

Analysis of User Satisfaction Towards Online Food Ordering Services and Prices Using Customer Satisfaction Index

Jonathan Kevin Fernando^{1*}, Jackri Hendrik², Feriani Astuti Tarigan³

^{1,3}Information Systems, STMIK Time, Medan, Indonesia

²Informatics Engineering, STMIK TIME, Medan, Indonesia

jon8000zxc@gmail.com^{1*}, jackri.hendrik@gmail.com^{2*}, ferianiaститime@gmail.com^{3*}

Abstract

The rapid growth of application-based food delivery services in Indonesia highlights the importance of not only convenience and delivery speed but also user satisfaction. This study aims to develop a digital survey system and management application capable of automatically calculating the Customer Satisfaction Index (CSI), analyzing key user satisfaction indicators, and comparing satisfaction levels across multiple platforms. The CSI method was employed to evaluate user satisfaction based on indicators such as service quality, application usability, delivery speed, pricing, and promotional offers. Data were collected through questionnaires completed by 200 active users of GoFood, GrabFood, and ShopeeFood, with each indicator measured using a five-point Likert scale to assess both importance and satisfaction. The findings reveal that delivery time significantly influences user satisfaction, with GoFood achieving the highest CSI score in the delivery aspect at 60.58%. In contrast, ShopeeFood outperformed in the pricing dimension, with transparency and price accuracy rated as the most satisfactory. However, undisclosed additional charges were identified as a factor that reduced overall satisfaction. This study is expected to provide valuable insights for food delivery application providers to enhance service quality and foster customer loyalty.

Keywords: digital survey system, Customer Satisfaction Index, customer satisfaction, GrabFood, ShopeeFood, GoFood.

1. Introduction

Online food ordering has become a significant trend in the modern world. With the emergence of ride-hailing applications offering food delivery services, consumers now enjoy greater convenience and accessibility in ordering meals from various restaurants and food vendors without leaving the comfort of their homes. Alongside technological developments, applications have been introduced that provide online ride-hailing services with standardized service quality, which differs from the traditional system of motorcycle taxis (ojek) that relied on designated bases at street corners or specific areas [1].

However, the success of online food delivery applications does not solely depend on convenience and delivery speed but also on the level of customer satisfaction. The growing number of online ride-hailing services has created increasingly intense competition. This competition is primarily driven by pricing strategies and the wide variety of available services, making consumers more selective in choosing services that best meet their needs. To address this situation, online ride-hailing companies must be able to provide both quality services and competitive pricing to ensure customer satisfaction [2].

Problems often arise when customers place food or beverage orders through these applications but do not receive them as expected despite having completed payment. Other common issues include frequent order cancellations by drivers and instances of drivers displaying inappropriate behavior toward customers. Such problems can greatly disturb customers and tarnish the reputation of the application if they occur repeatedly. Dissatisfied customers who no longer feel comfortable and secure with a particular service may easily switch to other online transportation providers. Therefore, it is crucial for service providers to focus on improving service quality and effectively handling customer complaints to enhance satisfaction and build customer loyalty [3].

Customer loyalty can also be achieved through accurate pricing strategies. Price is a crucial factor influencing purchasing decisions and, in turn, customer loyalty toward a product or service. Thus, proper pricing is vital for marketing success. Since their inception, ride-hailing services (ojol) have actively offered various discounts to attract and retain customers [4].

By analyzing customer satisfaction levels, this study aims to provide valuable insights for ride-hailing companies to improve their services, adjust pricing strategies, and enhance other aspects of their business. Furthermore, the findings of this research can benefit academics and stakeholders interested in the online food delivery industry as well as the research methodologies applied in this study. In conclusion, service quality and pricing simultaneously have a positive and significant influence on customer satisfaction. Customer satisfaction with

services and performance outcomes strongly impacts the company's image, making it a key concern for rapidly growing online ride-hailing companies.

2. Theoretical Basis

2.1. User Satisfaction

Customer satisfaction is the key to a company's success in achieving competitive advantage. Companies that are able to provide optimal services to the point where customers feel satisfied will gain significant benefits [5]. Theories related to customer satisfaction have long been a central focus in business management research. Customer satisfaction can be defined as a positive perception or subjective evaluation of a service experience compared to the user's expectations [6].

Customer trust and commitment play a crucial role in determining consumer loyalty to a company. Many businesses today place customer satisfaction at the core of their strategies. To measure satisfaction, companies often monitor customer experiences during transactions or while using the service. This information is highly valuable as it serves as the foundation for improving service quality. Customer satisfaction with services and performance outcomes has a strong impact on corporate reputation, making it a top priority for fast-growing companies.

2.2. Service

Service quality plays a crucial role in creating customer satisfaction. Providing excellent service can enhance customer satisfaction, which in turn encourages repeat purchases. Previous purchasing experiences are also a key factor in future purchasing decisions, as customer satisfaction influences commitment and loyalty toward a product or seller [7].

