study can be the theoretical foundation that could be very beneficial for OFDS investors, IT engineers, and even academicians. Finally, this study can be applied and extended to determine factors influencing customer satisfaction and loyalty in OFDS during the new normal of COVID-19 in other countries.

Keywords: online food delivery; customer satisfaction; new normal; COVID-19; theory of planned behavior

1. Introduction

Online food delivery service (OFDS) can be defined as any food delivery transaction with monetary value that is done through mobile handheld devices, such as smartphones or personal digital assistants [1]. OFDS is a common platform in 2020 due to the growth of internet users [2]. Academicians, marketing managers, and even retail industries are continuously engaged in the enhancement of OFDS, aiming to minimize the costs while maximizing the number of users. Indonesia is one of the developing countries that heavily utilizes OFDS in daily activities.

In Indonesia, OFDS consistently contributes to the sustainable revenue stream. It generated revenue of approximately $1.915 million USD in 2020 and is forecasted to increase by 54.8% in 2024 [3]. Apart from the revenue stream, the penetration rate of OFDS apps in Indonesia has also been predicted to grow positively in the future. In 2024, OFDS will penetrate around 11% of the total food delivery. This penetration rate is described as the number of customers who use OFDS apps compared to the whole target market. The pattern is constantly increasing because of the growing number of new users of OFDS apps.

New users of OFDS apps are mainly attracted by the advantages provided by these apps. OFDS apps provide almost everything that customers need in regards to buying food and beverages, which can be done with the touch of a button. Customers do not need to go out by themselves or make a call to the restaurant to order food. Utilizing these apps, customers are able to look up all nearby restaurants, see the menu options, and select the food or beverages that they want [2]. Furthermore, OFDS apps nowadays have also been equipped with digital payment instruments to make purchasing even easier. Because of this new behavior, in order to attract customers and increase brand awareness, many restaurants are available on OFDS apps [4].

However, restaurant availability is not the only factor that influences customer satisfaction when using OFDS apps. Other factors, such as ease of use, navigational design, and performance expectancy, will also influence customer satisfaction. For example, several studies have analyzed factors on consumers' initial app adoption during the early usage of OFDS apps [5–7]. As time goes on, customers become more familiar with these apps—they become adapted to the apps without experiencing technical issues. Since technical issues are decreasing, it is not enough to solely observe technology acceptance factors.

Additionally, several studies have already discussed behavioral factors that influence customer satisfaction and loyalty towards OFDS apps. Yeo et al. [8] analyzed convenience motivation, price, and time-saving orientation, as well as hedonic motivation towards OFDS. In addition, Prabowo and Nugroho [9] discussed prior online purchase experiences as determining factors that influence attitude and behavioral intentions to OFDS. Furthermore, Gunden et al. [10] explained habitual factors that influence one's intentions to use OFDS. Thus, OFDS apps have been an important topic in the past few years.

During the COVID-19 pandemic, OFDS has been widely utilized, especially in a developing country such as Indonesia. Indonesia was severely hit by the COVID-19 pandemic, with more than 1,099,687 positive cases and 30,581 deaths as of 3 February 2021 [11]; thus, some features in OFDS, such as delivery service and non-cash transactions, are very important [12]. Ali et al. [12] found that a moderating latent variable, such as the COVID-19 pandemic, had an influence on OFDS in Pakistan. Moreover, consumers rarely buy themselves to avoid being infected by the virus [12]. One of the most commonly utilized approaches to analyze this new behavior pattern is the theory of planned behavior approach.

Several studies have utilized the theory of planned behavior (TPB) in the context of OFDS apps. Lau and ng [4] utilized the theory of planned behavior to identify several factors (perceived ease of use, time saving orientation, convenience motivation, and privacy and security) towards behavioral intention of OFDS apps. Furthermore, Yeo et al. [8] utilized theory of planned behavior to analyze factors (hedonic motivation, prior online purchase, time saving orientation, and price saving orientation) influencing convenience motivation and post usage usefulness to determine attitude and behavioral intention towards OFDS apps. Despite the availability of existing studies about customer satisfaction and loyalty towards OFDS apps [4,8–10,12], there is a significant lack of research on addressing OFDS during the COVID-19 pandemic in Indonesia. It is important for further application of TPB to be implemented in the context of OFDS during the COVID-19 pandemic in Indonesia.

The purpose of this study is to determine factors influencing customer satisfaction and loyalty in OFDS measures in Indonesia during the new normal of the COVID-19 pandemic by using an extended theory of planned behavior (TPB) approach. This study analyzes factors affecting customer satisfaction and loyalty towards OFDS apps during the global COVID-19 pandemic. Finally, this study can be used and extended to measure the factors affecting customer satisfaction and loyalty towards OFDS apps in other countries in handling COVID-19 pandemic situations.

