The Roles of Customer Perception of Innovativeness and Engagement on Loyalty through Value Co-Creation Behaviors: The Case of Food-delivery Service

Adinda Toti Paringan[1]*; Santi Novani[2]

[1,2]School of Business and Management, Institut Teknologi Bandung
Jln. Ganesha no. 10, Bandung 40132, Indonesia
[1]adinda_toti@sbm-itb.ac.id; [2]snovani@sbm-itb.ac.id

ABSTRACT

The food delivery service that has gained popularity over the last few years should preserve its competitiveness by developing customer satisfaction and loyalty through customer value co-creation behaviors. However, there is still limited literature on understanding the antecedents and implications of customer value co-creation behavior in the service industry. The research aimed to evaluate the effect of customer perceptions of innovativeness and customer engagement on value co-creation behavior. Also, this study wants to reveal the relationship between value co-creation behavior on customer satisfaction and loyalty in food delivery services, using Service-Dominant (S-D) logic perspective. A survey of Indonesian GoFood customers was conducted through an online questionnaire. Then, 349 complete responses were empirically analyzed using the Partial Least Squares-Structural Equation Modeling (PLS-SEM) method. The findings reveal that customer engagement and perceived innovativeness affect customer value co-creation behavior. However, customer participation does not immediately increase customer loyalty. Instead, it must be accompanied by an increase in customer satisfaction. By investigating the antecedents and implications of value co-creation behavior among food delivery service users, the research provides practitioners with viable business strategies for maximizing customer loyalty by evaluating service innovation and the customers' behavior in co-creation value. Moreover, the research contributes to the theoretical development of customer value co-creation behaviors and the foodservice business.

Keywords: customer perception of innovativeness, customer engagement, customer loyalty, customer value co-creation behaviors, food-delivery service

INTRODUCTION

Online Food Delivery Service (OFDS), one of the developments in user-friendly services, is currently transforming the food and beverage industry. OFDS refers to services that offer ready-to-eat food that can be ordered online through specific platforms. It is widely regarded as the optimal marketing technique to increase sales and grab more significant food and beverage industry shares (Yusra et al., 2020). Around 74,4% of Indonesian Internet users utilize OFDS, generating 1,95 billion US dollars in revenue, and it

is predicted to rise at 35,2% of the annual rate (Kemp, 2021). Although OFDS tends to be a promising business model nowadays, the market's characteristics remain unclear (Kowalczuk, Stangierska, Gębski, Tul-Krzyszczuk, & Zmudczyńska, 2021; Yeo, Goh, & Rezaei, 2017).

Additionally, enthusiasm for OFDS has grown due to the coronavirus pandemic, which requires the public to restrict travel and adhere to strict health protocols (Prasetyo et al., 2021; World Health Organization, 2021). There has been a 67% growth in restaurants' delivery services globally, with the

online delivery service market reaching 3,5 trillion US dollars in 2020 (Statista, 2021). As a result of the coronavirus pandemic, customers' preferences and expectations have shifted from offline to online. It has compelled the foodservice industry to digitalize by utilizing food delivery services (Chai & Yat, 2019). The OFDS application provides various benefits that customers require, particularly during a pandemic. Customers can order food without leaving their homes by just pressing a button and making digital payments (Prasetyo et al., 2021).

However, as consumers' interest in ordering food via OFDS rises, new entries mobile applications with similar features begin to grow aggressively and tighten business competitiveness (Hooi, Leong, & Yee, 2021; Kartono & Tjahjadi, 2021). Hence, to sustain the viability of the business and its competitive advantage, providers must maintain positive relationships with their customers by analyzing customer participation and perception of the online service to obtain customer loyalty (Yusra et al., 2020). Customer participation in the service process benefits both customers and service providers since it can enhance satisfaction (Opata, Xiao, Nusenu, Tetteh, & John Narh, 2020; Solakis, Peña-Vinces, Lopez-Bonilla, & Aguado, 2021), leading to recurrent purchase behavior, which can lead to higher customer loyalty (Lee, Pan, Hsu, & Lee, 2019), and increase service organizations' sustainability (Chen, Weng, & Huang, 2018; Shannahan, Bush, Shannahan, & Moncrief, 2017). Thus, the research will examine the relationship between customer behavior on value co-creation and the antecedent factors in the food delivery service platform that influence customer satisfaction and loyalty to assist service providers in retaining customer loyalty and preventing customers from switching to competitors.

Value co-creation is how providers and customers exchange knowledge and resources to produce mutually beneficial value for the company (Prahalad & Ramaswamy, 2004). Following this notion, according to Sharafi Farzad, Kolli, Soltani, and Ghanbary (2019), value co-creation is the interaction between customers and providers and the communication links amongst customers regarding particular industries that generate value. Additionally, according to the Service-Dominant (S-D) logic perspective, customer collaboration is the primary driver of increasing a company's performance (Vargo & Lusch, 2004). Customers who engage in value co-creation will exhibit a unique behavior named value co-creation behavior (Yen, Teng, & Tzeng, 2020). Value co-creation behavior is a voluntary action taken by customers without the company's involvement. Previous research has developed a scale to measure value co-creation behavior which is characterized by two types of behavior: customer participation and customer citizenship (Yi & Gong, 2013).

Customer participation (in-role) behavior must be carried out to ensure the success of value co-creation by actively participating in the service process with the service providers (Yi & Gong, 2013).

Customer participation behavior is described as customers' interaction with providers, such as sharing order information in detail, completing responsible behavior, and personal interaction during the delivery process. This behavior is essential to the development of a business since it enables the development of market-accepted products and services. Customers and providers should communicate to ensure a high service delivery performance. It is essential because customers will be more satisfied when the providers fulfill their needs and expectations, which is critical for competitive business advantage (Moghadamzadeh, Ebrahimi, Radfard, Salamzadeh, & Khajeheian, 2020).

Meanwhile, customer citizenship (extra-role) behavior refers to customers' activities that may voluntarily provide value to a business, although it is not mandatory for value creation with the providers (Ida, 2017; Yi & Gong, 2013). Customer citizenship behavior refers to the customers' behavior that involves assisting, advocating for other customers, giving feedback to providers, and tolerating service process errors. This behavior can indicate a company's success or failure and determine the provider's business model suitability. It is essential for businesses because it can increase the value and performance of firms that are typically impacted more by external than internal factors (Moghadamzadeh et al., 2020). Enhancing customer participation behavior and customer citizenship behavior can generate additional value and help the business maintain its sustainability.

However, value co-creation behavior may increase when customers are involved in innovative service processes (Yen et al., 2020). According to Choi, Ahn, and Kim (2020), a South Korean gaming exhibition study demonstrates that customers who perceive innovation in service will exhibit increased customer citizenship behavior toward both fellow customers and providers. Meanwhile, another study conducted in Hungary by Ida (2017) with generations X and Y as the sample indicates a positive correlation between customer involvement in service and value co-creation behavior. Additionally, based on Yen et al. (2020), there is a positive correlation between perceived innovativeness, customer engagement, and value co-creation behavior from coffee shop customers in Taiwan.

