FACTORS AFFECTING THE USER OF ONLINE FOOD DELIVERY THROUGH MOBILE APPS

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Abstract. *The rapid growth of online transportation services has initiated several companies to develop online food delivery services, facilitating users with mobile phones for getting their foods easily. At this time, the market has been populated with many mobile apps with similar capabilities, making the competition extremely stringent. The purpose of this research is to obtain a more profound understanding regarding the features of the apps that influence the customers in using the online food delivery services. Thus, the results are of importance for businesses and developers. The results should provide a recommendation for the design and effectiveness of the app. The theoretical framework of the study is established by literature reviews of several existing models. In general, those sources focused on five main attribute factors in the apps, namely, Visual Design, Information Design, Navigation Design, Collaboration Design, and Service Level. Data are collected by using a questionnaire and obtained from a sample of 401 respondents. The data are analyzed by a multivariate linear regression model using SPSS software. The results suggest that those factors are equally important in influencing the Conversion Rate of the customers.*
Keywords: Online food delivery, Mobile apps, Attributes of mobile apps, Conversion Rate, Factors affecting the user of online food delivery

1. **Introduction.** It is undeniable that foods and drinks are the basic needs of every human being [1]. The human being needs food and drinks every day, so the level of need for food and drinks tends to be substantial. The high demand for food and beverages makes many companies tempted to enter this sector, which leads to strong competition between companies. Thus, to attract more customers and to lead the competition, the company has to maintain its innovativeness. One crucial recent innovation for the past few years is how customers can order food from certain restaurants via telephone calls. Commonly, after making a phone call, they should wait for their food to be delivered by the restaurant. However, this approach has some drawbacks, including the high cost of telephone calls, the difficulty of predicting the length of delivery, and the lack of information about the available food menu. Companies in this business area have to maintain their innovativeness to understand and respond to the change in customer behavior quickly. As a matter of fact, customers' behavior has shifted from conventional shopping practices to electronic ones, including for shopping the most basic needs such as food [2]. The behavior becomes visible when online transportation services are advancing rapidly in Indonesia. Freight is one of the main services. More users use the service to send not only goods but also food from restaurants [3]. The phenomenon instantiates the creation of a specialized e-commerce service in the order and delivers food online (Online Food Delivery (OFD)) [4]. The idea leads to the creation of mobile apps specifically for OFD purposes.

With the application, users only need to run the apps, choose a restaurant, order foods, and send them to wherever they wish [5]. Customers can also track the position and delivery status of their foods. For most users who have prior experience in buying goods in e-commerce platforms, the use of the OFD apps is natural. The new approach has overcome the deficiencies of the existing paradigms.

The growth of the OFD business is very promising both globally and nationally [6, 7]. In particular, in the city of Jakarta, Indonesia, the trend has instantiated interest in various aspects, including technological acceptance and severe traffic congestion. Generally, urban communities prefer to use the apps due to its practicality, supporting them to be productive in the user lines of business. The development has pushed forward the online transportation industry due to the strong connection between OFD and online-based transportation [3, 7]. In Indonesia, there are several types of OFD apps, and the most rapidly growing are those of the food aggregator type. For the OFD type, the apps are not usually owned by just a restaurant, but by an intermediary that collects various restaurants having an agreement with the OFD. Such OFD apps tend to have a large market where the users possess more choices than those OFDs associated with a unique catering company. The examples of the OFD of food aggregators are Food Panda, Go-Food, and GrabFood. By the end of 2016, Food Panda had to give up and left the business [8], leaving only Go-Food and GrabFood as the two giant players on the vast market. The fact is the driving force for the authors to assess the necessary factors of the OFD apps from the customers' perspective.

A previous study suggested that there is a strong relationship between the features contained in the app with users' intention-to-use, particularly during the conversion stage [9]. Therefore, the OFD app should feature attributes important for increasing brand awareness and also attract customer interests, leading to an increased stream of revenue [10]. Those attributes include visual appeal, experience in navigation, smart filters, payment systems, and real-time tracking. Unfortunately, the degree at which those attributes relate to the customer until the conversion stage has not been investigated in the existing literature, to the best of our knowledge. Many works had been tailored to understand the acceptance of the technology in the early stage.

