An Empirical Study of The Factors Affecting University Students' Satisfaction Towards Foodpanda Mobile Application

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ARTICLE INFORMATION

ABSTRACT

Foodpanda is a well-known online food delivery platform. Foodpanda has evolved to be a popular option for individuals looking for simple and convenient food delivery services, particularly university students. The objectives of this study are to provide novel insights and investigate what factors influence university students' satisfaction with the Foodpanda mobile application through the proposed research model. Precisely, the objective of this article is to examine the relationship between information quality, system quality, price, perceived convenience, delivery experience, and customer satisfaction. The results of this study aim to guide Foodpanda managers in ensuring a high degree of customer satisfaction and retention, as customer satisfaction is critical to a company's success. This study will use a quantitative method to obtain data from university students by administering a survey. SPSS software will be used to analyze the collected data. Based on the findings, it is anticipated that the five investigated factors will have significant effects on customer satisfaction.

Keywords: Foodpanda; Customer Satisfaction; Perceived Convenience; Online Food Delivery Platform; System Quality

INTRODUCTION

Foodpanda is the first meal delivery company to have been formed in Malaysia. In Malaysia, 91% of users use Foodpanda, making it the market leader in the third-party delivery app category (Oppotus, 2022). Foodpanda is one of the leading global online food deliveries (Suleiman et al., 2021). It is an online food and beverage application to aid people in ordering food without barriers (Aryani et al., 2022). A global marketplace for ordering and delivering meals online, Foodpanda works in 43 different nations. Due to the fast urbanization that has occurred, many urban residents have little time during their workweek to cook meals for them or even go out to eat. Many restaurants have started creating new business models to meet customers' desires and requirements by offering online food delivery services. In order to meet expectations and fulfil needs, ordering meals plays a significant role in everyone's life. It involves placing an online or other packaging-based meal order (Chouhan et al., 2020). Food delivery services have gained immense popularity over the last few years, and mobile applications like Foodpanda have revolutionized the way people order food. With the convenience of ordering food with just a few clicks on a smartphone, more and more university students are using food delivery services as a convenient solution to their busy schedule. The Foodpanda mobile application has been chosen as the focus of this study due to its wide usage and popularity among university students.

However, there are other competitors of Foodpanda which is used by the university students. In the realm of food delivery, university students have an array of options beyond Foodpanda. These alternatives cater to diverse tastes and preferences while offering convenience and accessibility. Among these competitors is AirAsia Food, an extension of the well-known airline, which has ventured into the food delivery market. With its wide coverage and competitive pricing, AirAsia Food provides students with a convenient way to satisfy their cravings. GrabFood is another major player in this space, widely used by students across various campuses. Known for its extensive restaurant network and efficient delivery service, GrabFood offers a seamless experience, allowing students to order from their favorite eateries with just a few taps on their smartphones. Its popularity stems from its reliability and user-friendly interface, making it a go-to choose for hungry students. These competitors not only offer students a variety of food choices but also contribute to the vibrant food culture on university campuses. With their seamless interfaces, quick delivery times, and enticing promotions, they have become integral parts of students' lives, providing them with nourishment and comfort during their busy academic journeys. Whether craving a quick snack between classes or a hearty meal during late-night study sessions, these food delivery platforms ensure that university students never go hungry.

Foodpanda emerged as Malaysia's pioneer meal delivery enterprise. Around 75% of Malaysians demonstrate a preference for using the Foodpanda food delivery app. Operating in 43 different countries, Foodpanda serves as a worldwide platform for online meal ordering and delivery. The selection of the Foodpanda mobile app as the research focal point stems from its extensive adoption and popularity among university students. Since the beginning of time, regardless of the size of the firm, the customer has been a crucial shareholder in its operation. Customers now hold a position of direct stakeholder rather than indirect stakeholder due to the evolution of business, which has enhanced their importance. It has become crucial for firms to maintain customer satisfaction because customers play such a significant role in every industry.

Foodpanda mobile application achieves the several SDGs goals. Firstly, Foodpanda aims to provide various food options, cater to dietary preferences, and support regional businesses that promote sustainable and healthy food to achieve SDG 2 Zero Hunger by offering convenience to customers while planning to prepare meal or looking for something to eat. Secondly, to gauge user satisfaction, four parameters relating to the quality of the information offered by the Foodpanda mobile application are built. It would benefit the Foodpanda App to achieve SDG 8 which is decent work and economic growth by gathering feedback on the information provided regarding its support for local restaurants and food vendors. The food industry's potential to create jobs and promote entrepreneurship is noteworthy. Thirdly, Foodpanda aimed to improve and achieve SDG 9 which is Industry, Innovation, and Infrastructure by customer satisfaction when using the Foodpanda mobile application. It aids in evaluating technology development and promoting innovations related to the Foodpanda app such as more effective order placement, and delivery tracking systems with user-friendly interfaces.