Along with examining the antecedents of value co-creation behavior, earlier studies have examined its consequences. For instance, Lee et al. (2019) discovered that value co-creation behavior significantly improved customer loyalty among users of a fitness club in Taiwan. Additionally, Hu, Huang, Yan, Liu, and Zhang (2020) demonstrated a beneficial association between customer citizenship behavior and customer loyalty among Chinese customers. Also, Xie, Tkaczynski, and Prebensen (2020) stated that visitors' co-creation behavior was positively related to their level of happiness with their whale viewing experience in Australia. However, on Norway's insurance and social media users, Apenes Solem (2016) revealed a different result. The cross-sectional

study stated that customer brand engagement affected customer participation behavior. However, customer participation behavior had no direct effect on customer brand loyalty. Hence, customer participation could influence brand loyalty through customer satisfaction.

Earlier research on value co-creation has been conducted in several hospitality sectors, including casual dining restaurants (Kim, Tang, & Bosselman, 2019), coffee shops (Yen et al., 2020), luxury cruises (Lee & Kim, 2019), hotels (Liu & Jo, 2020; Solakis et al., 2021), Chinese sports tourism (Jiang et al., 2021), and food delivery service (Limsuwan, 2020). However, research on the relationship between perceived innovativeness, customer engagement, value co-creation behaviors, customer satisfaction, and loyalty in the food delivery service industry remains scarce. At the same time, innovativeness is essential in the service industry because customers frequently expect services to be improved by adding impressive new features. It motivates them to engage in value co-creation and increases their loyalty to service providers (Kim, Tang, & Bosselman, 2019; Leckie, Nyadzayo, & Johnson, 2018).

The research relates to the recommendation of Yen et al. (2020) to examine value co-creation behavior in different service sectors to expand the literature on value co-creation behavior and service marketing. The research combines the antecedent and consequence variables of value co-creation behavior to assist service providers in identifying factors that influence value co-creation behavior. By exploring the relationship between value co-creation behavior and its antecedents and consequences in a food delivery service from the customers' perspectives, the research is expected to contribute to the knowledge concerning value co-creation, service marketing, and foodservice literature.

The research will explore customer value co-creation behavior in food delivery systems. The emphasis of the research is on platform-to-customer delivery services, in which customers order food through third-party applications. The providers are defined as a food delivery service platform, and customers are defined as food delivery service users. Hence, Figure 1 represents the OFDS industry's service system.

The provider-customer interaction occurs during the food delivery service, facilitated by Information and Communications Technology (ICT). Throughout the engagement process, delivery service providers can develop and offer customer service experiences by providing an interactive and innovative service. Moreover, customers can interact with the providers by placing orders and sharing information with drivers through a service platform. After the transaction is complete, customers will evaluate their experience with the service and give comments and ratings based on their perceptions of the service experience. Then, customers are more willing to recommend services to their friends if they have a positive service experience (Yen et al., 2020). Then, providers can analyze and evaluate the feedback to improve and innovate the interaction during the service process.

According to the literature, two research questions arise from the preceding explanation: (1) How does customer perception of innovation and engagement in the service process influence customers' value co-creation behavior in an Indonesian OFDS? (2) How does value co-creation affect customer satisfaction and loyalty in an Indonesian OFDS? The research will combine the precursor factors that impact value co-creation behavior (customer perceptions of innovation and customer engagement) with the consequence factors (customer satisfaction and loyalty) to address the research questions and compensate for previous research shortcomings.
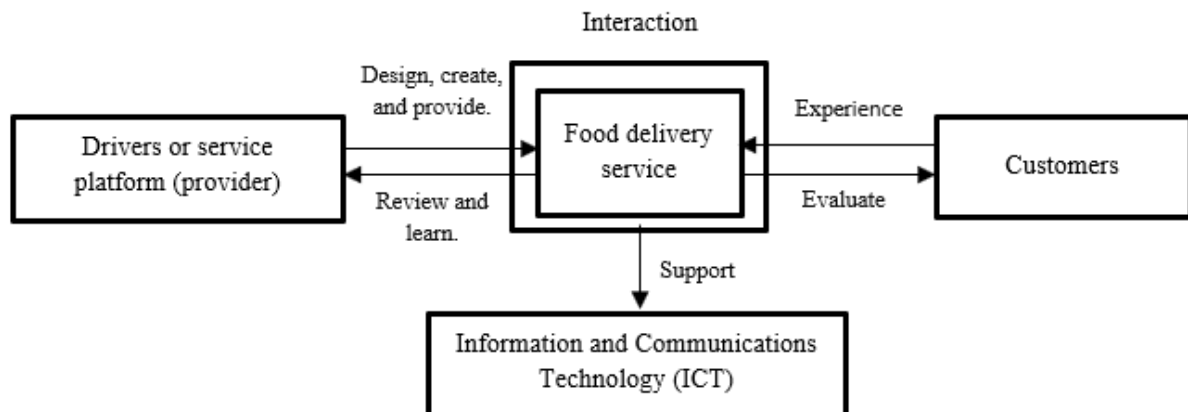

Figure 1 The Service System of the OFDS

Innovation is critical for a business's survival in today's dynamic environment (Moghadamzadeh et al., 2020). Innovation is described in the service industry as how providers transform ideas into new services that differentiate them from the competitors and enhance their performance (Demary, 2017). The degree to which a company's product and service innovations are accepted can be determined by examining their innovativeness from the customer's perspective (Zhang, Sun, Liu, & Chang, 2020). According to the prior study, customers will be more interested in learning about new inventions when interacting with providers during the service process (Leckie et al., 2018). According to Clauss, Kesting, and Naskrent (2019), gastronomy guests' participation in the service will increase if they encounter a new business model that can meet their expectations and improve value co-creation. Hence, the following hypothesis is established based on the prior studies.

H1: Perceived innovativeness is positively associated with customer participation behavior in the Indonesian OFDS.

H2: Perceived innovativeness is positively associated with customer citizenship behavior in the Indonesian OFDS.

Customer engagement can be described as the customers' dedication and interest in actively contributing to the co-creation of the experience and value from their interaction with the company (Brodie, Hollebeek, Jurić, & Ilić, 2011). Their emotional, physical, and psychological connections to providers can be strengthened through repeated interactions. According to Hollebeek, Srivastava, and Chen (2019), innovativeness may impact customer engagement. Providers' continuous innovation creates opportunities for providers to interact with their customers and increases customer engagement. It is consistent with the S-D logic principle, which notes that innovative services increase customers' perceived value and operate as a platform for interaction across the customer engagement process (Vargo & Lusch, 2004). Following these arguments, a hypothesis is proposed.

H3: Perceived innovativeness is positively associated with customer engagement in the Indonesian OFDS.

According to Liu and Jo (2020), more engaged customers will behave differently since they are more interested in finding information, recommending services positively, and being more active in co-creation value. When customers engage in the service process, they can share insights with providers, which may enhance their opinions of the benefits of the services (Yen et al., 2020). Thus, if customers are directly involved in the service process with the providers, they will be more encouraged to participate in value co-creation actively.

Additionally, customer engagement in service increases the likelihood that the service will be recommended positively to others (Fu & Lu, 2017; Moliner, Monferrer-Tirado, & Estrada-Guillén, 2018). As customers are more engaged with the service, they gain more experience. They are more willing to take a more proactive role in contributing ideas and suggestions for further improvement to the providers (Pansari & Kumar, 2017). According to Zhang, Guo, Hu, and Liu (2017), customer engagement can improve customer value co-creation because of increased customer benefit and value. Accordingly, the following hypotheses are formed.