In addition, some of the following studies had provided unique perspectives regarding the design of OFD apps. [11] focused on the influence of design attributes of OFD apps to the rate of conversion. Based on sampled students, they concluded that features related to Visual, Information, Navigation, and Collaboration were crucial. Specifically, they concluded that Collaboration and Information features were the most important. In the current study, we also take account of the Service Level feature, which is, in general, describing the level of the experience of the customers in using the apps. A high level of Service Level suggests a great concern to the customers and often leads to customer conversion.

We structure the paper as the following. In Section 2, Literature Review, we discuss several issues previously discussed and relevant to the topic of the use of mobile apps for e-commerce. In Section 3, Research Method, we present the research procedure starting from the adopted research framework, the data acquisition procedure, and the statistical analysis method. In Section 4, Results and Discussion, we present our findings including the results of the hypothesis tests and their implication. In Section 5, Conclusion, we briefly summarize the most important findings and a potential topic for future research.

2. Literature Review.

2.1. Use of smartphones in e-commerce.
E-commerce is a part of e-business that deals with the buying and selling of goods or services via the Internet. E-commerce also includes all activities that support all transactions in the market, such as advertising,

marketing, customer support, security, shipping, and payment [12]. Today's e-commerce has developed so that it does not only carry out its activities through the website but has entered into apps on smartphones based on iOS and Android, which are then better known as m-commerce. M-commerce specifically is the use of small electronic devices without cables such as smartphones and tablets to conduct business transactions digitally [13]. This development is due to the increasing number of smartphone users making companies try to sell and market their goods or services through apps in the hope that they will get more demand so that profits from it can increase.

In line with the above, several studies have been conducted on the adoption of m-commerce in the use of smartphones to conduct business transaction activities using apps [14, 15]. Such research is generally carried out using models that are generally widely trusted, such as the technology acceptance model [16] or the unified theory of acceptance and use of technology models [17]. Other studies also developed a model of acceptance from m-commerce in which it is stated that acceptance is influenced by cultural and technological factors [18]. In addition, there are also studies that state the acceptance of m-commerce must at least give attention to the sex and ethnicity of an individual [19]. Only a few kinds of research have been done to see how customer interest in app attributes can lead to purchases. However, there is an interesting point in a study that said the attributes of the app are important to trigger awareness and emotions of users [20, 21]. It also emphasized that there are three domains of attributes of technology products that can trigger positive or negative behavior from users, namely the appearance of the product, product performance, and the ability to communicate from the product. In other words, what makes an app successful is if it has interactive capabilities that can make users recognize and remember the brand of the app through the attributes that exist in the app [22, 23]. The attributes of the app can also cause psychological reactions that are influenced by the design of the visual and information attributes [21]. For example, the design of information contained in the OFD app can be in the form of digital menus, customer reviews, pictures of restaurants and food, restaurant locations, and contact information. Besides the attractive user interface such as Visual Design and Navigation Design in the app is believed to be an important attribute that can make users use the app in a sustainable manner [24]. With the relationship between attributes in the app and its influence to make customers reach the purchasing stage makes researchers interested in focusing on researching how technology is not only widely accepted, but to the stage of the Conversion Rate of using the app. The conversion itself in m-commerce can mean the action to place an order by a customer through the app and proceed with making a payment on the goods or services ordered [11]. [11] found that attributes in apps can have an important role to make users not only accept technology but to make purchases using the app.

Previous studies also showed that not much research has been done to examine the continuation of the acceptance of a technology, particularly for the level of conversion. Even so, previous studies have raised factors in the form of attributes in the app that can strengthen the acceptance of the app, some even up to the conversion stage. These factors are Visual Design, Information Design, Navigation Design, Collaboration Design, and Service Level. In Indonesia, the study focused on examining the acceptance of OFD apps, and their use until the conversion is very limited while the intense competition in this industry is getting bigger. For this reason, this research will be conducted to find out the results in Indonesia, especially in Jakarta, using the literature review above.