It is important to note that few studies have thoroughly evaluated the variables that affect how customers perceive Foodpanda's mobile food delivery service in the expanding Malaysian market. Based on a previous study of The Performance of Foodpanda (Gan et al., 2022), the key discovery underscores that convenience is the most influential factor positively affecting customer satisfaction compared to other variables. Another previous study of The Impact of Food Delivery Apps on Customer Perceived Value Among University Students (Ganatra et al., 2021), it is evident that respondents expressed overwhelmingly positive opinions regarding the food delivery service, indicating a strong belief in the quality of products and services offered. In this context, "belief" refers to customers' satisfaction with the overall service quality, emphasizing the importance of timely and reliable food delivery to prevent customer dissatisfaction. As a result, these studies fill in the gap and leads an empirical examination regarding the factors that affecting university students' satisfaction towards Foodpanda mobile application in Malaysia. The findings of this study will have significant implications for Foodpanda. The study's results will provide valuable insights into customer preferences and highlight areas where improvements can be made to enhance customer satisfaction. Ultimately, this research aims to contribute to the understanding of factors that influence customer satisfaction towards food delivery services, with a specific focus on the Foodpanda mobile application.

Extensive attention from researchers worldwide has been directed towards the behavior of online shoppers, although the exploration of online food delivery services has remained comparatively limited. As a result, it is important to emphasize that there has been a lack of substantial research within the realm of online food delivery services. This highlights the significance of recognizing that only a restricted number of studies have thoroughly examined the elements influencing the satisfaction of university students with the Foodpanda mobile application in the rapidly expanding Malaysian market. Consequently, the current study addresses this gap by undertaking an empirical inquiry that pioneers an investigation into the determinants impacting customer satisfaction in Malaysia. In conclusion, customer satisfaction in online food delivery services is significantly influenced by various factors such as information quality, price, perceived convenience, system quality, and online food delivery experience. Meeting these expectations can help enhance customer experience, positively impact customer satisfaction and retention, build brand loyalty and ultimately drive business growth in the online food delivery industry.

LITERATURE REVIEW

System Quality and Customer Satisfaction

System quality refers to the overall level at which users assess the performance of a particular Information System (IS) in relation to its ability to provide information and meet their specific needs (Vijai, 2018). System quality refers to the technical aspects of an online platform that contribute to its performance, such as ease of use, reliability, and speed (Benmoussa et al., 2018). The lack of these functionalities could lead users to develop unfavorable opinions about the IS providers' competence and reliability in delivering high-quality service. Similarly, in the context of online food delivery apps settings, if users view the platform as reliable due to their perception of the system's quality, they will place their trust in the intermediary and be open to assuming the potential risks associated with relying on the online food delivery platform. The website or mobile application, payment gateway, order administration system, delivery tracking system, and customer support channels are all part of the online meal delivery system. To provide a smooth and efficient consumer experience, these components must work in unison. System quality is critical since it influences the online food delivery system's dependability, usability, and response. A reliable system guarantees the uninterrupted availability of the meal delivery service to customers. Any technical issues or system downtime can lead to customer frustration and dissatisfaction, ultimately harming the service's standing. This finding also suggests that university students are more likely to adopt a food delivery service with a user-friendly interface, fast loading times, and minimal technical issues. Delone and McLean introduced an enhanced model for evaluating the success of information systems (IS). This model suggests that assessing the perception of quality should encompass three key dimensions: system quality, information quality, and service quality. System quality significantly affects customer satisfaction in the food delivery context. Customers expect the platform to be user-friendly, responsive, and capable of handling their orders and preferences efficiently.

H1: There is a significantly positive effect of system quality on customer satisfaction.

Information Quality and Customer Satisfaction

Information quality pertains to individuals' perception of the standard of information provided within the system (Ghasemaghaei & Hassanein, 2019). Information quality concerns the accuracy, relevance, and completeness of the content provided on an online platform (Freeze et al., 2019). Information quality stands as a pivotal factor among the dimensions that shape users' inclinations toward adopting technology. Information plays a crucial role in shaping users' beliefs, ultimately guiding their behavioral intentions. In the context of food delivery services, information quality includes factors such as menu accuracy, pricing, and nutritional information. The information quality is critical in online meal delivery services since it directly influences the customer's decision-making process. To ensure a pleasant customer experience, the information offered to the consumer must be accurate, relevant, and up-to-date. Supplying precise and comprehensive information aids customers in making well-informed choices regarding their food orders and minimizes the likelihood of misunderstandings or mistakes. A mobile application containing comprehensive details contributes to enhanced customer satisfaction. Customer satisfaction is filled by the achieved expectation by the customers (Arif & Syahputri, 2021). Customer satisfaction is measured by how many levels the service and capability to meet customers' expectation (Irshad et al., 202). Furthermore, information quality refers to data that meet specific criteria and meet customer satisfaction (Rubab et al., 2018). The level of information provided by a food app allows customers to compare product features, enhance their shopping experience, and make better purchase decisions. The information delivered to customers via online needs to show the quality features such as accuracy, timeliness, and usefulness for the consumer