H4: Customer engagement is positively associated with customer participation behavior in the Indonesian OFDS.

H5: Customer engagement is positively associated with customer citizenship behavior in the Indonesian OFDS.

Next, customer satisfaction represents the customers' feelings of pleasure or disappointment depending on the suitability of the service performance received with earlier expectations (Oliver, 1999). When customers have a positive interaction with a service that meets their expectations, their level of satisfaction will increase (Opata et al., 2020). It has been discovered that when customers participate in co-creation activities, they feel invited and welcomed. Hence, they take a greater interest in the company (Sleilati and Sfeir, 2021). Customers will perceive an increase in self-esteem due to gaining more valuable experience from their participation in value co-creation with service providers and the delivery of pleasant services (Liu & Jo, 2020). It is supported by the findings of Cambra-Fierro, Pérez, and Grott (2017) and Frempong, Chai, and Ampaw (2018), suggesting a direct correlation between customer co-creation and customer satisfaction and loyalty in the service industry. These hypotheses are proposed by considering these reasons.

H6: Customer participation behavior is positively associated with customer satisfaction in the Indonesian OFDS.

H7: Customer citizenship behavior is positively associated with customer satisfaction in the Indonesian OFDS.

Customer loyalty is a customer's consistency in purchasing, recommending, and maintaining a good attitude toward a product or service. Customers can dedicate more time to researching a service if they are willing to participate in the service interaction process (Lee et al., 2019). They are also committed not to seeking alternative providers (Oliver, 1999). They become loyal when participating in co-creation

activities with the service providers (Sleilati & Sfeir, 2021).

Additionally, customer citizenship behavior will strengthen the relationship between customers and providers. Customers will feel more appreciated in their interactions and loyal to services that meet their needs (Sleilati & Sfeir, 2021). The customer's level of satisfaction determines customer behavior toward a service. Satisfaction influences purchase decisions, resulting in the desire to repurchase behavior (Kapoor & Vij, 2018; Yusra et al., 2020). Furthermore, satisfied customers will continue to undertake online transactions and remain loyal to the service providers (Malhotra, Sahadev, & Purani, 2017). Hence, the research proposes the following hypotheses based on the preceding explanation.

H8: Customer participation behavior is positively associated with customer loyalty in the Indonesian OFDS.

H9: Customer citizenship behavior is positively associated with customer loyalty in the Indonesian OFDS.

H10: Customer satisfaction is positively associated with customer loyalty in the Indonesian OFDS.

The researchers develop the conceptual model for the research based on the preceding explanation, as illustrated in Figure 2. The research findings should assist service providers in developing appropriate business strategies for maximizing customers' happiness and loyalty by evaluating service innovation, customer involvement, and customer value co-creation behavior. Also, the research is expected to contribute to the literature on value co-creation behavior, service marketing, and food service business.

METHODS

The research applies a quantitative approach by conducting a survey of online food delivery service users with online questionnaires. The population of the research comprises all users of online food delivery services in Indonesia, whereas the sample consists of GoFood Indonesia users. GoFood is chosen because it is Indonesia's most popular food delivery platform, accounting for 78% of delivery service customers (Statista, 2022). Another sample criterion is GoFood users over 18 years old since it is commonly accepted as the minimum age for regular mobile phone use. It is also the age at which an individual is regarded as capable of making independent decisions.

Then, six measuring items are taken from Yi and Gong (2013) for customer participation behavior and customer citizenship behavior as they have been validated in the service industry (Hsieh, Chiu, Tang, & Lin, 2018). The four questions used to assess customers' perceived innovativeness are adapted from Cheng, Shiu, and Dawson (2014) because it takes a customer-centric approach to service innovation. Next, eight customer engagement questions items are from So, King, and Sparks (2014) due to their validation in various industries (So et al., 2014; Yen et al., 2020). Finally, four measurement items are adapted from Apenes Solem (2016) for customer satisfaction and loyalty since they have been validated in the service industry (Moise, Gil-Saura, & Ruiz-Molina, 2020). Table 1 in the Appendices shows the measurement items for each variable.

The research uses an online questionnaire distributed via e-mail and social media to perform a market survey. The data collection process was performed over one week in June 2021. The questionnaire has been distributed using a purposive sampling technique, with the chosen sample based on particular characteristics related to the research objectives. The preliminary study is conducted twice, with 24 respondents for the first pilot study and 21 respondents for the second pilot study. It determines the questionnaire's validity and reliability and ensures that the questions are clear and understandable. Then, invalid items are removed, and a questionnaire of 40 items, including the demographics, customer perceived innovativeness, engagement, value co-creation behavior, satisfaction, and loyalty, is finalized.

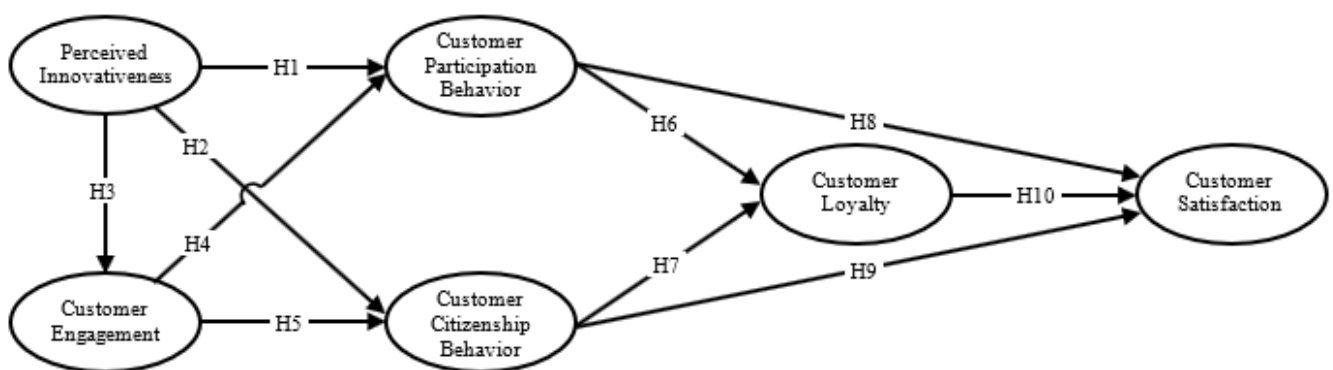Respondents can use a 5-point Likert scale to

Figure 2 Research Conceptual Model

indicate their thoughts and experiences when using GoFood, with a score of 5 for strong agreement and 1 for strong disagreement. Because the participant is an Indonesian citizen, questionnaire items are translated into Indonesian and followed by English translations to prevent ambiguity.

Then, the data are processed with the SmartPLS 3 application and analyzed using the Partial Least Squares-Structural Equation Modeling (PLS-SEM) method. PLS-SEM is chosen since it is a multivariate statistical technique that evaluates a theoretical framework from a predictive perspective and determines latent variables' scores (Hair, Risher, Sarstedt, & Ringle, 2019). Moreover, PLS-SEM is the appropriate technique for establishing the association between variables. The PLS-SEM approach evaluates convergent validity and determines the loading factor, construct reliability, and Average Variance Extractor (AVE). Meanwhile, the cross-loading factor determines the discriminant validity of the construct.