In relation to the Conversion Rate based on references and previous studies, it is known that the conversion of an app is influenced by how the design of the attributes in it. Therefore, this study determined the factors that affect the Conversion Rate by taking the attribute factors that exist in [11], namely Visual Design, Information Design, Navigation Design, Collaboration Design, and [25] which is Service Level.

2.2. **App attributes and effects on conversions.**

2.2.1. *Conversion Rate.* There are several terms related to conversions. [26] suggested that conversion is a sign of acceptance of m-commerce. In other words, if a user has used an app, then it can be said as a conversion. However, according to [27], the conversion is a purchasing activity so that when someone has reached the level of purchase in a particular app, then it is only referred to as the actual conversion. This research adopts the notion of Cezar, which defines a conversion if the user has reached the stage of purchasing. Several studies say that attributes strongly influence the conversion factor in the app, such as Visual Design, Navigation Design, and Information Design. All of these things can increase the user's desire to use to purchase goods or services from the app [28, 29, 30, 31, 32].

2.2.2. *Visual Design.* Scientific research has begun to distinguish between libraries that specifically explain the characteristics in the app and the characteristics in the website. A critical attribute of app characteristics is Visual Design [24, 32]. This character refers to consistency, aesthetics, and other exciting things such as pictures, colors, font types, shapes, animations, layouts, or in other words, the overall appearance of the app [31, 33]. Other research also mentions that Visual Design can influence users to some extent to use apps in conducting online transactions [19, 34]. Visual Design is also referred to as an essential component that can shape user experience in interacting with apps [35], because the attractive Visual Design can give a positive message to customers about the quality of an item and service. Even attractive Visual Designs can increase user usage levels because visuals and information are factors related to the level of acceptance of the app [30, 36].

2.2.3. *Information Design.* Regarding the issue of Information Design, [37] implied that Information Design in an app is related to the app's ability to provide relevant, efficient, current, and effective information for users to understand. Clear and relevant information will increase app usage by users [21]. Other research also says that complete and structured information in apps can attract users to a certain point, and can also make users loyal to a brand [38]. Regarding the issue of online transactions, they are mostly related to the information of products, services, payments, and shipping [39]. When they are well provided, they increase the trust of users towards the brand and eventually also increase the desire to buy [40, 41]. These are in line with research findings on other product-related information such as product descriptions, customer reviews, and rules for the replacement and exchange of goods in e-commerce. All of those affect the users' purchasing decisions at a certain point [42]. In addition, the easiness of finding and obtaining information about a product during a shopping experience also needs improvement [43]. Conversely, minimal and irrelevant information will make users disappointed to use the app because of the time and effort wasted trying to find information. The issue above strengthens the conviction that information about a product and service is an essential attribute in designing apps and is expected to have a positive influence on user Conversion Rates.

2.2.4. *Navigation Design.* The Navigation Design of any app relates to how the appearance of the pages and their contents are made structured and organized. The Navigation Design of an app will also affect how much effort a user takes to move between pages [44]. [29] suggested that Navigation Design is an important attribute that is directly related to the use of an app. Navigation Design can help users to move between pages smoothly, access links within pages easily, and even make payments through payment gateways quickly. For this reason, it is necessary to establish a Navigation Design of the app that is efficient and can provide easy-to-use navigation controls so that users can move from one page to another quickly and easily in all parts of the app. In addition, an easy filtering system on a page also needs to be built so that users can enter their desired filtering criteria in a concise and minimal effort [39]. This is because users prefer to see a simple

Navigation Design that can save their time and effort to find what they are looking for and can also help them to complete payments quickly. Conversely, things that can slow down the user experience in using an app can reduce the level of use of the app. Even [45] reinforces that the speed and Navigation Design of an app is an important measure that can guide users to the conversion.

2.2.5. *Collaboration Design.* Design related to collaboration is about how an app and other companies can collaborate. For example, in Indonesia, the OFD Go-Food app collaborates with Go-Ride, while GrabFood app collaborates with GrabBike. With this collaboration, when the user has finished selecting and ordering food through Go-Food, then the food will be delivered by Go-Ride. There is also a feature to enter the voucher code on the transaction page when paying using Go-Pay, which is a fin-tech company that works with OFD Go-Food app. Thus, collaboration as an attribute of the app can increase the level of flexibility and efficiency of it so that it can encourage the interest of users to use the app, which at some point will end in conversion [46].