(Ahmad & Lasi, 2020). These aspects influence how customers perceive the value offered (Tien et al., 2019). Customers demand real-time updates on their orders, including information on the expected delivery date and order status. Building confidence with the consumer and easing their concerns about delivery timelines are both facilitated by providing accurate and timely information. Customers rely on accurate and comprehensive information to make informed decisions and evaluate the value proposition offered by Foodpanda.

H2: There is a significantly positive effect of information quality on customer satisfaction.

Perceived Convenience and Customer Satisfaction
In today's rapid-paced lifestyle, individuals opt against eating out due to their reluctance to spend time waiting for meals to be served. The creation of mobile applications has enabled the convenient online ordering of food because of technological advancements. Food delivery applications offer convenience by allowing users to compare food prices from various restaurants, helping them avoid waiting times and circumvent traffic-related issues. Previous research on online food delivery services indicates a positive correlation between customer satisfaction and factors such as location (Correa et al., 2018), traffic (Correa et al., 2018), and convenience (Pigatto et al., 2017; Roh & Park, 2018; Yeo et al., 2017). If customers recognize time-saving benefits, they would be inclined to utilize online food delivery applications. As a result, the speed, simplicity, and accuracy of the ordering process have garnered customer preference for online food delivery. In OFD services context, convenience pertains to the ease of managing time and exertion. Shoppers who prioritize convenience consistently factor in time and effort. They favor ordering food from home to save time, evade crowded markets, and conduct transactions whenever and wherever suits them. Perceived convenience is a significant factor influencing the satisfaction of university students towards food delivery services. The hectic and time-sensitive schedules of university students often prompt them to prioritize services that save time and effort. Kim et al. (2020) found that convenience was a primary motivator for students to utilize online food delivery services, as it allowed them to manage their time efficiently and focus on other responsibilities. The convenience was found to be a significant predictor of behavior intention towards food delivery platforms. Students appreciate the ability to order food from their preferred restaurants without the need to leave their campus or accommodation. The availability of a mobile application that allows easy browsing and ordering, as well as quick and reliable delivery, enhances the convenience factor.

H3: There is a significantly positive effect of perceived convenience on customer satisfaction

Price and Customer Satisfaction
Price is a key factor influencing customer satisfaction in the OFD industry (Kim et al., 2020). Customers commonly display sensitivity to prices and seek economical choices when placing online food orders. High prices, compared to rival online meal delivery services or conventional restaurant dining, could deter customers from using the service or prompt them to leave unfavorable feedback. Customers expect clear and transparent pricing that excludes hidden charges or extra fees. Any supplementary expenses like delivery fees or taxes should be clearly stated from the outset to avert any confusion or dissatisfaction among customers. The customers, especially university students, who often have limited budgets, are sensitive to price when choosing a food delivery service. The competitive pricing strategies, such as discounts and promotions, were effective in attracting and retaining customers. Customers are likely to enjoy enhanced experiences when presented with coupons, discounts, special deals, and other forms of financial incentives. Research findings indicate that engaging customers through monetary

rewards can effectively enhance their intention to repeatedly use mobile food delivery apps. Customers may be discouraged from utilizing the service or may leave bad reviews if the price is excessively high in comparison to competing online meal delivery services or traditional restaurant eating. Therefore, the price perception significantly influences their satisfaction towards food delivery platforms. Customers are likely to choose services that offer reasonable prices, promotions, and discounts without compromising on the quality of the food and delivery experience.

H4: There is a significantly positive effect of price on customer satisfaction.

Delivery Experience and Customer Satisfaction
The term "delivery experience" pertains to the favorable feelings associated with the process of receiving food that has been ordered through a food delivery app (FDA). This encompasses various aspects within the FDA, such as the option to place nighttime orders, the capability to pinpoint the delivery location on a map, instances of free delivery, and the feature to track the delivery in real-time and access estimated delivery time. Several recent studies have indicated that customer satisfaction toward online food delivery services are important predictors of intentions to use them. (Elvandari et al., 2018; Maimaiti et al., 2018; Suhartanto et al., 2019; Yeo et al., 2017; Yusra & Agus, 2018). A customer's encounter holds significant influence over their utilization of FDAs, which extends to the satisfaction derived from the delivery experience. A positive encounter fosters an inclination to use the service again in the future. Online meal delivery providers must consider the delivery experience because it has a direct bearing on the customer's entire satisfaction and experience. The delivery experience is made up of a number of factors, including packing quality, delivery crew behavior, punctuality and accuracy. A positive delivery experience can contribute to customer satisfaction and encourage repeat usage of the service. Customers placed a high value on timely deliveries and well-packaged food, which contributed to their overall satisfaction with the service.