J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

3 of 16

2. Conceptual Framework

Figure 1 represents the Theoretical Research Framework of the current study. The building block of this proposed framework is the theory of planned behavior (TPB). Theory of planned behavior (TPB) is an extension of the theory of reasoned action and consists of three independent predictors of an individual's intention [13]: attitude toward behavior, subjective norm, and perceived behavioral control. An individual's intention is the main difference between theory of reasoned action and theory of planned behavior, which is located in the center of the model framework. In addition, an individual's intention is used to identify factors that influence a behavior and indicate how hard people are willing to try to perform the behavior [14].
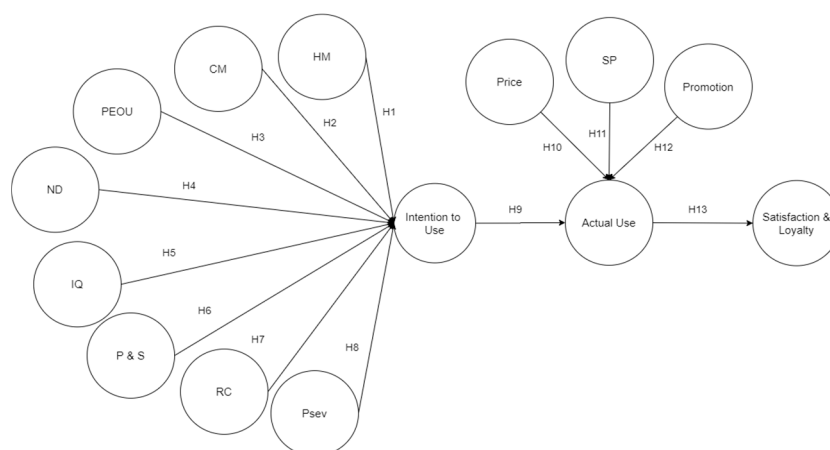

Figure 1. Theoretical Research Framework.

Based on Figure 1, there were 11 exogenous latent variables, which consist of hedonic motivation (HM), convenience motivation (CM), perceived ease of use (PEOU), navigational design (ND), information quality (IQ), privacy and safety (P and S), restaurant credibility (RC), perceived severity (PSEV), price, safe packaging (SP), and promotion. In addition, Figure 1 shows that there were three endogenous latent variables, which consist of intention to use, actual use, and satisfaction and loyalty.

Hedonic motivation can be translated into intrinsic motivation (e.g., happiness, fun, and pleasure), which can be driven from using new products or services [15,16]. The role of hedonic motivation was found by Yeo et al. [8] and it shapes customers' convenience and usefulness of online food delivery. Okumus and Bilgihan found that intrinsic motivation influences customers' behavior to use online food delivery services [17]. Thus, we hypothesized the following:

Hypothesis 1 (H1). *Hedonic Motivation had a significant direct effect on intention to use.*

In the urbanization era, people have become busier, and only have a limited amount of time to prepare food and dine in at restaurants [4]. As a result, people tend to use online food delivery services (OFDSs) to save time and effort associated with eating out. Convenience of time and effort are critical attributes to understand people's behavior towards OFDS [18]. People prefer to use OFDS apps to buy food and beverages because they can do the transaction at anytime and anywhere [19]. Furthermore, in this modern era, people find out that using OFDS is relatively easy and not time consuming. People can easily find out what they need through an intuitive navigational design of OFDS. Thus, we hypothesize the following:

Hypothesis 2 (H2). *Convenience motivation had a significant direct effect on intention to use.*

Hypothesis 3 (H3). *Perceived ease of use had a significant direct effect on intention to use.*

Hypothesis 4 (H4). *Navigational design had a significant direct effect on intention to use.*

Information quality and structure of information in mobile apps influences the users to enhance their loyalty towards it [20]. It is plausible because the users are demanding the up-to-date and complete information that is given at the right of detail before they use it. Misleading information will have an effect on the users of online food delivery service (OFDS) apps and makes them reluctant to use it. Thus, we hypothesized the following:

Hypothesis 5 (H5). *Information Quality had a significant direct effect on Intention to Use.*

Belanger et al. [21] defined privacy as accessing, copying, using, and destroying personal security information. These become the threat, which creates potential incidents related to security of payments and storing information through online transactions. By being secured while using online food delivery services (OFDS), people will have an urge to use OFDS. Thus, we hypothesized the following:

Hypothesis 6 (H6). *Privacy and Security had a significant direct effect on Intention to Use.*

Brand awareness of restaurants is very important for the users to use online food delivery services (OFDSs). The users tend to buy from well-known brands because they provide standard quality of food and outlet availability that are nearby the user's location [22–25]. Completing the brand awareness, the users also pay attention to the number of ratings given to a particular restaurant in deciding to use OFDS. Subsequently, the following hypothesis was proposed:

Hypothesis 7 (H7). *Restaurant Credibility had a significant direct effect on Intention to Use.*

Large-scale social restrictions during COVID-19 will cause closures of some restaurants that are not available to meet safety standards. For restaurants that are able to open, they need to implement social distancing procedures to minimize potential exposure to COVID-19. Although restaurants already strictly follow social distancing rules, there is still the possibility of individuals being infected. Therefore, using online food delivery services during the COVID-19 pandemic is a good solution to help prevent the potential spread of the virus. As a conclusion, we propose the following hypotheses:

Hypothesis 8 (H8). *Perceived severity of COVID-19 had a significant direct effect on intention to use.*

Hypothesis 9 (H9). *Intention to use had a significant effect on actual use.*

Hypothesis 10 (H10). *Price had a significant direct effect on actual use.*

COVID-19 can be spread through droplets, airstreams, and physical contact [26]. These reasons are, very likely, how COVID-19 is spread in the case of food delivery services. It is very common that food is prepared by a human; thus, it is impossible to eliminate human roles in preparing and delivering food to customers. During the COVID-19 pandemic, in order to alleviate customer concerns and minimize the spread of COVID-19, a sealed packaging is necessary. Sealed packaging can at least reduce the possibility of food and beverages from being contaminated during the delivery process. Health information of the employees who prepare the food is sometimes embedded in the packaging to make customers feel more comfortable. If customers are comfortable with using online food delivery services (OFDSs), it could lead to the actual use of using OFDS more in the future. Thus, we hypothesized the following:

Hypothesis 11 (H11). *Safety Packaging had a significant direct effect on Actual Use.*

Promotion in online food delivery services (OFDSs) will influence people to use these services. People will prefer using OFDS if it offers cheaper prices than restaurants. Moreover, OFDS needs to consider its terms and conditions when giving promos (e.g., expiration date and minimum payment). Short expiration dates and high minimum payments will directly affect people by encouraging them to use normal delivery services to an OFDS. Therefore, to make people more interested in using OFDS, promotions might be a good solution. The promotion must be reasonable (e.g., long expiration dates and low minimum payments) to attract people to use OFDS. Thus, we hypothesized the following:

Hypothesis 12 (H12). *Promotion had a significant direct effect on actual use.*

Experience economy is a condition where customers are willing to pay more if they enjoy the experiential value of the products/services [27]. Experiential value is created through interaction between the users and business providers. This interaction happens when people directly use or consume the products/services; in the current study, it lies in the actual use of OFDS. Actual use is very important for OFDS in order to attract loyal customers to consume the services more in the future. Subsequently, it will lead to customer satisfaction and loyalty. Thus, we hypothesized the following:

Hypothesis 13 (H13). *Actual use had a significant direct effect on satisfaction and loyalty.*

3. Methodology
3.1. Participants

The current study utilized a cross-sectional design. Due to the protocols surrounding the new normal of COVID-19 in Indonesia, an online questionnaire was distributed from 15 September to 10 October 2020. A total of 253 Indonesians (15–55 years) answered the online questionnaire (Table 1), which had a total of 65 questions, and was divided into 15 Segments (Table 2).

Table 1. Descriptive statistics of respondents.

Characteristics	Category	N	%
Gender	Male	119	47.04%
	Female	134	52.96%
Age	15–24	229	90.51%
	25–34	4	1.58%
	35–44	5	1.98%
	45–54	6	2.37%
	>=55	9	3.56%
Occupation	Students	203	80.24%
	Entrepreneur	19	7.51%
	Employee	28	11.07%
	Household wife/husband	3	1.19%
Average expenditure/month	<1 million rupiah	113	44.66%
	>1–3 million rupiah	109	43.08%
	>3–5 million rupiah	15	5.93%
	>5–7 million rupiah	11	4.35%
	>7–9 million rupiah	0	0%
	≥9 million rupiah	5	1.98%
Last education	High school or equivalent	163	64.43%
	Undergraduate (S1)	79	31.23%
	Postgraduate (S2/S3)	6	2.37%
	Others	5	1.98%

J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

6 of 16

Table 1. *Cont.*

Characteristics	Category	N	%
Online food delivery usage rate/month	1–5 times in a month	144	56.92%
	6–10 times in a month	67	26.48%
	11–15 times in a month	22	8.70%
	16–20 times in a month	10	3.95%
	21–25 times in a month	2	0.79%
	26–30 times in a month	3	1.19%
	⩾ 30 times in a month	5	1.98%

Table 2. Constructs and measurement items.

Construct	Items	Measures	References
Convenience motivation (CM)	CM1	I can use OFD to make an order anywhere and anytime	Lau and ng [4]
	CM2	I feel that using OFD can reduce my travel effort to buy food/beverages	Lau and ng [4]
	CM3	I think that OFD helps me to save my time instead of buying food/beverages by myself	Yeo et al. [8]; Prabowo and Nugroho [9]
Perceived ease of use (PEOU)	PEOU1	I can easily find things that I need in OFD application	Suhartanto et al. [28]
	PEOU2	I find that OFD has informative button to help me	
	PEOU3	I can complete a transaction quickly	
	PEOU4	I feel that OFD application in terms of design and position are well organized	
Navigational design (ND)	ND1	I feel that Navigation Bar in OFD app is helpful	Kapoor and Vij [2]
	ND2	I can easily jump into and back to other pages in OFD app	
	ND3	I think that dynamic filter helps me to find restaurant or dish that I look for	
	ND4	I feel that keyword search in OFD app can reduce my effort	
	ND5	I think that order tracking status is essential to customers	
Navigational design	ND6	I find that payment interface in OFD is easy to understand	Kapoor and Vij [2]
	ND7	OFD provides stage of shopping cart and I can easily go back to my shopping cart	
Information quality (IQ)	IQ1	I find that OFD provides me with up to date information related to restaurant, food and discount	Kapoor and Vij [2]
	IQ2	I enjoy using OFD because it gives me believable information	Kapoor and Vij [2]
	IQ3	I think that OFD app provides information at the right of detail that I need	Kapoor and Vij [2]
	IQ4	I feel that information in OFD app is in an appropriate format	Lee et al. [29]