Moreover, certain boundaries reflect a construct's validity and reliability. According to Hair et al. (2019), Cronbach's alpha and Composite Reliability (CR) evaluations must have a value greater than 0,7. Meanwhile, a factor loading value of more than 0,5 is considered appropriate (Hair, Black, Babin, & Anderson, 2018). Additionally, discriminant validity can be determined by comparing each variable's square root of AVE to Fornell and Larcker's estimations of inter-construct correlation (Hair et al., 2019). Discriminant validity can be accepted if the diagonal side's AVE value is greater than the lower column and row value. The AVE value indicates the size of an indicator's representation in the construct. The larger the AVE value is, the more diversified the indicators are accommodated in the latent construct, and the more indicators are represented in a construct (Hair et al., 2019).

RESULTS AND DISCUSSIONS

There are 361 responses to the online questionnaire. However, 12 responses have to be discarded because of insufficient information. As a result, 349 responses are used in the analysis. Purposive sampling is used to choose respondents, with the respondents' criterion encompassing all Indonesian GoFood users over 18 years old. Table 2 (see Appendices) contains demographic information about the respondents.

Confirmatory Factor Analysis (CFA) with PLS-SEM is used to verify the construct's reliability and validity. The discriminant validity is demonstrated in Table 3 (see Appendices). The square roots of AVE on diagonal items are higher in value than the square roots of AVE on their corresponding row and column elements. It indicates that the discriminant validity of the instrument is acceptable. Additionally, as shown in Table 4 (see Appendices), Cronbach's alpha and CR values are higher than 0,7 for all variables. It shows an acceptable scale of reliability and internal consistency.

Furthermore, all questionnaire items have a factor loading value higher than 0,5, representing convergent validity.

Since the data for the research are from a single source, the possibility of Common Method Bias (CMB) exists, which can affect the research's validity. The Harman one-factor test is used in this analysis to assess CMB on six variables, including customer perceived innovativeness, customer engagement, customer participation behavior, customer citizenship behavior, customer satisfaction, and customer loyalty. The result suggests that the maximum covariance that a single factor may explain is 28,950%. It is much less than the tolerance level of 50% (Podsakoff & Organ, 1986). It shows that the findings are unaffected by CMB.

Furthermore, according to Cohen (1988), the suitable cutoffs of R^2 and adjusted R^2 for behavioral science are 0,10 for a small effect, 0,30 for a medium effect, and 0,50 for a large effect. According to Table 5 (see Appendices), the model explains 64,6% of the variation in customer loyalty. It means that the effect size on customer loyalty is large. Meanwhile, customer satisfaction and citizenship behavior have a moderate impact scale. The customer participation and engagement factors have a negligible effect size. Additionally, the Akaike's Information Criterion (AIC), Bayesian Information Criteria (BIC), Hannan-Quinn Criterion (HQ) indices are highly negative, indicating the model's fitness (Garson, 2016).

The PLS-SEM method is utilized to determine the relationship between antecedents and consequences variables in value co-creation behavior. The structural model is validated using this method by considering the path coefficient between variables, as illustrated in Figure 3. Furthermore, the hypotheses are evaluated using path analysis. Table 6 (see Appendices) summarizes the standardized path coefficient value derived from the structural model test and the hypothesis testing findings.

Figure 3 (see Appendices) shows the direction from perceived innovativeness to customer participation behavior ($\beta = 0,302$, $p < 0,05$), perceived innovativeness and customer citizenship behavior ($\beta = 0,216$, $p < 0,05$), and perceived innovativeness to customer engagement ($\beta = 0,384$, $p < 0,05$). These directions indicate a significant positive relationship. As a result, H1, H2, and H3 are supported, asserting that perceived innovativeness is correlated with customer engagement, customer participation, and citizenship behaviors.

Then, a significant positive association exists between customer engagement and customer participation behavior ($\beta = 0,124$, $p < 0,05$) and between customer engagement and customer citizenship behavior ($\beta = 0,536$, $p < 0,05$). Thus, H4 and H5 are supported, showing a positive correlation between customer engagement, customer participation behavior, and customer citizenship behavior.

Next, customer participation behavior has a positive relationship with customer satisfaction ($\beta = 0,167$, $p < 0,05$). Customer citizenship behavior

also has a positive correlation with customer satisfaction (β = 0,512, p < 0,05). It implies that H6 and H7 are accepted.

Additionally, customer citizenship behavior is positively correlated with customer loyalty (β = 0,346, p < 0,05). Meanwhile, customer loyalty is negatively correlated with customer participation behavior (β = -0,087, p < 0,05). Thus, H8, which states the relationship between customer participation behavior and loyalty, is rejected. In contrast, H9 is supported since it proposes a relationship between customer citizenship behavior and loyalty. Finally, customer satisfaction has a statistically significant positive correlation with customer loyalty (β = 0,588, p < 0,05), indicating the acceptance of H10.

The research aims to ascertain the effect of perceived innovativeness and customer engagement in value co-creation behavior. Then, it affects customer satisfaction and loyalty to the food delivery service customers. The research expands on Yen et al. (2020) recommendations to investigate the relationship between customer perception of service innovativeness and engagement as antecedents of value co-creation behavior in service industries other than coffee shops. Furthermore, the research includes customer satisfaction and loyalty as the implication of value co-creation behavior based on the literature study (Bouchriha, Farid, & Ouiddad, 2021; Kim et al., 2019; Sleilati & Sfeir, 2021). The research also empirically validates the value co-creation theory results by defining the relationship between perceived innovativeness, customer engagement, customer participation and citizenship behavior, customer satisfaction, and loyalty and adding to the literature on value co-creation behavior in the service industry.

According to the findings shown in Table 6, perceived innovativeness and customer engagement are positively related to customer participation and citizenship behavior. Furthermore, perceived innovativeness is discovered to have a positive relationship with customer engagement. Since it can enhance enthusiasm and excitement to participate in the value co-creation process during service, innovativeness is an effective strategy for stimulating value co-creation behavior in customers (Yen et al., 2020). Customers who have experienced unique and innovative services from service providers are more likely to actively participate in services with the providers, such as providing precise information on orders and making payments. Furthermore, customers will be more interested in recommending services to other customers, assisting users who have difficulty utilizing the service platform, and being patient if problems arise throughout the service process on new and innovative services.

Innovative food delivery services can include new technology-related features, new promotional activity, experiential innovativeness, or brand renewal (Kim et al., 2019). Providers can develop new features or create an exciting user interface that captures customers' attention. Because perceived innovativeness of customers is associated with value co-creation, service providers must continue developing and delivering new services to keep customers engaged and interested in the service for an extended period. The finding is consistent with recent research by Clauss et al. (2019) and Yen et al. (2020), finding a good and significant association between customer perceived innovativeness and customer value co-creation behavior. Customers will be compelled to participate in value co-creation if the providers' business strategy is different from other restaurants. Hence, perceived innovativeness is a critical predictor of customer value co-creation behavior in the foodservice industry.

Furthermore, the research verifies the findings from Yen et al. (2020) that customer engagement in the service process increases customer knowledge of the service benefits and positive impressions of the service. Customers who understand the benefits of a service are more likely to take the time to actively participate in services, resulting in a successful value co-creation. Furthermore, if customers already know and feel the service benefits, they will be more interested in persuading others to use the same service. Additionally, customers will be more engaged in value co-creation if they are intellectually and emotionally engaged in service (Liu & Jo, 2020). Hence, customer engagement is also an essential driver of customer value co-creation behavior.