H5: There is a significantly positive effect of delivery experience on customer satisfaction.

Customer Satisfaction
Online food delivery platforms have become integral to our daily routines. People have encountered varying experiences, both favorable and unfavorable, while utilizing these apps for food delivery. The consumption experience of customers holds significant importance in ensuring the long-term viability of businesses, as a positive consumption encounter directly contributes to customer contentment. A person is said to be satisfied when they feel happy or disappointed about a product's performance or results in relation to their expectations. Customer satisfaction is a critical factor in determining the success of any service-oriented business. Customer satisfaction is regarded as a sentiment that emerges following a customer's purchase or utilization of a service and subsequent payment. It signifies the customer's satisfaction with the product or service received. Moreover, satisfaction is closely linked to factors such as food quality, delivery time, and order accuracy. One of the ideas that professionals should take into account to make sure that a firm manufacturing its products succeeds is customer satisfaction. Customer satisfaction can also be viewed as the ultimate contentment observed in a customer's emotional reaction when receiving a service from Foodpanda, determining whether it generates a positive or negative impression leading to long-term customer loyalty. This implies that measuring customer satisfaction involves evaluating the degree of customer contentment with a product, service, or overall experience. Figure 1 illustrated the research model used in this study.

Figure 1. Research Model
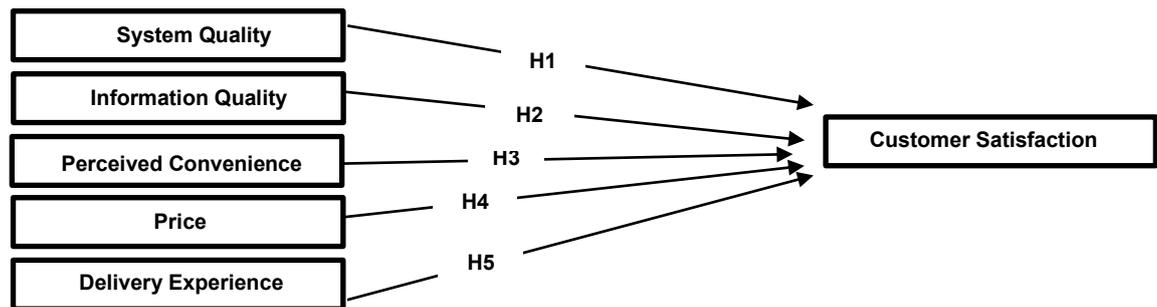
RESEARCH METHOD

Sample and procedures
To collect the data for the survey, a survey questionnaire was created using Google Forms and disseminated to targeted respondents. The primary objective of Google Forms was to collect pertinent data regarding the variables that affect university students' satisfaction levels with the Foodpanda mobile application. A pilot test was conducted with ten respondents before releasing the Google forms to the targeted Malaysian university students who have previously utilized the Foodpanda mobile application on at least two times. There are two criteria for the respondents to answer the questionnaire. First is whether you are currently a university student at one of the public or private universities in Malaysia. Second is whether they have used the Foodpanda mobile app at least two times before. Social media sites like WhatsApp, Instagram, Facebook, and Telegram were used to spread the survey.

Collecting data from 110 participants may suffice to portray university students' views, given certain circumstances. Initially, the sample size needs to be sufficiently large to offer a reasonable reflection of the overall population. From a statistical standpoint, a sample size of approximately 100 is commonly regarded as acceptable for populations numbering in the thousands, provided the selection process is random and encompasses diverse demographics. Moreover, the uniformity of the population is pivotal. Should university students exhibit similar traits such as age distribution, socioeconomic status, and cultural backgrounds, a sample size of 110 could yield valuable insights into their preferences and behaviors concerning food delivery platforms like Foodpanda. Besides that, reaching out to and persuading university students to participate in surveys can be challenging due to time constraints. Thus, this survey effectively gathered 110 replies while protecting the respondents' privacy.

Statistical Analysis Technique
IBM SPSS Statistics Software Version 27 has been used to analyze the data gathered. SPSS was used to analyse the demographic information and the relationships between the variables.