In the context of online food delivery applications, good service quality encompasses several important aspects, including:

1. **User-Friendly Interface**
Applications should feature a simple and intuitive interface that allows users to place orders smoothly without difficulties.
2. **Variety of Menu Options**
Applications should provide a wide selection of menus from various restaurants or food vendors, giving users diverse choices to suit their tastes and needs.
3. **Comprehensive Menu Information**
Each menu item should be presented with clear and detailed information, including descriptions, prices, and appealing food images.
4. **Ease of Payment**
Applications must offer secure and convenient payment options, such as credit/debit cards, bank transfers, and other online payment methods.
5. **Order Tracking**
Users should be able to track their orders in real-time through an order tracking feature, enabling them to know the estimated delivery time.
6. **Feedback System**
Applications should provide a feedback feature that allows users to leave reviews and ratings for restaurants or menu items, helping other users make informed decisions before placing an order.
7. **Responsive Customer Service**
Applications must ensure responsive and accessible customer support, for example through live chat, phone, or email, to assist users in resolving issues or providing help when needed.

2.3. Price

Price can be defined as the amount of money paid by consumers for a product or service, or as the total value that consumers are willing to spend in order to obtain the benefits of owning or using the product or service. Indicators of price include affordability, compatibility with service quality, relevance to perceived benefits, and competitiveness. The objectives of pricing strategies may vary, such as ensuring business sustainability, maximizing short-term profits, gaining the largest market share, maximizing "market skimming" (obtaining high profits from early adopters), demonstrating leadership in product quality, and achieving other strategic goals [8].

In the context of online food delivery applications, price has a significant impact on customer satisfaction because it directly influences the value perceived by customers. Several factors illustrate how price can affect customer satisfaction:

1. **Value Perception**
When the price corresponds to the quality of the food offered, it can enhance the perceived value of the purchase. Customers feel more satisfied when the amount they pay is proportional to the quality, taste, and portion size of the food they receive.

2. **Financial Satisfaction**
Affordable prices or attractive promotions can increase customers' financial satisfaction. They feel they are getting more value for their money, which enhances their overall shopping experience through the application.
3. **Accessibility**
Excessively high prices can make food on the application less accessible to certain customer groups, potentially reducing satisfaction. Conversely, more affordable prices allow greater accessibility, thereby improving overall customer satisfaction.
4. **Price Comparison**
Customers frequently compare prices across different food delivery applications. If they find more competitive prices or better offers elsewhere, they are more likely to switch services, leading to dissatisfaction with the current application's pricing.
5. **Price Transparency**
The clarity of pricing information, including additional charges such as delivery fees or taxes, also influences customer satisfaction. When prices are clearly stated and free from hidden charges, customers are more likely to feel satisfied and trust the application.

By considering these factors, online food delivery providers can manage their pricing strategies wisely to improve customer satisfaction and build long-term positive relationships with their users.

2.4. Online Merchant Application

An application is a computer program or software designed to perform specific functions on electronic devices such as computers, smartphones, or tablets. Applications vary in their functions, ranging from data management to information delivery, and are generally created to facilitate users in carrying out various tasks. Various scholars have provided their own definitions of the term application. Some of the popular definitions include:

1. **Ali Zaki and Smitdev Community**
According to Ali Zaki and the Smitdev Community, an application is a component that functions to process data and perform various activities, such as creating or managing documents and files.
2. **Sri Widianti**
Sri Widianti defines an application as software that serves as a front-end interface within a system. Its function is to manage various types of data into useful information for users and related systems.
3. **Harip Santoso**
Harip Santoso explains that an application is a collection of files (such as classes, forms, and reports) designed to perform specific interrelated activities, for example, payroll applications or fixed asset management applications.
4. **Yuhefizar**
Yuhefizar describes an application as a program intentionally developed to meet user needs in completing specific tasks.
5. **Hengky W. Pramana**
Hengky W. Pramana defines an application as a software unit designed to meet the needs of various human activities or tasks, including commerce, advertising, public services, gaming, and others [9].

The term online generally refers to connection or access via the internet. In the context of applications, this term indicates that the application operates through internet connectivity, allowing users to access the available services and features through the network.

A merchant refers to an individual or company engaged in trade activities by selling products or services to consumers. Typically, merchants own the goods or services they market and are responsible for the entire sales process, including payment processing and product delivery to customers.

Broadly speaking, an Online Merchant Application is software or a computer program that functions as a platform to facilitate interaction between sellers (merchants) and buyers (users) via the internet. Through such applications, merchants can offer their products or services online to consumers, as well as manage transactions, payments, and product deliveries digitally.

For instance, an application called FoodieExpress serves as an online food ordering platform. In this application, restaurants or food vendors can register their food products to be sold to users. Application users, acting as buyers, can browse various menu options from registered restaurants and place orders through the platform. Once the purchase is made, the application facilitates the online payment process and provides confirmation to the user. Furthermore, the application manages the delivery process from the restaurant to the user's designated address. Thus, FoodieExpress is a concrete example of an online merchant application that enables seamless interaction between sellers (restaurants) and buyers (users) in digital food-ordering transactions.