Another finding is that customer citizenship behavior correlates positively with customer satisfaction and loyalty. According to Hu et al. (2020), customer citizenship behavior is positively associated with customer satisfaction and loyalty. On the other hand, customer participation behavior is positively associated with customer satisfaction but negatively related to customer loyalty. The last finding indicates that customer satisfaction is related to customer loyalty in a positive way. Based on the S-D logic perspective, users who exhibit citizenship behavior toward a service enhance the service's value-in-use and value-in-exchange. Then, it increases customer satisfaction and loyalty (Vargo & Lusch, 2016).

The finding also reveals that customer participation behavior affects customer satisfaction, which affects customer loyalty. It implies that when a customer participates in the service process, the providers will feel more confident in carrying out their responsibilities because they already have clear information about the order. As a result, the providers' services will be customized to the customers' expectations and needs. Then, it will increase customer satisfaction (Frasquet-Deltoro, Alarcón-del-Amo, & Lorenzo-Romero, 2019). The findings indicating a significant relationship between customer satisfaction and loyalty are consistent with the findings by Al-dweeri, Obeidat, Al-dwiry, Alshurideh, and Alhorani (2017) and Hansopaheluwakan (2021). It is also consistent with Apenes Solem (2016), which confirms that customers must be satisfied first to earn their loyalty.

On the other hand, customer participation

behavior is inversely related to customer loyalty. According to Apenes Solem (2016), it may occur if the service providers are unwilling to embrace customer participation and ignore customer feedback or comments. Thus, if customers do not notice an improvement in service quality due to their participation and feedback, they will seek other service options, decreasing customer loyalty. As a result, providers must provide platforms for customer participation and continue to improve services based on customers' feedback to feel appreciated and willing to provide feedback in the following order.

CONCLUSIONS

The main objective of the research is to conduct a thorough analysis of the antecedents and consequences of customer value co-creation behavior in the OFDS. A total of 349 GoFood customers fully responded to the online questionnaire, which the data are analyzed using PLS-SEM. The findings indicate that perceived innovativeness and engagement are positively associated with customer value co-creation, including participation and citizenship behavior. Additionally, customer citizenship behavior is associated with customer satisfaction and loyalty. On the other hand, customer participation does not correlate with consumer loyalty directly. Instead, customer satisfaction precedes customer loyalty.

The research adds to the knowledge regarding customer value co-creation behavior, service marketing, and the food service business. First, the research responds to the recommendation of Yen et al. (2020) to investigate customer value co-creation behavior in other service industries. To the researchers' best knowledge, no research has been conducted on OFDS platforms using a value co-creation behaviors perspective, particularly in Indonesia. Second, the research expands the variables by incorporating the determinants and consequences of value co-creation behavior. According to the cited literature, no research has been conducted on the relationship between perceived innovativeness, customer engagement, value co-creation behavior, satisfaction, and loyalty in OFDS. Thirdly, the research analyzes the factors contributing to customer loyalty by utilizing innovation and customer engagement. Those factors are essential for building service marketing strategies to attract and retain customers. Therefore, the research enriches the literature on customer value co-creation behavior in the foodservice industry.

The research also provides management implications in addition to theoretical contributions. It is essential to research value co-creation behavior on food delivery service platforms. Food quality provided via a digital platform is a challenge as the customers cannot physically inspect it. As a result, OFDS platforms need to provide information about the product's quality through descriptions, images, users' comments, and ratings to increase the value and impact buyers' decisions. Effective value co-creation can be accomplished by offering innovative services that increase consumer engagement and behavioral changes. Customers who perceive providers as innovative are more likely to engage actively in the interaction process with the providers and other customers. Hence, it will increase customer satisfaction and loyalty.

Although the research has added to the knowledge about value co-creation behavior in the foodservice business, it also has limitations. First, the research employs a cross-sectional study, distorting the causal relationship between variables. Further research is suggested to conduct longitudinal studies to ascertain the causality and long-term consequences of value co-creation behavior in the service industry. Second, since the research is based on a single case study of Indonesia's food delivery service companies, it cannot be generalized to other industries. So, future research can validate the application of these findings in other sectors for generalizability. Third, the research only examines the customers' viewpoint. Future research can be conducted from various perspectives, combining suppliers and customers to understand different stakeholders' perspectives.

ACKNOWLEDGEMENT

REFERENCES

Al-dweeri, R. M., Obeidat, Z. M., Al-dwiry, M. A., Alshurideh, M. T., & Alhorani, A. M. (2017). The impact of e-service quality and e-loyalty on online shopping: Moderating effect of e-satisfaction and e-trust. *International Journal of Marketing Studies*, *9*(2), 92–103. https://doi.org/10.5539/ijms.v9n2p92

Apenes Solem, B. A. (2016). Influences of customer participation and customer brand engagement on brand loyalty. *Journal of Consumer Marketing*, *33*(5), 332–342. http://doi.org/10.1108/JCM-04-2015-1390

Bouchriha, Z., Farid, S., & Ouiddad, S. (2021). Customer value co-creation behaviors through online interactions in luxury hotels: Effect on customer loyalty. In *International Conference on Human-Computer Interaction* (pp. 522–526). Springer. https://doi.org/10.1007/978-3-030-90179-0_66

Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research, 14*(3), 252–271. https://doi.org/10.1177/1094670511411703

Cambra-Fierro, J., Pérez, L., & Grott, E. (2017). Towards a co-creation framework in the retail banking services industry: Do demographics influence? *Journal of Retailing and Consumer Services*,

34(January), 219–228. https://doi.org/10.1016/j.jretconser.2016.10.007

Chai, L. T., & Yat, D. N. C. (2019). Online food delivery services: Making food delivery the new normal. *Journal of Marketing Advances and Practice*, *1*(1), 62–77.

Chen, J. S., Weng, H. H., & Huang, C. L. (2018). A multilevel analysis of customer engagement, its antecedents, and the effects on service innovation. *Total Quality Management & Business Excellence, 29*(3-4), 410–428. https://doi.org/10.1080/14783363.2016.1203249

Cheng, C. C. J., Shiu, E. C. C., & Dawson, J. A. (2014). Service business model and service innovativeness. *International Journal of Innovation Management, 18*(02), 1–22. https://doi.org/10.1142/S1363919614500133

Choi, S., Ahn, Y. J., & Kim, I. (2020). The roles of perceived innovativeness in creating visitors' citizenship behaviors at an international game exhibition. *Sustainability*, *12*(12), 1–19. https://doi.org/10.3390/su12124950

Clauss, T., Kesting, T., & Naskrent, J. (2019). A rolling stone gathers no moss: The effect of customers' perceived business model innovativeness on customer value co-creation behavior and customer satisfaction in the service sector. *R&D Management*, *49*(2), 180-203. https://doi.org/10.1111/radm.12318

Cohen, J. (1988). *Statistical power analysis for the behavioral science*. Lawrence Erlbaum Associates, Publishers.