Measurements
The survey is divided into three main sections. Section A deals with demographic data, Section B with general inquiries, and Section C with consumer perceptions across various topics. The six subsections in Section C are focused on, in that order, perceived convenience, system quality, information quality, customer satisfaction, price, and delivery experience. To determine the level of agreement, a 7-point Likert scale ranging from 1 ("Strongly Disagree") to 7 ("Strongly Agree") was employed in measuring the variables. All questionnaires can be found in Appendix 1. For section A, the Surveys often include demographic questions to collect information on respondents' gender, age,

highest academic qualification, ethnicity, living area, state, university name and type, employment status, and monthly income to know the targeted respondents well. As for section B, the several general questions, such as Foodpanda Mobile Application Prior Experience and Frequency of Using the Foodpanda Mobile Application, were asked to understand the user's familiarity with the Foodpanda Mobile Application.

RESULTS

Table 1. Respondents' Descriptive Statistics (*N* =110)

Response		Frequency	Percentage (%)
Gender			
	Female	85	77.3
	Male	25	22.7
Age			
	19-24 years old	107	97.3
	25-30 years old	3	2.7
	31 years old and above	0	0
Highest Academic Qualification			
	Diploma	8	7.3
	Bachelor	101	91.8
	Master	1	0.9
	Doctorate	0	0
Ethnicity			
	Malay	16	14.5
	Chinese	91	82.7
	Indian	2	1.8
	Indonesian	0	0
	Arab	0	0
	Other: Bumiputera Sarawak	1	0.9
Living Area			
	City	82	74.5
	Rural	28	25.5
State			
	Johor	11	10
	Kedah	14	12.7
	Kelantan	3	2.7
	Malacca	1	0.9
	Negeri Sembilan	1	0.9
	Pahang	5	4.5
	Penang	38	34.5
	Perak	14	12.7
	Sabah	2	1.8
	Sarawak	16	14.5
	Selangor	5	4.5
University Name			
	Dasein Academy of Arts	1	0.9
	Fame International College	1	0.9
	Imperia College	1	0.9
	National University of Malaysia	1	0.9
	Northern University of Malaysia	1	0.9
	Providence University	1	0.9
	Sunway University	1	0.9
	Universiti Kebangsaan Malaysia	1	0.9
	Universiti Malaysia Sarawak	5	4.5
	Universiti Sains Malaysia	94	85.5
	Universiti Teknologi Malaysia	2	1.8
	Universiti Utara Malaysia	1	0.9

Type of the University			
	Public	105	95.5
	Private	5	4.5
Employment Status			
	Full Time	19	17.3
	Part Time	13	11.8
	Self-employed	0	0
	Unemployed	78	70.9
Monthly Income			
	No Income	89	80.9
	Less than RM 1,000	16	14.5
	RM 1,001 - RM 2,500	4	3.6
	RM 2,501 - RM 4,000	0	0
	RM 4,001 or more	1	0.9

Table 1 shows the summary of respondents' demographic in frequency and percentage. The majority of the respondents with 77.3% are female while 22.7% of respondents are male. 97.3% or 107 respondents, are from the age group of 19-24 years old. This indicates that most of our respondents were born in 1997 - 2012, which is Generation Z. Based on the educational level, 91.8% of the respondents are bachelor's degree holders. Out of the total respondents, 82.7% or 91 individuals were Chinese, while Malay respondents accounted for 14.5%. Indians made up 1.8% of the participants, and only 0.9% were Bumiputera Sarawak. Besides, the majority of the respondents with 74.5% are living in the city area while 25.5% of respondents are living in the rural area. They are from different states which include Penang (34.5%), Sarawak (14.5%), Perak and Kedah (12.7%), Johor (10%), Pahang and Selangor (4.5%), Kelantan (2.7%), Sabah (1.8%), Malacca and Negeri Sembilan (0.9%). Based on the university, most of the respondents with 85.5% are studying at Universiti Sains Malaysia and 95.5% of respondents are studying at public university. In terms of employment status, 70.9% of respondents are unemployed, 17.3% of respondents are full time employed and 11.8% of respondents are part time employed. Lastly, 80.9% of our respondents do not have monthly income, 14.5% of respondents have less than RM 1,000 monthly income, 3.6% of respondents have RM 1,001 - RM 2,500 monthly income and only one respondent has RM 4,001 or more monthly income.

Table 2. Respondents' Response to Questions Related to Foodpanda Mobile Application

Response	Frequency	Percentage (%)
Foodpanda Mobile Application Prior Experience		
Less than one year	17	15.5
1-2 years	45	40.9
2-3 years	24	21.8
More than 3 years	24	21.8
Frequency of Using Foodpanda Mobile Application		
Less than 4 times per month	69	62.7
5-10 times per month	38	34.5
More than 10 times per month	2	1.8
Other: Once to none per month	1	0.9
Average spending per use time		
Less than RM 15	16	14.5
Between RM 15 to RM 45	81	73.6