J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

7 of 16

Table 2. *Cont.*

Construct	Items	Measures	References
Privacy and security (PS)	PS1	I can feel secure because OFD app has protective payment instrument steps before transaction occurs	Suhartanto et al. [27]
	PS2	I think that verification steps prior to usage both for user and driver can reduce the risk	
	PS3	I think that OFD provider should not give personal information to other agents	
Restaurant credibility (RC)	RC1	I think that restaurant rating in OFD app helps me to decide in making an order	Han et al. [30]
	RC2	I also concern with number of rating related to restaurant in making an order	
	RC3	I prefer to buy from restaurant that has popularity or good brand awareness	
	RC4	I think that outlets availability of restaurant is influencing me to make an order	
Perceived severity (Psev)	Psev1	I understand about social distancing regulations, so I choose to use OFD instead of dining in or buying it by myself	
	Psev2	I am afraid to dine in a restaurant due to COVID-19 pandemic	
	Psev3	I feel that OFD helps me to satisfy my craving for food during COVID-19 pandemic	
	Psev4	I feel that OFD is a solution to a limited seat capacity in a restaurant due to social distancing regulations	
	Psev5	I find that using OFD is helpful to have a food that I can't cook when I am lazy to go out	
Price (P)	P1	I think delivery price of OFD services is reasonable	Ray and Bala [31]
	P2	I think that tax price in using OFD services is reasonable	
	P3	I feel that OFD services overall price is affordable	
Safe packaging (SP)	SP1	I think that food/beverages must be sealed well especially during COVID-19 pandemic situation	
	SP2	I also concern with packaging material that influences food cleanliness	
	SP3	I find that health information of people involved in preparing and delivering my order ensures the food hygiene	
Promotion (Pro)	Pro1	I feel that discount provided encourages me to use OFD services	Kapoor and Vij [2]
	Pro2	Terms and conditions of promotion are important to me before I use OFD services	
	Pro3	I think that promotion expiry date influences me in making an order	

Table 2. *Cont.*

Construct	Items	Measures	References
Hedonic motivation (HM)	HM1	I don't use OFD only for fulfilling my basic needs	Lee et al. [29]; Prabowo and Nugroho [9]
	HM2	I usually spend more using OFD rather than buying it by myself due to minimum purchase and promo	
	HM3	I find that using OFD is very enjoyable to give food/beverages to someone else	Yeo et al. [8]; Prabowo and Nugroho [9]
Intention to use (ITU)	ITU1	I intend to continue using OFD in the future	Lee et al. [29]
	ITU2	I will always try to use OFD in my daily life	
	ITU3	I plan to continue to use OFD frequently	
	ITU4	I have decided to use OFD for purchasing food/beverages the next time	
Actual use (AU)	AU1	When buying food, I always use OFD app	Suhartanto et al. [27]
	AU2	I prefer to use OFD app rather than delivery service owned by the restaurant	Rivera [32]
	AU3	I always check the available food/restaurants	
	AU4	I always check the notification and promotions	
Satisfaction and loyalty (SL)	SL1	I am satisfied with the way OFD app carried out transaction	Alalwan [33]
	SL2	Overall, I was satisfied with the OFD services	Suhartanto et al. [27]
	SL3	I always subscribe to OFD promotions	
	SL4	I will use the OFD again in the future	Cai and Leung [34]
	SL5	I will promote the OFD to other people	Zhao and Bacao [35]
	SL6	I will share the testimonial of using OFD to the public	

3.2. Questionnaire

Following the theoretical framework explained before, we developed a self-administered questionnaire for this study to analyze factors that affect online food delivery services during the COVID-19 situation in Indonesia (Table 2). The questionnaire consisted of one introduction section: demographic information (gender, age, occupation, food expenses/month, last education, number of OFDs usage per month); and 14 sections: (1) convenience motivation, (2) perceived ease of use, (3) navigational design, (4) information quality, (5) privacy and security, (6) restaurant credibility, (7) perceived severity, (8) price, (9) safe packaging, (10) promotion, (11) hedonic motivation, (12) intention to use, (13) actual use, (14) satisfaction and loyalty. All latent constructs included in the SEM were measured by using a 5-point Likert scale.

3.3. Structural Equation Modeling

Structural Equation Modeling (SEM) is a powerful statistical technique used for identifying, estimating, and testing causal relationships between the latent variables [36,37]. AMOS 22 with maximum likelihood approach was utilized to derive the causal relationships of the proposed hypotheses construct.