Demary, V. (2017). Stepping up the game - The role of innovation in the sharing economy. In *Konkurrensverkets Working Paper Series in Law and Economics*. https://doi.org/10.13140/RG.2.2.28679.19365

Frasquet-Deltoro, M., Alarcón-del-Amo, M. D., & Lorenzo-Romero, C. (2019). Antecedents and consequences of virtual customer co-creation behaviours. *Internet Research*, *29*(1), 218–244. https://doi.org/10.1108/IntR-06-2017-0243

Frempong, J., Chai, J., & Ampaw, E. M. (2018). Effects of waste management customer online value co-creation on sanitation attitude and advocacy: A customer-enterprise dyadic perspective. *Sustainability, 10*(7), 1–21. https://doi.org/10.3390/su10072557

Fu, J. R., & Lu, I. W. (2017). Customer intentions towards co-creation in the online environments. In *PACIS 2017 Proceedings*.

Garson, G. D. (2016). *Partial least squares: Regression and structural equation models*. Statistical Associates Publishers.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate data analysis*. Cengage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hansopaheluwakan, S. (2021). Analysis of e-service quality and website quality effect on e-customer loyalty through e-customer satisfaction (Case study: Tokopedia). In *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/794/1/012086

Hollebeek, L. D., Srivastava, R. K., & Chen, T. (2019). S-D logic–informed customer engagement: Integrative framework, revised fundamental propositions, and application to CRM. *Journal of the Academy of Marketing Science*, *47*, 161–185. https://doi.org/10.1007/s11747-016-0494-5

Hooi, R., Leong, T. K., & Yee, L. H. (2021). Intention to use online food delivery service in Malaysia among university students. In *CoMBInES-Conference on Management, Business, Innovation, Education and Social Sciences* (Vol. 1, No. 1, pp. 60–73).

Hsieh, Y. C., Chiu, H. C., Tang, Y. C., & Lin, W. Y. (2018). Does raising value co-creation increase all customers' happiness? *Journal of Business Ethics*, *152*, 1053–1067. https://doi.org/10.1007/s10551-016-3293-5

Hu, B., Huang, W., Yan, S., Liu, G., & Zhang, T. (2020). Business model design and customer loyalty: The mediating role of customer citizenship behavior. *Sustainability*, *12*(17), 1–14. https://doi.org/10.3390/su12177047

Ida, E. (2017). The role of customers' involvement in value co-creation behaviour is value co-creation the source of competitive advantage? *Journal of Competitiveness*, *9*(3), 51–66. https://doi.org/10.7441/joc.2017.03.04

Jiang, X., Kim, A., Kim, K., Yang, Q., García-Fernández, J., & Zhang, J. J. (2021). Motivational antecedents, value co-creation process, and behavioral consequences in participatory sport tourism. *Sustainability*, *13*(17), 1–16. https://doi.org/10.3390/su13179916

Kapoor, A. P., & Vij, M. (2018). Technology at the dinner table: Ordering food online throung mobile apps. *Journal of Retailing and Consumer Services*, *43*(July), 342–351. https://doi.org/10.1016/j.jretconser.2018.04.001

Kartono, R., & Tjahjadi, J. K. (2021). Factors affecting consumers' intentions to use online food delivery services during COVID-19 outbreak in Jabodetabek area. *The Winners, 22*(1), 1–14. https://doi.org/10.21512/tw.v22i1.6822

Kemp, S. (2021). *Digital 2021: Indonesia*. Retrieved from https://datareportal.com/reports/digital-2021-indonesia?rq=indonesia

Kim, E., Tang, L., & Bosselman, R. (2019). Customer perceptions of innovativeness: An accelerator for value co-creation. *Journal of Hospitality and Tourism Research*, *43*(6), 807–838. https://doi.org/10.1177/1096348019836273

Kowalczuk, I., Stangierska, D., Gębski, J., Tul-Krzyszczuk, A., & Zmudczyńska, E. (2021). Digital consumers in the foodservices market. *Sustainability*, *13*(13), 1–18. https://doi.org/10.3390/su13137403

Leckie, C., Nyadzayo, M. W., & Johnson, L. W. (2018). Promoting brand engagement behaviors and loyalty through perceived service value and innovativeness. *Journal of Services Marketing*, *32*(1), 70–82. https://doi.org/10.1108/JSM-01-2017-0035

Lee, Y., & Kim, I. (2019). A value co-creation model in brand tribes: The effect of luxury cruise consumers' power perception. *Service Business*, *13*, 129–152. https://doi.org/10.1007/s11628-018-0373-x

Lee, Y. L., Pan, L. Y., Hsu, C. H., & Lee, D. C. (2019). Exploring the sustainability correlation of value co-creation and customer loyalty-A case study of fitness clubs. *Sustainability*, *11*(1), 1–15. https://doi.org/10.3390/su11010097

Limsuwan, P. (2020). Co-Creating values and values perception of delivery services through mobile phone application experience in lazy economy society. *Educational Research (IJMCER), 2*(5), 251–257.

Liu, J., & Jo, W. (2020). Value co-creation behaviors and hotel loyalty program member satisfaction based on engagement and involvement: Moderating effect of company support. *Journal of Hospitality and Tourism Management*, *43*(June), 23–31. https://doi.org/10.1016/j.jhtm.2020.02.002

Malhotra, N., Sahadev, S., & Purani, K. (2017). Psychological contract violation and customer intention to reuse online retailers: Exploring mediating and moderating mechanisms. *Journal of Business Research, 75*(June), 17–28. https://doi.org/10.1016/j.jbusres.2017.01.013

Moghadamzadeh, A., Ebrahimi, P., Radford, S., Salamzadeh, A., & Khajeheian, D. (2020). Investigating the role of customer co-creation behavior on social media platforms in rendering innovative services. *Sustainability*, *12*(17), 1–21. https://doi.org/10.3390/su12176926

Moise, M. S., Gil-Saura, I., & Ruiz-Molina, M. E. (2020). Implications of value co-creation in green hotels: The moderating effect of trip purpose and generational cohort. *Sustainability*, *12*(23), 1–20. https://doi.org/10.3390/su12239866

Moliner, M. Á., Monferrer-Tirado, D., & Estrada-Guillén, M. (2018). Consequences of customer engagement and customer self-brand connection. *Journal of Services Marketing*, *32*(4), 387–399. https://doi.org/10.1108/JSM-08-2016-0320

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing, 63*(4_suppl1), 33–44. https://doi.org/10.1177/00222429990634s105

Opata, C. N., Xiao, W., Nusenu, A. A., Tetteh, S., & John Narh, T. W. (2020). Customer value co-creation in the automobile industry: Antecedents, satisfaction, and moderation. *SAGE Open,* 1–11. https://doi.org/10.1177/2158244020948527

Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, *45*, 294–311. https://doi.org/10.1007/s11747-016-0485-6

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531–544. https://doi.org/10.1177/014920638601200408

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership, 32*(3), 4–9. https://doi.org/10.1108/10878570410699249

Prasetyo, Y. T., Tanto, H., Mariyanto, M., Hanjaya, C., Young, M. N., Persada, S. F., ... & Redi, A. A. N. P. (2021). Factors affecting customer satisfaction and loyalty in online food delivery service during the COVID-19 pandemic: Its relation with open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 1–16. https://doi.org/https://doi.org/10.3390/joitmc7010076

Shannahan, R. J., Bush, A. J., Shannahan, K. L., & Moncrief, W. C. (2017). How salesperson perceptions of customers' pro-social behaviors help drive salesperson performance. *Industrial Marketing Management, 62*(April), 36–50. https://doi.org/10.1016/j.indmarman.2015.05.004

Sharafi Farzad, F., Kolli, S., Soltani, T., & Ghanbary, S. (2019). Digital brands and Web 3.0 enterprises: Social network analysis and thematic analysis of user activities and behavioral patterns in online retailers. *AD Minister*, (34), 119–138.