2.2.6. *Service Level.* Service quality is an essential factor in designing an e-commerce app and, in general, can be interpreted as online support for consumers by a brand [47]. Some common examples of forms of service quality from an app are such as feedback on goods or services, speed of responding to customer complaints, page of questions and answers, also tracking system to track orders made by customers. This factor is said to be important because if the lack of service quality of a brand to its customers can have severe impacts such as loss of customer trust, that leads to loss of customers [48]. In [37], there are at least three attributes of service quality, namely empathy, reliability, and responsiveness. Some of these attributes are described as four dimensions of e-service quality, where the first is the design of a website that can make users judge satisfaction about how a business process. Second is reliability that can make users judge how the process of an order is made from the beginning to get to the hands of customers. Third, is privacy and security that can make users judge how sensitive their data is safe. Fourth and last is customer service that can make customers assess the level of service and support of the company [49]. In the research of [25], they took two attributes from the level of service, which are responsive and continued service. Continued service is a form of action to contact customers again to ask for input, feedback, to criticism in order to improve service and customer satisfaction. In [25] there is a model for examining how online Service Levels can influence customers for their sustainability using apps. They mentioned that there are two main dimensions of online service, namely pre-purchase service, and transaction-related services. Their empirical findings state that services related to transactions and services before purchase have a strong relationship for developing experience in apps. The experience has a strong influence on user behavior in the app or website, which leads to the desire to buy.

3. **Research Method.** This study aims to determine the main factors in the app attributes that affect the Conversion Rate of customers to order food in the OFD app. We derive the research framework and hypotheses presented in Figure 1. These variables are measured using indicators that reflect them. These indicators are adapted from previous studies involving Visual Design, Information Design, Navigation Design, and Collaboration Design adopted from Kapoor and Vij's work [11].

Visual Design is reflected as an appropriate color and font size, interesting background color combinations, structured information in the app, and there are animations that make the visual more interesting. The Information Design is reflected as the app's ability to provide information that is relevant, efficient, current, and easy for users to understand, such as restaurant search features, cost information, food recommendations, and transaction history. The Navigation Design of an app is reflected by the ease of switching between pages, and the structured and organized content. This can be in the form of
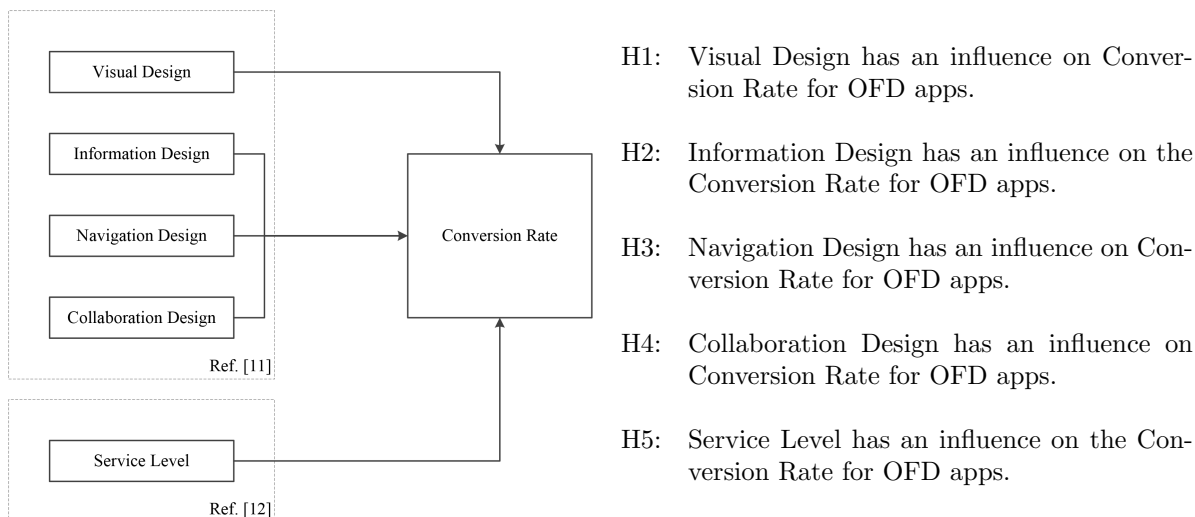
FIGURE 1. The framework and hypotheses of this research