2.5. Customer Satisfaction Index

The Customer Satisfaction Index (CSI) is used to assess the overall level of user satisfaction with a service by considering both service performance and the importance or expectations regarding specific service attributes [10].

The CSI is a method applied to evaluate customer satisfaction comprehensively by taking into account the significance of the measured product or service attributes. It provides transparent customer satisfaction data, enabling companies to periodically assess areas that require improvement and enhance aspects of service perceived as added value by customers [11].

The following are the complete steps and formulas for calculating the Customer Satisfaction Index (CSI):

1. **Validity and Reliability Test**
Before calculating the CSI, it is essential to ensure that the questionnaire or survey instrument has passed both validity and reliability tests. A validity test confirms that the survey instrument measures what it is intended to measure, while a reliability test ensures that the instrument consistently measures the intended variables.

2. **Mean Importance Score (MIS)**
Calculate the average importance score for each attribute using the scale provided in the questionnaire. For example, if a Likert scale is used (e.g., ranging from 1 to 5), then the MIS is obtained by summing all importance ratings for each attribute and dividing the result by the number of respondents.

$$MIS = \frac{\sum \text{Importance Score}}{\text{Total Respondents}}$$

3. **Mean Satisfaction Score (MSS)**
Calculate the average satisfaction score for each attribute using the same scale as in the MIS.

$$MSS = \frac{\sum \text{Satisfaction Score}}{\text{Total Respondents}}$$

4. **Weight Factor (WF)**
Calculate the weighting factor for each attribute by dividing the MIS of each attribute by the total sum of all MIS values.

$$WF_i = \frac{MIS_i}{\sum_{i=1}^n MIS_i}$$

5. **Weighted Satisfaction (WS)**
Calculate the weighted satisfaction for each attribute by multiplying the MSS by its corresponding WF.

$$WS_i = MSS_i \times WF_i$$

6. **Customer Satisfaction Index (CSI)**
Calculate the CSI by summing all the WS (Weighted Satisfaction) values for each attribute.

$$CSI = \sum_{i=1}^n WS_i$$

The CSI provides a score that reflects the overall level of customer satisfaction. A higher CSI score indicates a higher level of satisfaction.

If the CSI value is above 50%, it indicates that customers are generally satisfied; conversely, if the CSI value is below 50%, it means that customers are not yet satisfied. In this study, the CSI value is divided into five categories, ranging from “very dissatisfied” to “very satisfied”, as shown in the following table:

Table 1: Customer Satisfaction Index (CSI) Value Criteria

Nilai CSI	Kriteria CSI
81% - 100%	Sangat Puas
66% - 80.99%	Puas
51% - 65.99%	Cukup Puas
35% - 50.99%	Kurang Puas
0% - 34.99%	Tidak Puas

3. Research Methods

This research begins with an analysis of the ongoing process as observed in the field. The results of this process analysis are visualized through a flowchart that illustrates the workflow from start to finish. The flowchart is presented in Figure 1 below.



Fig. 1: Flowchart of the Running System Flow

Based on the results of the analysis, the system design was carried out to develop software capable of measuring user satisfaction levels with regard to food delivery services and pricing in online food ordering applications such as GoFood, GrabFood, and ShopeeFood, by applying the Customer Satisfaction Index (CSI) method. The system is designed as a web-based application to ensure easy access for both users and researchers. The system design is illustrated using a Data Flow Diagram (DFD) to clarify the data flow processes within the system, as shown in Figure 2 below.

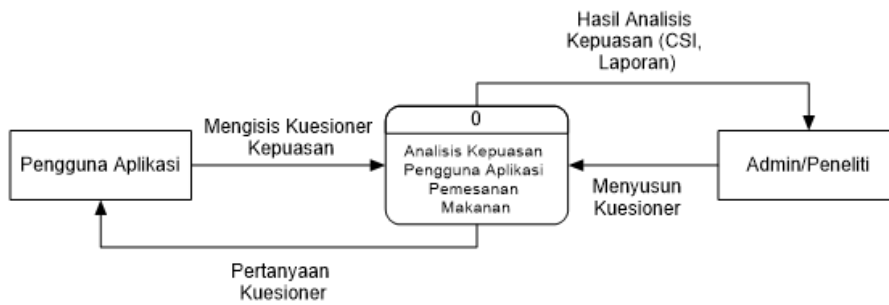


Fig. 2: Data Flow Diagram Analysis System

The database structure was then designed by arranging several main tables, such as the respondent table, the assessment aspect table, the question table, and the evaluation table. Each table was structured to support the process of collecting, storing, and automatically calculating the CSI values.

The system interface was designed with a simple and responsive layout to ensure that users can easily operate the application. The interface includes a survey input form, a results display in graphical format, and an admin page for managing data and viewing comparative reports of satisfaction levels across different applications. The system interface design is presented in Figure 3 below.



Fig. 3: Some Digital Survey System Interface Views

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