Sleilati, E. B., & Sfeir, C. J. (2021). Impact of value co-creation behaviour within the social media context. *Asian Journal of Business and Accounting*, *14*(1), 33–58. https://doi.org/10.22452/ajba.vol14no1.2

So, K. K. F., King, C., & Sparks, B. (2014). Customer engagement with tourism brands: Scale development and validation. *Journal of Hospitality and Tourism Research*, *38*(3), 304–329. https://doi.org/10.1177/1096348012451456

Solakis, K., Peña-Vinces, J., Lopez-Bonilla, J. M., & Aguado, L. F. (2021). From value co-creation to positive experiences and customer satisfaction. A customer perspective in the hotel industry. *Technological and Economic Development of Economy*, *27*(4), 948–969. https://doi.org/10.3846/tede.2021.14995

Statista. (2021). *Digital restaurant delivery growth worldwide by country 2020*. Retrieved from https://www.statista.com/statistics/1238955/digital-restaurant-food-delivery-growth-in-selected-countries-worldwide/

Statista. (2022). *Indonesia: Favorite food delivery apps 2021*. Retrieved from https://www.statista.com/statistics/1149349/indonesia-favorite-food-delivery-apps/

Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, *44*, 5–23. https://doi.org/https://doi.org/10.1007/s11747-015-0456-3

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing, 68*(1), 1–17. https://doi.org/10.1509/jmkg.68.1.1.24036

World Health Organization. (2021). *Advice for the public: Coronavirus disease (COVID-19)*. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Xie, J., Tkaczynski, A., & Prebensen, N. K. (2020). Human value co-creation behavior in tourism: Insight from an Australian whale watching experience. *Tourism Management Perspectives*, *35*(July), 1–12. https://

doi.org/10.1016/j.tmp.2020.100709

Yen, C. H., Teng, H. Y., & Tzeng, J. C. (2020). Innovativeness and customer value co-creation behaviors: Mediating role of customer engagement. *International Journal of Hospitality Management*, *88*(July), 1–11. https://doi.org/10.1016/j.ijhm.2020.102514

Yeo, V. C. S., Goh, S. K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward Online Food Delivery (OFD) services. *Journal of Retailing and Consumer services, 35*(March), 150–162. https://doi.org/10.1016/j.jretconser.2016.12.013

Yi, Y., & Gong, T. (2013). Customer value co-creation behavior : Scale development and validation. *Journal of Business Research*, *66*(9), 1279–1284. https://doi.org/10.1016/j.jbusres.2012.02.026

Yusra, Caraka, R. E., Agus, A., Mohd Ariffin, A. A., Gio, P. U., Chen, R. C., & Lee, Y. (2020). An investigation of Online Food Aggregator (OFA) service: Do online and offline service quality distinct? *Serbian Journal of Management*, *15*(2), 277–294. https://doi.org/10.5937/sjm15-24761

Zhang, F., Sun, S., Liu, C., & Chang, V. (2020). Consumer innovativeness, product innovation and smart toys. *Electronic Commerce Research and Applications*, *41*(May–June), 1–13. https://doi.org/10.1016/j.elerap.2020.100974

Zhang, M., Guo, L., Hu, M., & Liu, W. (2017). Influence of customer engagement with company social networks on stickiness: Mediating effect of customer value creation. *International Journal of Information Management, 37*(3), 229–240. https://doi.org/10.1016/j.ijinfomgt.2016.04.010

APPENDICES

Table 1 Measurement Items

Code	Items	Source
PI1	The GoFood service feature is novel.	
PI2	The benefits that the GoFood service offers are new.	
PI3	The GoFood service shows an unconventional way of solving problems in food delivery service.	(Cheng et al., 2014)
PI4	The GoFood service is brand new, which has never been seen in the market before.	
CE1	When someone praises GoFood, it feels like a personal compliment.	
CE2	I feel excited to use GoFood.	
CE3	I am passionate about GoFood.	
CE4	Anything related to GoFood grabs my attention.	(So et al., 2014)
CE5	When using GoFood, it is difficult to detach me.	
CE6	Time flies faster when I am using GoFood.	
CE7	I am someone who likes to participate in discussions related to GoFood actively.	
CE8	In general, I really enjoy exchanging ideas with others about GoFood.	
CPB1	I give the drivers the required information regarding the food ordered.	
CPB2	I provide the necessary information regarding the food ordered so that the drivers can order food properly.	
CPB3	I perform all the tasks (payments, special requests, and others) that are required.	(Yi & Gong, 2013)
CPB4	I adequately exhibit all the expected behaviors (payments, special requests, and others).	
CPB5	I am kind to the GoFood drivers.	
CPB6	I am polite to the GoFood drivers.	
CCB1	I recommend GoFood to others.	
CCB2	I encourage my friends and relatives to use GoFood.	
CCB3	I help other customers if they seem to have problems using GoFood.	
CCB4	I teach other customers how to use GoFood correctly.	(Yi & Gong, 2013)
CCB5	If the driver makes a mistake during service delivery, I am patient.	
CCB6	If I have to wait longer than expected to receive service, I am willing to adapt.	
CS1	GoFood has lived up to my expectations.	
CS2	Overall, I am satisfied with GoFood.	
CS3	Being a customer of GoFood has been a good choice for me.	(Apenes Solem, 2016)
CS4	GoFood offers me good solutions in food delivery service.	
CL1	I intend to stay loyal to GoFood in the future.	
CL2	I intend to stay on as a customer of GoFood for the next three years.	
CL3	I intend to recommend GoFood to other people.	(Apenes Solem, 2016)
CL4	If I have to choose again, I will still choose GoFood as a delivery service.	

Table 2 Demographics of Respondents (n=349)

Category		Percentage (%)
Gender	Male	31,5
	Female	68,5
Age	18–25	69,1
	26–33	22,3
	34–41	5,2
	>41	3,4
Education	High school diploma	10,0
	Associate degree	8,3
	Bachelor's degree	67,4
	Master's degree	12,9
	Others	1,4
Occupation	Students	28,9
	Housewife	6,3
	Entrepreneur	8,6
	Employee	40,7
	Civil servant	9,2
	Others	6,3
Monthly Income Range (Rp)	< 1.000.000	18,9
	1.000.001–4.000.000	28,9
	4.000.001–7.000.000	28,7
	7.000.001–10.000.000	8,3
	> 10.000.000	15,2
Usage Period of GoFood Service	< 1 year	5,2
	1–2 years	16,3
	2–3 years	26,6
	> 3 years	51,9
The Use of GoFood during the Pandemic	Less often	23,2
	The same	36,7
	More often	40,1

Table 3 Results of Correlation Analysis and Discriminant Analysis

Construct	1	2	3	4	5	6
1. CCB	**0,709**					
2. CE	0,619	**0,711**				
3. CL	0,651	0,668	**0,877**			
4. CPB	0,405	0,240	0,274	**0,746**		
5. CS	0,580	0,621	0,756	0,375	**0,864**	
6. PI	0,422	0,384	0,475	0,350	0,497	**0,745**