Between RM 45 to RM 70	12	10.9
Above RM 70	1	0.9
Type of products that you usually buy on Foodpanda Mobile Application		
Cuisines	61	55.5
Mini Marts	5	4.5
Pharmacies	1	0.9
Bakeries and Ice Cream	10	9.1
Beverages	33	30
I will use Foodpanda mobile app on a regular basis in the future.		
Yes	91	82.7
No	19	17.3
I'm willing to pay for becoming a pandapro.		
Yes	61	55.5
No	49	44.5
Would you recommend others to use the Foodpanda mobile application?		
Yes	101	91.8
No	9	8.2

Note: (*N=110*)

Table 2 illustrates the respondents' response to questions related to Foodpanda Mobile Application. From the findings, 40.9% or 45 respondents have 1-2 years of Foodpanda Mobile Application prior experience, 21.8% or 24 respondents have 2-3 years and more than 3 years of Foodpanda Mobile Application prior experience respectively and the less than one-year prior experience record the least percentages of respondents which is 15.5% or 17 respondents. The frequent use of Foodpanda Mobile Application records the highest at less than 4 times per month with 62.7% or 69 respondents while the least frequency is once to none per month, standing at 0.9%. The majority of respondents with 73.6% are average spending between RM 15 to RM 45 per use time and only one respondent with 0.9% is average spending above RM 70 per use time. Over half of the respondents with 55.5% are usually spending for the cuisines on the Foodpanda Mobile Application, 30% or 33 respondents usually buy the beverages, 9.1% of respondents usually buy the bakeries and ice cream, 4.5% of respondents usually buy the mini marts and only 1 respondent usually but the pharmacies on Foodpanda Mobile Application. Besides, 82.7% of respondents are of the opinion that they will use the Foodpanda mobile app on a regular basis in the future, 55.5% of respondents are willing to pay for becoming a pandapro and 91.8% with 101 respondents will recommend others to use the Foodpanda Mobile Application.

Table 3. Descriptive Analysis, Cronbach's Coefficient Alpha, and Zero-Order Correlations of All Study Variables

Variables			Beta
Perceived Convenience			.182*
System Quality			.238*
Information Quality			.311**
Price			.163*
Delivery Experience			.121
Customer Satisfaction			
R Square			.691
F Value			46.450

Note: *N* =110; *p < .05, **p < .01, ***p < .001. Diagonal entries indicate Cronbach's coefficient alpha.

Table 3 displays Cronbach's coefficient alpha, correlations and descriptive statistics among all variables. Cronbach's coefficient alpha evaluates the reliability or internal consistency of the variables. For Cronbach Alpha, analysts always use 0.7 as a benchmark value and the reliability of variables is reliable at this level and higher. Thus, all variables are highly reliable or excellent since the Cronbach Alpha falls between 0.927 to 0.960, greater than 0.7. Furthermore, Table 3 also presents the correlation between independent variables and dependent variable, with each variable correlated positively. Descriptive statistics reveal that the majority of respondents agree and strongly agree with the statements because the mean for all variables range from 5.5318 to 6.0315. A further
indication that the data are considered normal is the standard deviation of the variables range from 0.83484 to 1.22152, which is less than half of the mean (5.5318 to 6.0315).

Table 4. Summary of Regression Analysis

Variables	Perceived Convenience	System Quality	Information Quality	Customer Satisfaction	Price	Delivery Experience
Perceived Convenience	**.927**					
System Quality	.746**	**.932**				
Information Quality	.592**	.754**	**.934**			
Customer Satisfaction	.653**	.754**	.754**	**.9555**		
Price	.444**	.618**	.708**	.672**	**.960**	
Delivery Experience	.631**	.735**	.702**	.692**	.618**	**.939**
Number of Items	5	4	4	5	4	6
Mean	6.0315	5.9639	5.9874	5.9496	5.5318	6.0155
Standard Deviation	0.93029	0.88606	0.83484	0.97352	1.22152	0.88114

Note: *N=110*; *p < 0.05, **p < 0.01, ***p < 0.001.

Table 4 provides the summary of the regression analysis. Regression analysis was employed to determine the factors that influence university students' satisfaction towards

Foodpanda Mobile Application. We use multiple regression to evaluate our hypothesis. According to the summary, perceived convenience, system quality, information quality and price were positively correlated to customer satisfaction. The R Square value of 0.691 indicates that approximately 69.1% of the variation in customer satisfaction can be accounted for by the four independent variables. It indicated that the higher the R Square value ranges from 0 to 1, the more accurate the prediction. The finding also revealed that perceived convenience, system quality as well as price and information quality have a significant relationship with customer satisfaction since the $p < 0.05$ and $p < 0.01$ respectively. In addition, information quality, which had a beta value of 0.311 was the primary factor that influenced university students' customer satisfaction However, it was determined that the delivery experience did not influence university students' customer satisfaction. Thus, H5 is not supported by its beta value of 0.121. As a result, we can conclude that H1, H2, H3 and H4 were supported.