having a navigation bar, links to other pages, keyword search options, and easy access to important pages such as the main page and payment page. Design related to collaboration is reflected in how a collaboration between OFD and other companies can collaborate. This can be in the form of cash-backs, discounts, points, and cashless payments. For Service Level, this study adopts from existing indicators in Huang's research which states that Service Level in general can be interpreted as online support for consumers by a brand. This can be in the form of ease of contacting customer service, or ease of conveying feedback. Determination of the Conversion Rate indicator was adopted using Cezar's research, so the indicator used is how the customer has arrived at the purchasing stage and how the customer will again use the app to buy food in the future.

The next process is determining the instrument for collecting data. The questionnaire contains questions for each variable. Questionnaire is distributed by e-mail and private message to respondents. The collected questionnaire is validated prior data analysis. The data are analyzed by the multivariate linear regression. The population is Go-Jek or GrabFood app users in Jakarta whose areas have been reached by the shipping area of the Go-Food and GrabFood apps. The exact number of Go-Food and GrabFood service users in Jakarta is not known exactly. However, for the Go-Food app as a subsidiary of the Go-Jek app, we estimate the number from Go-Jek app users. The number of active users of the Go-Jek app is 22 million users of which 30%-40% are in Jakarta [46].

The number of samples is taken from the population of Go-Jek app users who have used the Go-Food app service. It is found that the number of Go-Food or GrabFood app users is around 6 million users. The sample size is determined by $n = N/\left(1 + Ne^2\right)$ where n is the sample size, N is the population size, and e is the error tolerance limit. For $e = 5\%$, we obtain $n \approx 400$ persons. Probability sampling technique is used to collect samples. Questionnaire is provided to each respondent. For each question, the respondents will choose the level that suits their experience ranging from strongly disagreeing to strongly agreeing to every statement given to the respondent (1 is Strongly Disagree, 2 is Disagree, 3 is Neutral, 4 is Agree, 5 is Strongly Agree).

The data analysis method is the multivariate linear regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \tag{1}$$

where Y denotes the Conversion Rate variable, X_1 is Visual Design variable, X_2 is Information Design variable, X_3 is Navigation Design variable, X_4 is Collaboration Design variable, and X_5 is Service Level variable. The model coefficients βs shall be determined by the least-squares method. Each coefficient denotes the contribution of the associated

independent variable to the Conversion Rate. The suitability of the model (1) with the data will be evaluated by the coefficient of determination R^2. In addition, statistical tests of F and t will be conducted for coefficients β_1 until β_5. Finally, the residual data from model (1) will be evaluated in terms of randomness, normality, and homoscedasticity.

4. **Results and Discussion.**

4.1. **Respondent's demographics data.** The questionnaire in this study is about the factors that influence the use of OFD through the app. The questionnaire was distributed through forums or groups on social media for approximately two weeks, and the questionnaire returned was 451 respondents. The cleaning process is carried out because not all respondents can be processed, particularly those respondents who have never used the OFD app. The result of cleaning is 401 valid respondents. From these results, there were 51.87% of women and 48.13% of men. The average respondent is from the age range of 21-30 years (61%), which is also the age of most users of e-commerce apps [50]. As for the education level, most respondents hold a bachelor's degree. The proportion is 66% of the total. In terms of the occupation, 62% of the respondents are employees. It can be explained as an employee usually does not have much time to make their foods, so they are easier to convert using OFD services. In the experience of shopping using a smartphone app, most respondents have had the experience of shopping using a smartphone app for more than three years, which is as much as 35% of the total respondents.