Supporting the analysis of the SEM model, six measurements were used to evaluate the model fit: incremental fit index (IFI), Tucker–Lewis Index (TLI), comparative fit index (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and root mean square error of approximation (RMSEA) [38–40]. A value of 0.9 or higher was suggested for

IFI, TLI, and CFI to have a good model [36,38,41,42]. For GFI and AGFI, a value greater than 0.8 was the minimum requirement that indicated a good model [43]. Finally, the RMSEA value should be less than 0.07 to indicate a good model [36,44].

4. Results

Figure 2 describes the initial SEM to determine factors influencing customer satisfaction and loyalty in OFDS measures among Indonesians during the new normal of COVID-19 in Indonesia. As seen in Figure 2, several hypotheses were not significant: convenience motivation on intention to use (Hypothesis 2); perceived ease of use on intention to use (Hypothesis 3); navigational design on intention to use (Hypothesis 4); privacy and security on intention to use (Hypothesis 6); restaurant credibility on intention to use (Hypothesis 7); perceived severity on intention to use (Hypothesis 8); and safety packaging on actual use (Hypothesis 11). Therefore, a revised SEM model was constructed by omitting those hypotheses. Furthermore, in order to enhance the model's fit, some modification indices were applied. Modification indices is an approach to improve the fitness of the model recommended by Hair [38]. Using the suggested modification indices, discrepancies between the conceptualized and estimated model can be minimized. Subsequently, the final SEM is presented in Figure 3.
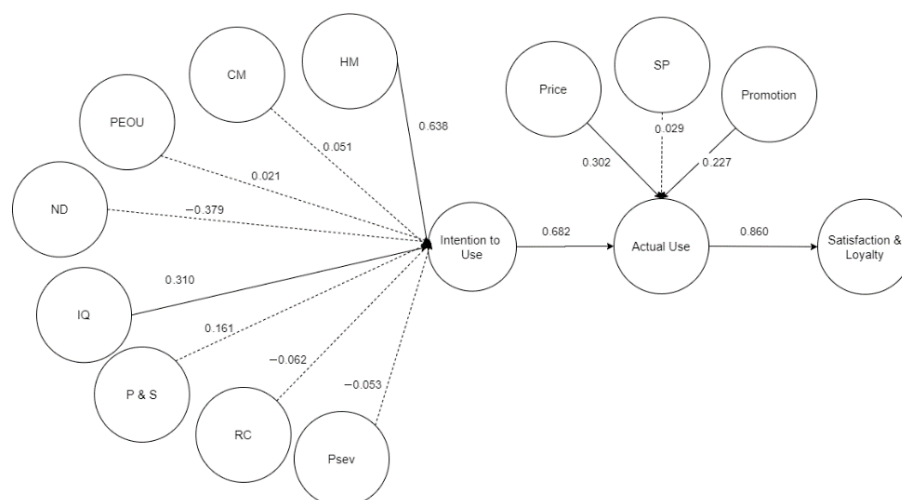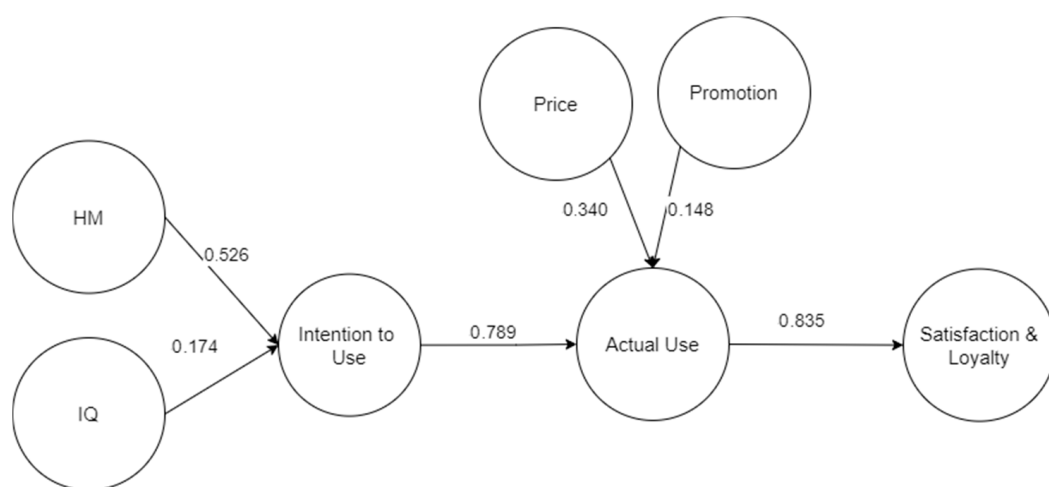

Figure 2. Initial result of SEM.

Figure 3. The final SEM to determine factors affecting customer satisfaction and loyalty in online food delivery service (OFDS) among Indonesians during the new normal of the COVID-19 pandemic.