The R-square value of 0.691 demonstrates that the variables in the current model can account for 69.10% of the variability in customer satisfaction. This suggests that the research model exhibits a strong explanatory capability and could serve as a robust framework for future investigations into customer satisfaction within the domain of the D&M IS success model. The subsequent section explores the implications of this study.

Figure 2: Hypothesized Model
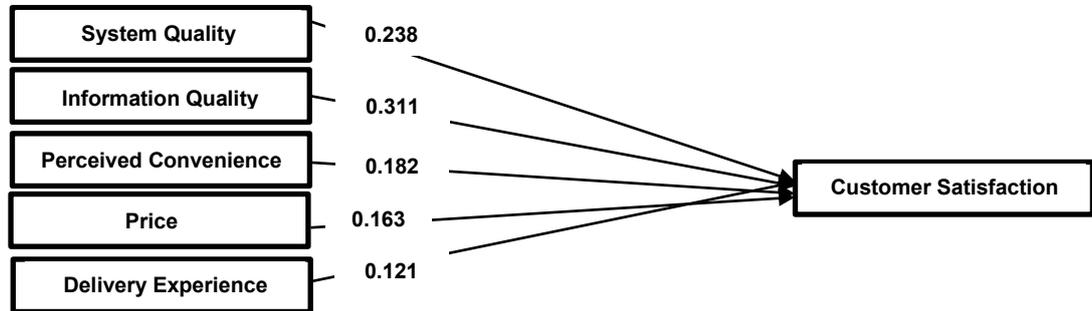
DISCUSSION

Considering the growing popularity of using the Foodpanda mobile app for ordering food delivery, companies must prioritize meeting the increasing demands and retaining their customer base. The findings indicate that information quality had a notably stronger impact compared to other factors and played a crucial role in influencing customer satisfaction. The customers can obtain more accurate and reliable information in a detailed manner through the completeness, personalization, and relevance of information provided by Foodpanda mobile app. This will lead customers to achieve a high satisfaction level. In the context of a food delivery app like Foodpanda, accurate and up-to-date information about restaurant menus, prices, and availability of items is crucial. If customers receive incorrect information about menu items or prices, it can lead to frustration and disappointment when their order arrives. Overall, the quality of information provided by the Foodpanda mobile application directly affects customers' satisfaction. In the competitive landscape of food delivery apps, accurate and reliable information not only enhances their experience but also contributes to customer retention and positive word-of-mouth recommendations.

Moreover, the study revealed that system quality emerged as the second most influential factor in attaining customer satisfaction. System quality holds significant value in establishing customer satisfaction within the Foodpanda app platform. When the electronic system exhibits desirable features such as usability, reliability, and response time, customers experience satisfaction with the system quality of the Foodpanda mobile app, leading to increased customer loyalty. A reliable app that consistently works without any technical issues provides a positive user experience. Customers can place orders, track deliveries, and make payments without encountering unexpected errors, leading to increased satisfaction. Besides that, a user-friendly interface contributes to a smooth and hassle-free experience. Customers can quickly find restaurants, browse menus, and complete orders without confusion, enhancing their satisfaction with the app. In conclusion, the study's findings highlighted the substantial impact and effectiveness of system quality in contributing to customer satisfaction within the Foodpanda app platform in Malaysia. A well-functioning, reliable, and user-friendly app enhances the overall user experience, reduces friction, and instills confidence in the service. A positive system quality contributes to customer loyalty, positive reviews, and repeat business, ultimately driving the success of the platform.

This study confirmed that perceived convenience in the Foodpanda mobile app has a positive effect on customer satisfaction. It signifies that users can conveniently access the mobile food delivery app without the need for physical movement. This feature not only saves customers time by avoiding traffic but also reduces waiting time at restaurants. With the mobile food delivery app at their disposal, customers have the flexibility to order food whenever they desire. As a result, the convenience of using these apps has been identified as a factor that influences customer satisfaction. This implies that the Foodpanda mobile app enhances perceived convenience by focusing on delivering a user-friendly interface, time and effort savings, order tracking, multiple payment options, and personalization. It leads to positive impacts on customer satisfaction as customers appreciate the ease of application and simplicity in fulfilling their food delivery needs.

Besides that, price appeared to be a potential factor that led to customer satisfaction. The study has revealed that the price transparency would be able to improve the satisfaction of the customer on the Foodpanda mobile app. This is because it reduces the chances of customers feeling surprised or deceived when the app clearly communicates prices, additional charges, and provides detailed invoices. Transparent pricing practices enhance customer satisfaction. Likewise, when customers perceive the prices of food items in the Foodpanda mobile app as reasonable and commensurate with the quality, portion size, and overall experience offered, it increases the likelihood of their satisfaction. When customers feel they are receiving good value for their money, it enhances their overall satisfaction.