The average respondents mostly choose Go-Food as their OFD app (93%). It could be because that for the aggregator type, Go-Food was the pioneer of the first OFD app in Indonesia. Looking at the average of total purchases in one transaction, most respondents spent in the range of 25000-50000 Rupiah. This is in line with the average price range of one portion of food in most restaurants in Jakarta. In other words, the average OFD app user orders food not at restaurants in the Mall, because the average price of one portion of food in the Mall is above Rp. 50000. For frequency of purchase, most respondents (around 88%) use the OFD app less than once a week to several times a week. They rarely use the OFD app every day to order food. For a complete description of the demographics, it can be seen in Table 1.

TABLE 1. Demographic characteristics of the respondents ($n = 401$)

Item	Category	Freq.	(%)	Item	Category	Freq.	(%)
Gender	Male	193	48.1	Mobile Shopping-	< 1	46	11.5
	Female	208	51.9	Experience	1-2	103	25.7
Age	< 21	21	5.2		2-3	113	28.2
	21-30	244	60.9		> 3	139	34.7
	31-40	89	22.2	OFD Apps Used	Go-Food	186	46.4
	41-50	31	7.7		GrabFood	28	7.0
	> 50	16	4.0		Go- & GrabFood	187	46.6
Education	Junior High	1	0.3	Average Order-	< 25000	16	4.0
	Senior High	67	16.7	Value per Order-	25000-50000	135	33.7
	Diploma	29	7.2	(Rupiah)	50000-75000	108	27.0
	Bachelor's degree	264	65.8		75000-100000	74	18.5
	Master's degree	40	10.0		> 100000	68	17.0
Occupation	Household	23	5.7	Order Frequency	Once a week	172	42.9
	Employee	250	62.3		Several time a week	180	44.9
	Student	52	13.0		Everyday	33	8.2
	Self-Employee	54	13.5		More than once a day	16	4.0
	Others	22	5.5				

4.2. **Validity and reliability tests.** The validity test is done to find the relationship of the indicators to the total score using the Pearson Product Moment Correlations formula. Based on the results in Table 2, it can be seen that each statement in the research instrument has a significance value of less than 0.05, and the correlation coefficient exceeds the value of r-table of 0.098. This means that each of these statements is valid, or in other words, they can be used to represent the variables of Visual Design, Information Design, Navigation Design, Collaboration Design, Service Level, and Conversion Rate.

TABLE 2. The Pearson correlation (ρ) and Cronbach's Alpha (α) values

Construct	Item	ρ	p-value	α	Construct	Item	ρ	p-value	α
Visual Design	DV1	0.833	0.000	0.893	Information	DI1	0.743	0.000	0.843
	DV2	0.852	0.000		Design	DI2	0.779	0.000	
	DV3	0.808	0.000			DI3	0.809	0.000	
	DV4	0.725	0.000			DI4	0.806	0.000	
	DV5	0.805	0.000			DI5	0.784	0.000	
	DV6	0.832	0.000		Navigation	DN1	0.755	0.000	0.878
Collaboration	DK1	0.714	0.000	0.831	Design	DN2	0.726	0.000	
Design	DK2	0.751	0.000			DN3	0.723	0.000	
	DK3	0.751	0.000			DN4	0.792	0.000	
	DK4	0.714	0.000			DN5	0.786	0.000	
	DK5	0.754	0.000			DN6	0.799	0.000	
	DK6	0.776	0.000			DN7	0.76	0.000	
Service Level	TP1	0.898	0.000	0.773	Conversion	TK1	0.918	0.000	0.682
	TP2	0.907	0.000		Rate	TK2	0.834	0.000	

The reliability tests are carried out to measure the internal consistency of each statement. For this respect, this research uses the Cronbach's Alpha statistic. The reliability test is carried out jointly on all statements to see whether the value of alpha is greater than 0.60 to determine whether the statement is reliable or not. The results of the reliability test shown in Table 2 show that the Cronbach's Alpha coefficient falls between 0.682 to 0.893, which means it meets the established reliability criteria (exceeding the minimum Cronbach's Alpha coefficient of 0.60).