Note: CCB: Customer citizenship behavior, CE: Customer engagement, CL: Customer loyalty, CPB: Customer participation behavior, CS: Customer satisfaction, PI: Perceived innovativeness

Table 4 Results of Reliability and Convergent Validity Test

Construct	Code	Factor Loadings	VIF	Cronbach's Alpha	CR	AVE
Perceived Innovativeness	PI1	0,823	1,706	0,737	0,832	0,555
	PI2	0,798	1,635			
	PI3	0,625	1,402			
	PI4	0,719	1,453			
Customer Engagement	CE1	0,655	1,672	0,863	0,891	0,506
	CE2	0,686	2,161			
	CE3	0,746	2,465			
	CE4	0,796	2,297			
	CE5	0,779	2,248			
	CE6	0,653	1,799			
	CE7	0,666	2,402			
	CE8	0,693	2,365			
Customer Participation Behavior	CPB1	0,682	1,776	0,841	0,882	0,556
	CPB2	0,725	1,857			
	CPB3	0,750	1,884			
	CPB4	0,782	1,905			
	CPB5	0,773	3,304			
	CPB6	0,759	3,160			
Customer Citizenship Behavior	CCB1	0,784	2,080	0,799	0,855	0,503
	CCB2	0,831	2,351			
	CCB3	0,755	2,219			
	CCB4	0,750	2,290			
	CCB5	0,532	1,356			
	CCB6	0,543	1,362			
Customer Satisfaction	CS1	0,881	2,626	0,886	0,922	0,746
	CS2	0,876	2,554			
	CS3	0,881	2,474			
	CS4	0,816	1,905			
Customer Loyalty	CL1	0,911	4,032	0,899	0,930	0,769
	CL2	0,892	3,589			
	CL3	0,831	1,947			
	CL4	0,872	2,458			

Table 5 Assessment of Structural Model Indicators and Model Criteria

	R²	Adjusted R²	Effect Size	AIC	BIC	HQ
CL	0,646	0,643	Large	-355,121	-339,700	-348,982
CS	0,359	0,356	Medium	-150,464	-138,899	-145,860
CCB	0,423	0,419	Medium	-186,673	-175,107	-182,069
CPB	0,136	0,131	Small	-45,841	-34,276	-41,237
CE	0,147	0,145	Small	-52,574	-44,864	-49,505

Table 6 Structural Model and Hypothesis Testing Results

Path Relationship				Path Coefficient	T-Statistics	P-Value	Results
H1:	PI	→	CPB	0,302	8,318	0,000	Supported
H2:	PI	→	CCB	0,216	5,558	0,000	Supported
H3:	PI	→	CE	0,384	4,619	0,000	Supported
H4:	CE	→	CPB	0,124	2,083	0,038	Supported
H5:	CE	→	CCB	0,536	12,752	0,000	Supported
H6:	CPB	→	CS	0,167	3,230	0,001	Supported
H7:	CCB	→	CS	0,512	12,128	0,000	Supported
H8:	CPB	→	CL	-0,087	2,409	0,016	Not Supported
H9:	CCB	→	CL	0,346	7,311	0,000	Supported
H10:	CS	→	CL	0,588	12,187	0,000	Supported

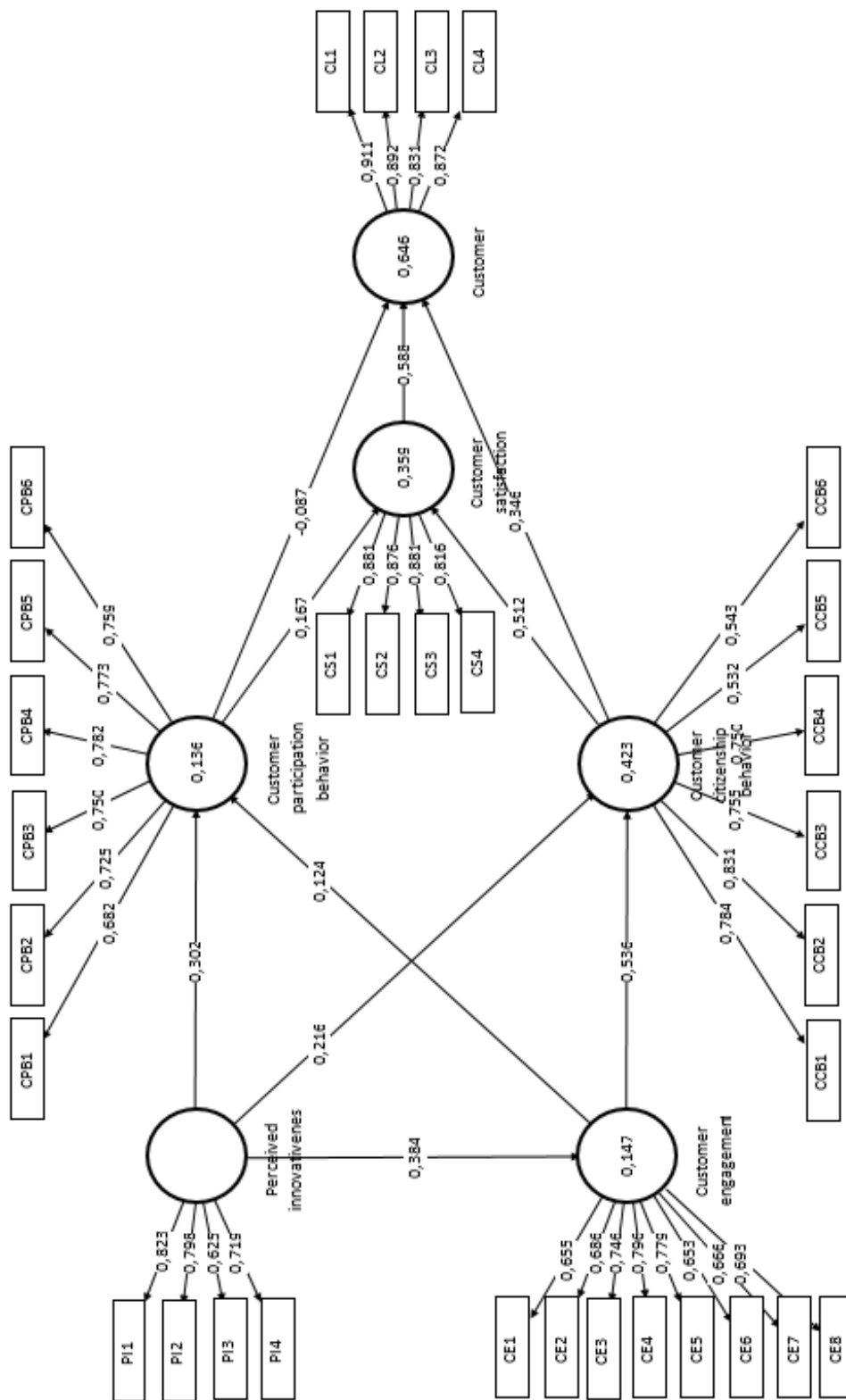Note: CCB: Customer citizenship behavior, CE: Customer engagement, CL: Customer loyalty, CPB: Customer participation behavior, CS: Customer satisfaction, PI: Perceived innovativeness

Figure 3 Path Coefficient Model