J. Open Innov. Technol. Mark. Complex. **2021**, *7*, 76

10 of 16

Completing the final results, Table 3 demonstrates the results of factor loadings, validity, and reliability of each indicator and construct. In addition, Table 4 describes the model fit of the final SEM. IFI, CFI, and TLI values were greater than the suggested cutoff of 0.90, which indicated that the final constructed model really represents observed data. Furthermore, the GFI and AGFI values were respectively 0.845 and 0.797, which indicate the good model. RMSEA value was 0.066, which was also below the recommended value that indicates a good model.

Table 3. Factor Loadings, validity, and reliability.

Factor	Item	Factor Loadings	Cronbach's α	Average Variance Extracted (AVE)	Composite Reliability (CR)
Convenience motivation	CM1	0.59	0.631	0.387	0.653
	CM2	0.69			
	CM3	0.58			
Perceived ease of use	PEOU1	0.67	0.808	0.523	0.814
	PEOU2	0.75			
	PEOU3	0.75			
	PEOU4	0.72			
Navigational design	ND1	0.79	0.810	0.524	0.884
	ND2	0.74			
	ND3	0.56			
	ND4	0.55			
	ND5	0.41			
	ND6	0.71			
	ND7	0.55			
Information quality	IQ1	0.66	0.835	0.534	0.820
	IQ2	0.82			
	IQ3	0.77			
	IQ4	0.66			
Privacy and security	PS1	0.64	0.777	0.553	0.786
	PS2	0.82			
	PS3	0.76			
Restaurant credibility	RC1	0.78	0.744	0.440	0.754
	RC2	0.74			
	RC3	0.56			
	RC4	0.54			
Perceived severity	PSEV1	0.64	0.751	0.419	0.776
	PSEV2	0.40			
	PSEV3	0.70			
	PSEV4	0.80			
	PSEV5	0.63			
Price	P1	0.85	0.891	0.734	0.892
	P2	0.87			
	P3	0.85			
Safety packaging	SP1	0.76	0.791	0.569	0.798
	SP2	0.80			
	SP3	0.70			
Promotion	PRO1	0.66	0.717	0.461	0.718
	PRO2	0.62			
	PRO3	0.75			
Hedonic motivation	HM1	0.65	0.661	0.407	0.672
	HM2	0.67			
	HM3	0.59			

J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

11 of 16

Table 3. *Cont.*

Factor	Item	Factor Loadings	Cronbach's α	Average Variance Extracted (AVE)	Composite Reliability (CR)
Intention to use	ITU1	0.65	0.836	0.587	0.849
	ITU2	0.78			
	ITU3	0.85			
	ITU4	0.77			
Actual use	AU1	0.64	0.660	0.278	0.602
	AU2	0.51			
Satisfaction and loyalty	SL1	0.42	0.817	0.393	0.791
	SL2	0.54			
	SL3	0.71			
	SL4	0.68			
	SL5	0.67			
	SL6	0.69			

Table 4. Model Fit.

Goodness of Fit Measures of SEM	Parameter Estimates	Minimum Cut-Off	Suggested by
Incremental fit index (IFI)	0.92	>0.90	Hair [38]
Tucker–Lewis index (TLI)	0.90	>0.90	Hu and Bentler [41]
Comparative fit index (CFI)	0.91	>0.90	Hair [38]
Goodness of fit index (GFI)	0.85	>0.80	Gefen et al. [43]
Adjusted goodness of fit index (AGFI)	0.81	>0.80	Gefen et al. [43]
Root mean square error (RMSEA)	0.066	<0.07	Steiger [44]

5. Discussion: Food Delivery in the COVID-19 Pandemic and Open Innovation

5.1. Discussion: Customer Satisfaction about Food Delivery in the COVID-19 Pandemic

The current study used an extended theory of planned behavior (TPB) to determine factors influencing customer satisfaction and loyalty in OFDS during the new normal of COVID-19 in Indonesia. The SEM approach was utilized to identify interrelationship among latent variables: hedonic motivation (HM), convenience motivation (CM), perceived ease of use (PEOU), navigational design (ND), information quality (IQ), privacy and security (P and S), restaurant credibility (RC), perceived severity (PSEV), intention to use (ITU), price (p), promotion (pro), safe packaging (SP), actual use (AU), and satisfaction and loyalty (SL).

SEM found that hedonic motivation (HM) had a significant direct effect on intention to use (ITU) (β = 0.53, p = 0.001), which supports the claim by Yeo et al. [8]. HM can be described as an irrational purchasing pattern because it does not align with economic principles to cover basic needs. Instead, customers make a purchase in order to fulfill a pleasure, and it is heavily influenced by the surroundings in which the user is in. Moreover, HM strongly affects emotional arousal, which triggers customers to make a purchase [9]. The respondents mostly felt that they utilized OFDS, not only for fulfilling the basic needs, but also as an enjoyable platform for buying food for someone else. In addition, the respondents agreed that they spent more money while using OFDS rather than buying it directly from the stores due to the minimum purchase and promotion discount provided.