The relationship between delivery experience and customer satisfaction was found to be insignificant. The impact of delivery experience on customer satisfaction was not substantial, possibly due to the fact that most Foodpanda app users already have sufficient experience using the app. Consequently, users are more inclined to use the app smoothly, without encountering any difficulties. Nevertheless, delivery experience may not always be significantly related to customer satisfaction, it is still an important aspect of the overall customer experience. Food delivery services should strive to optimize the delivery process to meet customer expectations and continuously improve overall customer satisfaction.

CONCLUSION

Foodpanda has evolved to be a popular option for individuals looking for simple and convenient food delivery services, particularly university students. This study has provided several significant contributions by examining the factors driving customer satisfaction with the Foodpanda food delivery app, specifically in the context of Malaysia. As the preference for food delivery over dining-in has become increasingly common among customers, our findings align with this trend, indicating that perceived convenience, system quality, information quality, and price are the primary factors influencing university students' satisfaction with the Foodpanda mobile application.

Grasping and engaging with customers is crucial for accomplishing servitization, particularly when it involves enhancing the value proposition of a company's offerings. Leveraging the technological infrastructure to its fullest potential can additionally enhance a company's capabilities, making it more productive and streamlined. These study results can serve as a valuable guideline for food delivery companies such as Foodpanda to understand and explore the essential factors that influence customer satisfaction and encourage repeat app usage. By identifying the key reasons that drive customer satisfaction when using their food delivery apps, companies can effectively compete with their rivals and establish strong connections with consumers.

This study emphasizes the importance of addressing existing challenges and improving upon weaknesses to better understand customer needs and enhance satisfaction through the food delivery app service platform. Such improvements can contribute to enhancing a company's profile, capturing a larger market share, and cultivating loyal customers. Ultimately, these efforts can positively influence customer satisfaction and ensure sustained demand for food delivery services in Malaysia.

In summary, Table 4 shows that information quality is the most important factor, followed by perceived convenience. These results suggest that food and beverage companies should enhance their mobile food delivery apps by offering greater information quality, timeliness, security, and user-friendliness. These enhancements would streamline the order placement process and reduce consumers' search time. Positive purchasing experiences contribute to customer satisfaction, subsequently elevating the likelihood of repeated use and establishing lasting customer relationships that foster loyalty toward the apps. However, the study finds that the delivery experience is less important compared to other factors. Therefore, companies may place relatively less emphasis on these aspects when allocating improvement efforts.

The findings of this research expand the understanding of customer satisfaction in the context of Foodpanda's services. According to the study, customer satisfaction is significantly correlated with price, perceived convenience, system quality, and information quality. By emphasizing the improvement of these elements—especially information quality—Foodpanda can enhance its mobile application, which will increase customer satisfaction, retention, and loyalty. Additional research will need to be conducted in the future to further clarify the antecedents and potential outcomes, as well as to broaden the conceptual scope of the factors that affect university students' perceptions of customer satisfaction and loyalty. A meaningful way to do this is by extending the geographical scope of the research to include other countries and comparing it across different mobile food ordering app markets.

Overall, this study offers implications for both theoretical research and practical applications. It provides valuable insights for practitioners at Foodpanda on how to boost customer satisfaction and strengthen their competitive advantage in the online food delivery market.

LIMITATION
While the study successfully achieved its objectives, several limitations should be acknowledged as they could have influenced the outcomes. The first limitation pertains to the sample size, which was relatively small compared to the population of undergraduate students in Kuala Lumpur, Malaysia. With only 110 participants, it is likely that not all groups were adequately represented, potentially limiting the diversity of perspectives and compromising the accuracy of the research. Second, the data collection was confined to Malaysia, which may restrict the generalizability of the findings. This study solely focused on respondents from public and private universities in Malaysia, excluding participants from other nations or regions, primarily consisting of Gen Y-Z. Consequently, there is a risk of biases when respondents completed the questionnaire based on their personal experiences with online food delivery. Future studies could expand the research to other Asian contexts, such as Indonesia, Singapore, and Thailand, and gather data from a more diverse range of respondents to enhance the validity of the research model. Third, the authors suggest that future research may incorporate qualitative methods to delve deeper into the experiences of food app delivery users in Malaysia. By providing an in-depth description of these experiences, it would be possible to explore the significance of food app delivery services from the users' own perspectives and experiences. Lastly, the data collected were specifically from users of

the Foodpanda mobile application. Therefore, future studies could include data from users of other food app delivery platforms, such as GrabFood and LOLOL, to enable comparisons between different food app delivery companies.

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DECLARATION OF CONFLICTING INTERESTS

The authors declared no potential conflicts of interest.

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