4.3. **The results of the regression analysis.** The coefficient of determination test (R^2) in this study is conducted to determine the compatibility between the model and data. When the number approaches the value of one (or 100%), then it shows that the level of compatibility is absolute. The results are: $R = 0.693$, $R^2 = 0.480$, adj.-$R^2 = 0.473$, standard error of the estimate $= 0.565$, and Durbin-Watson $= 2.156$. The value of the coefficient of determination of 0.480 suggests that the independent variables – Visual Design, Information Design, Navigation Design, Collaboration Design, and Service Level – are able to explain the dependent variable (Conversion Rate) by about 48.0% where the remaining 52.0% is influenced by other factors not included in this model. The value of the coefficient of determination (R^2) is sufficiently high, considering only five variables for the predictors.

The second statistical test in the multivariate regression analysis is the F test. The case has the null hypothesis (H0): $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5$ and the alternative hypothesis (Ha): there is a non-zero β_j at the least. The test result is the F statistic of 72.888, associated with an extremely small p-value of 0.000, suggesting a rejection on the null hypothesis.

The next is a couple of t tests to evaluate the relationships between each of the five independent variables, namely, Visual Design, Information Design, Navigation Design,

TABLE 3. The results of t- and multicollinearity tests for model (1)

Model	Unstd. Coef.		Std. Coef.	t-stats	p-values	Tol.	VIF	Collinearity
	B	Std. Error	β					
(Constant)	0.238	0.215		1.109	0.268			
Visual Design	0.100	0.050	0.092	1.980	0.048	0.610	1.638	No
Information Design	0.302	0.065	0.250	4.686	0.000	0.434	2.161	No
Navigation Design	0.192	0.065	0.163	2.962	0.003	0.434	2.303	No
Collaboration Design	0.260	0.056	0.227	4.608	0.000	0.541	1.848	No
Service Level	0.122	0.051	0.118	2.416	0.016	0.552	1.812	No

Collaboration Design, and Service Design, to the dependent variable. The results in Table 3 show that all values of the t statistic are statistically significant. Thus, all hypotheses described by Figure 1 are accepted.

The multicollinearity tests are performed to test whether or not the regression model has a correlation among the independent variables. The results are presented in Table 3 where the values of tolerance are more than 0.1, and Variance Inflation Factor (VIF) values are less than 10, suggesting no collinearity.

4.4. **Discussion.** The results obtained by the t-tests also show that Information Design with $\beta_2 = 0.250$ and Collaboration Design with $\beta_4 = 0.227$ are the factors that rank first in the magnitude of their influence on the likelihood of conversion, then followed by Navigation Design with $\beta_3 = 0.163$, Service Level with $\beta_5 = 0.118$, and Visual Design with $\beta_1 = 0.092$.

As mentioned earlier, Collaboration Design is one of the factors that have the most significant influence on conversion (purchase) compared to other factors in this study, which has a significant value of 0.00 (the less than 0.05, the more significant the effect). Collaboration here takes many forms, and the most common is giving discounts and cashback to customers. Some e-commerce players will usually work together to collaborate with other e-commerce players or with merchants to provide promos to customers.

For example, the OFD Go-Food app will work with Go-Pay to provide discounts to customers who choose to pay using the Go-Pay facility. Another example is that certain merchants will give promos such as Buy 1 Get 1 Free if you buy using an app from a specific OFD, instead of buying directly to where the merchant is. This of course can make customers more selective in choosing the OFD app. Customers will tend to choose to make purchases using the OFD app, which provides many promos, especially for food that is about to be ordered. This is because the quality of food and service from certain restaurants will not be different from using any OFD app. The effect of OFD app selection will be stronger when customers get promos on the food they want to buy. It is very important for e-commerce engaged in this factor to understand the needs of their customers so they can work together with other e-commerce to create promos that are effective and efficient.

Information Design has the same influence as the Collaboration Design on the Conversion Rate of customers, with a significance value of 0.00. It means it has a strong significance level. In other words, the quality of the information in the OFD app greatly influences how the customer will choose which OFD app to use until the purchase occurs using the OFD app. The quality of information here is greatly influenced by how the information presented is up to date and includes all the information needed by the customer. Such information can be in the form of digital menus, customer reviews, addresses and contacts of restaurants, pictures of food and the restaurant itself, as well as other things that can increase the desire and trust of customers to buy using the OFD app. Customers will usually type the name of the food they want to buy in the filter section of the app, and then a number of restaurants will appear. Customers will generally choose

the restaurant that has the best reviews, clear contacts and addresses, as well as photos of real food from other customers who have made reservations at the restaurant. Such information will usually determine whether the customer will ultimately choose to buy food at the place or not. It can even impact whether the customer will continue to use the OFD app, or choose another OFD app. Companies engaged in the OFD field must pay attention to how all the latest and relevant information can be available in their OFD app.