However, HM does not only influence the user to use OFDS, but also information quality (IQ). IQ can be described as the extension of a system that provides the user with useful and relevant information in a speedy and accurate manner [9]. The SEM indicated that IQ had a significant direct effect on ITU (β = 0.17, p = 0.042). Based on the finding indicators, the up-to-date and detailed information related to restaurants, food, and even discounts provided in an appropriate place were the keys for IQ, influencing customer intentions toward OFDS. Afterwards, it would lead to customer satisfaction and loyalty towards OFDS. The reason why IQ beta coefficient was not as high as HM could be that

customers take it for granted. It means that IQ involves basic features that OFDS must have, but it is not the main reason why people want to use OFDS. Although IQ was found not as strong as HM in influencing users to use OFDS, IQ was still important because no one wants to buy a product or use a service that they do not know. However, people will not use OFDS when those basic expectations do not exist. It is logically correct that information related to the restaurant, menu, location, food price, and delivery price are a must in OFDS, so the users are fully informed before making a purchase.

Price was found to have a significant direct effect on actual use ($\beta = 0.34$, $p = 0.001$). As discussed earlier, one of several pieces of information, important for customers in making a purchase, is price. Price, which includes food, tax, and delivery price, can determine customer willingness to pay and their perceptions toward OFDS. Customer perceptions toward OFDS can be measured by how much money they can save by using it. The more money a customer saves, or the lower the price that the customers pays, the more the customer tends to perceive that a related service is convenient to use [9]. Interestingly, SEM revealed that price has the second-largest effect after HM on the model framework. It is plausible, since HM is the main factor that encourages customers to use OFDS. In contrast, although customers have intentions to use OFDS, if the price is too high, they will cancel the order using OFDS. In addition, promotion as a complement to price is useful to make customers keep using OFDS.

OFDS provides many promotions, such as discount coupons and free delivery services to attract customers. Promotion is another useful method for cognitive evaluation of a product and purchasing decision [45]. The result of the study confirmed that promotion had a significant direct effect on actual use ($\beta = 0.15$, $p = 0.019$). When OFDS provides a discount coupon and free delivery service, people will have more positive perceptions about the product value than without the promotion [46]. According to several studies [46,47], promotion is an important marketing tool for e-retailers to influence customers' purchasing decisions. Sun et al. [30] found that promotion will make customers switch to another brand. Apart from it, promotion is also effective at attracting new customers and making them actual users [48]. However, customers also consider the terms and conditions of discounts (e.g., minimum purchase, discount percentage, and expiry date) in OFDS before making a purchase.

As the customers start using OFDS, they become more familiar with the interface of OFDS. This new behavioral pattern makes the usability factor, such as navigational design (ND)—which used to be significant [2] in affecting the purchase/conversion using OFDS—no longer relevant with the current conditions. Furthermore, this new trend was also supported by an existing study [4] that stated perceived ease of use had no significant direct effect on behavioral intention of OFDS. It is proven with Hypothesis 3 "Perceived ease of use had a significant direct effect on intention to use", which was proven to be insignificant in the SEM result ($\beta = 0.021$, $p = 0.933$). These changes in customer behavior are logically correct since customers have spent a lot of time in using OFDS and already passed the learning phase moments when they encountered many technical problems.

5.2. Discussion: Open Innovation in Food Delivery in the COVID-19 Pandemic

Some findings in this study, such as the support of the hypothesized relationship between promotion (Pro) and actual use, as well as hedonic motivation (HM) and Intention to use (ITU), leads to another topic of discussion: open innovation. It should be noted that open innovation, when implemented, can lead to a steady development of the service industry, including the food industry [49]. An OFDS, as the findings of this study suggest, will have increased intention and actual use when factors, such as Pro and HM, are also enhanced. Furthermore, both Pro and HM have unique attributes that connect both to open innovation. This is due to how open innovation disrupts the boundary of limitations that exist in a business. An open innovation implemented in a business will enable technologies, ideas, and knowledge to freely cross inside and outside of the business. Ideas from employees, students, or even customers on a research project will help develop an OFDS in

many aspects. For example, customers can give ideas related to which types of promotions encourage them to using an OFDS. Employees in an open innovation system will also have the opportunity to suggest to management what kinds of features or services increase the enjoyment of an OFDS user.

6. Conclusions

The COVID-19 pandemic was a serious global crisis in 2020. In Indonesia, there were more than 1,099,687 positive cases and 30,581 deaths as of 3 February 2021 [11]. The current study utilized an extended theory of planned behavior (TPB) to determine factors affecting the customer satisfaction and loyalty in OFDS during the new normal of COVID-19 measures among Indonesians. A total of 253 voluntary respondents voluntarily participated and answered 65 questions distributed among 15 categories. The results of structural equation modeling (SEM) indicated that hedonic motivation had the most significant direct effect on the intention to use (ITU). Furthermore, Price (P) also had a significant direct effect on the actual use (AU), followed by information quality (IQ), which had a significant effect on ITU, and promotion (Pro) had a significant effect on AU.