Navigation Design has a considerable influence on the Conversion Rate of customers that has a significance value of 0.003. Navigation here can mean how customers can move from one place to another within the OFD app quickly and smoothly. For example, how smoothly a customer can move from a digital menu page to a summary display of all food that a customer has chosen, to the payment page in the OFD app. The ease of transition from one page to another that is felt by the customer will affect to a certain point how the customer will return to use the OFD app and how the customer will make a purchase with the app. With the design of an effective and efficient navigation, customers can easily find the food they are looking for in no time, easily see back all the food they have chosen, then easily also enter the payment page with various payment options. Therefore, the OFD app developer is expected to pay attention to how they will design the navigation within the app so that each stage of the customer's journey to make a purchase can occur quickly and smoothly without any significant obstacles.

This study also shows that the Service Level is a factor that quite influences the Conversion Rate of customers with a significance value of 0.016. Service Level here means how the OFD app provides facilities to facilitate customers to interact with the driver who makes food purchases, or to the customer service of the OFD app. Drivers will usually initiate contacting customers using the chat facility in the app to ensure that orders received by drivers are in accordance with the wishes of the customer. Customers can also use this facility to provide clearer information if on food orders they make there are special requests for these foods. Customers can also provide feedback or complaints easily about the service they get after food is received. This feedback is usually raised by the OFD app after the food is received in the form of star rating (one to five Stars, where the higher the Star is given, the more satisfied the customer is with the service they get). There is also a special column to provide comments if there are complaints or suggestions that customers want to convey directly to the customer service of the OFD app. The convenience for customers to communicate with drivers and in conveying aspirations to service providers can increase the desire of customers to return to make purchases with the same OFD app because customers feel the app has great concern for their customers. For this reason, OFD app developers can pay attention to how customers can communicate easily, both to the driver and to the company. Developers are also expected to provide fast and appropriate responses to every suggestion and complaint submitted by each of their customers.

Although it has the smallest effect compared to the factors above, Visual Design has a significant influence on the customer Conversion Rate with a significance value of 0.048. It shows that although it does not have as much influence as other factors in this study, design in visual matters must still be taken seriously when developing OFD apps. Attractive colors, appropriate font sizes, structured information, image and color combinations, and animation are things in Visual Design that play an important role in influencing customers for convenience in using apps. These things make customers happy to make purchases with certain OFD apps, which can also result in reuse using the same OFD app. Customers tend to choose apps that have the right font size, colors that can blend beautifully, as well as high-quality images that make them interested in interacting with the app. These things must be taken into consideration when developers want to develop attractive OFD apps, that can result in leading customers to the purchasing stage.

5. **Conclusion.** Mobile app as a tool to communicate and be able to attract customers digitally and even to make purchases is well understood. This study empirically points out that for OFD apps, the attributes of Information Design, Collaboration Design, Visual Design, Navigation Design, and Service Level influence the app's adoption and conversion. Moreover, we find that the first two attributes to be the most relevant, followed by Navigation Design and Service Level. Visual Design is also statistically significant, but not as dominant as other attributes. Those attributes are crucial to alleviating customers' engagement to the level of conversion stage. We note that the study is conducted in Indonesia at the time that OFD apps are adopted at a fast pace. The sample is only taken from the citizen of Jakarta, Indonesia's largest city, where e-commerce adoption is also significant.

As for a potential research topic for the future, we advise the following. In the present work, we only consider five independent variables, namely, Visual Design, Information Design, Navigation Design, Collaboration Design, and Service Level, and each variable is demonstrated to be statistically significant affecting the Conversion Rate, the dependent variable. However, as a whole, those five independent variables only explain 48% variability of the dependent variable, suggesting a lot more factors should be taken into account to better understand the consumer conversion. The issue is recommended for future research work.

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