Interestingly, this study found that usability factors related to technical issues were proven not significant. The current study analyzed factors affecting customer satisfaction and loyalty in OFDS measures during the new normal of the COVID-19 pandemic. The study results could be used as a reference for OFDS developers to improve their service quality. Furthermore, this study suggested that OFDS providers must pay attention to a customer's hedonic motivation (HM), price (P), information quality (IQ), and promotion (Pro). Finally, this study can also be applied to evaluate the factors affecting customer satisfaction and loyalty in OFDS measures in other countries, which are also dealing with the COVID-19 pandemic.

6.1. Theoretical Contribution

This study contributes to several theoretical contributions to the existing literature of OFDS usage in Indonesia. Firstly, the contribution was to provide novelty surrounding the factors that affect the usage of OFDS, especially during the new normal of COVID-19. During the new normal of COVID-19, there were additional factors that customers needed to consider before ordering their food—these factors were modeled and analyzed using structural equation modeling (SEM). According to Prabowo and Nugroho [9], SEM has the ability to recognize the relationship between constructed variables, simultaneously, and the results can be generalized into targeted populations. This justifies that the result of SEM analysis is trustworthy and reliable.

Secondly, the contribution would be related to the theory that was utilized in this study. This study utilized and extended the theory of planned behavior (TPB), being implemented in a new context of the COVID-19 pandemic in Indonesia. Similar to findings by Ajzen and Fishbein [13] and Ali et al., [12], this study carefully analyzed the customer attitudes, perceived behavioral control, and subjective norms through constructed exogenous latent variables. Likewise, these exogenous latent variables will influence customer behaviors towards OFDS.

6.2. Implications to Practice

The findings from this study can be used to increase the number of people using OFDS in the future, but several aspects need to be considered. Interestingly, our findings proved that hedonic motivation (HM) was the most important aspect. Thus, the OFDS developer needs to build a strong perception that using OFDS is enjoyable and interesting. In addition, marketers also need to instill a mindset that OFDS is a part of the user's lifestyle. In order to cultivate OFDS in the user's lifestyle, both traditional media (e.g., television, radio, newspapers) and social media (e.g., Facebook, Instagram, YouTube) should be used as a platform to advertise OFDS to the potential users [50,51].

J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

14 of 16

Once advertisement issues are handled, it is strongly suggested that OFDS developers focus on the prices related to food, tax, and delivery price via OFDS. Supporting the latent variables, price (P) and promotion (PRO) were important in influencing customer satisfaction and loyalty in OFDS. Collaborating with restaurants is one way to create a proper price strategy. Thus, the OFDS developer, together with the restaurant provider, should set the food price to a reasonable amount and give regular promotions.

Furthermore, usability factors were proven not significant in influencing customer satisfaction and loyalty in OFDS during the new normal of COVID-19 in Indonesia. Therefore, OFDS developers should not primarily invest resources in improving the quality of usability, such as navigational design (ND) and perceived ease of use (PEOU). In contrast, OFDS developers must place emphasis on deciding reasonable prices, and offering discounts and promotions regularly to trigger customers to use OFDS more. As a complement, the OFDS developer must also provide customers with believable, detailed, and structured information quality (IQ) in an appropriate format. Therefore, customers will have less hesitation in using OFDS, leading to increased satisfaction and customer loyalty in utilizing OFDS.

6.3. Limitations and Future Research

Despite the study's significant contributions, we would like to acknowledge several limitations of the study, in addition to its significant findings. First, most of the respondents came from low-income/allowance backgrounds. Moreover, 90.51% of the sample was in the 15–24 age segment. Hence, this sample may not be able to capture the whole OFDS targeted population, mainly dominated by young consumers [28,51]. Future studies need to expand their sample demographics in order to reach the whole OFDS targeted population.

Second, this study also utilizes the COVID-19 pandemic, corresponding to OFDS usage from September to October 2020. One of the variables related to OFDS during the COVID-19 pandemic would be safe packaging (SP). The final framework showed that SP was not significant in influencing the usage of OFDS. This result could be related to the samples, which were mostly millennials, and they perceived it as not important. They considered the price and promotion instead of safe packaging. Thus, it is logically correct if price and promotion had significant impacts on the actual use.

Third, our study was mainly focused on the restaurant to the costumer through an outsourcing platform, since this type of OFDS is the most common in Indonesia. In fact, there are other types of OFDSs, such as platform to consumer (immediately) or restaurant to costumer (through self-delivery). Future research should be done to investigate the acceptance between these types.

Finally, this study has not considered the impact of cultural factors (e.g., food habits, health consciousness, family size, and lifestyle). For future study, the researchers suggest using cultural factors that could have a direct and indirect effect on satisfaction and loyalty towards OFDS. Unfortunately, our study only considered the direct factors, such as price, promotion, and safe packaging, which directly relate to the food. Future research could incorporate several indirect factors, such as the number of restaurants, menus, and driver attitudes.

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J. Open Innov. Technol. Mark. Complex. **2021**, 7, 76

15 of 16

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