



**JOURNAL OF TOURISM,
HOSPITALITY AND
ENVIRONMENT MANAGEMENT
(JTHERM)**

www.gaexcellence.com/jthem



ASSESSING UITM DUNGUN STUDENT'S PERCEPTION OF FOOD QUALITY IN ONLINE FOOD DELIVERY PLATFORMS

Ainnin Sofea Azeman^{1*}, Hudal Husna Alias², Siti Nurhanifah Sulong³, Amir Manshoor⁴,
Nur Amanina Idris⁵, Amal Syafiqah Che Mohd Ruzima⁶

¹Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Terengganu, Malaysia

 ainnin@uitm.edu.my

 <https://orcid.org/0009-0001-1313-5591>

²Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Terengganu, Malaysia

 2024554549@student.uitm.edu.my

 <https://orcid.org/0009-0001-7767-3532>

³Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Terengganu, Malaysia

 nurhanifah@uitm.edu.my

 <https://orcid.org/0000-0003-1568-5594>

⁴Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Terengganu, Malaysia

 amirmanshoor@uitm.edu.my

 <https://orcid.org/0000-0003-0893-7204>

⁵Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Terengganu, Malaysia

 amaninaidris@uitm.edu.my

 <https://orcid.org/0000-0002-4208-2484>

⁶Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Puncak Alam, Selangor, Malaysia

 amalsyafiqah@uitm.edu.my

 <https://orcid.org/0009-0001-7982-8972>

*Corresponding Author

Article Info:

Article history:

Received date: 27.07.2026

Revised date: 13.08.2026

Accepted date: 30.08.2026

Published date: 17.09.2026

To cite this document:

Azeman, A. S., Alias, H. H., Sulong, S. N., Manshoor, A., Idris, N. A., & Ruzima, A. S. C. M. (2026). Assessing UiTM Dungun Student's Perception of Food Quality in Online Food Delivery Platforms. *Journal of Tourism Hospitality and*

Abstract:

The purpose of this present study is to explore how student views of food quality; eco-friendly packaging; delivery services; and price relate to customer satisfaction with online food delivery services. With the popularity and rapid expansion of university students using online food delivery services, questions about these services, such as quality, pricing, and sustainable practices, have emerged. This current study employed a quantitative approach, using a structured questionnaire developed from past research. Participants in this study included 386 students from UiTM Dungun who had prior experience using online food delivery services. The Statistical Package for Social Sciences (SPSS) was used to analyse the data, including reliability analysis and descriptive analysis, as well as correlation and multiple regression analyses. Results from this current study showed that all independent variables significantly relate to customer satisfaction; however, price had the strongest relationship with customer satisfaction, followed by food quality; delivery services; and eco-friendly packaging. This current study adds to the literature base by providing empirical evidence of how students perceive online food delivery services; therefore, the study is beneficial to the food service industry, specifically in Malaysia.

Environment Management, 11
(45), 336-349.

Additionally, there are practical implications from this current study that can assist online food delivery services in providing better customer satisfaction.

DOI:10.35631/JTHER.1145020 **Keyword:**

Online Food Delivery, Customer Satisfaction, Food Quality, Eco-friendly Packaging, Delivery Service, Price



© The authors (2026). This is an Open Access article distributed under the terms of the Creative Commons Attribution (CC BY NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact jthem@gaexcellence.com.

Introduction

The food service industry has been significantly transformed by technological advancements and digital media, particularly through the rise of internet-based food delivery platforms. This trend is especially popular among Malaysian university students due to the convenience and efficiency of services such as FoodPanda and GrabFood, which allow users to order food without leaving campus or their residence (Ali et al., 2021). In spite of the benefits mentioned above, customers' satisfaction is affected by the quality of food and service. Namkung & Jang (2007) indicate that customers have prior expectations for Termed food such as the freshness, taste, temperature, size, packaging, and presentation. Customers will oftentimes find that the food they ordered does not meet their expectations, resulting in dissatisfaction with their experience and a loss of trust in that establishment. In addition, timely and responsive customer service is an important component of the overall customer experience (i.e., a customer experiences delays when receiving delivery and/or inaccurate estimates of when their food will be delivered, causing frustration and interfering with their daily routine). The perceptions of UiTM Dungun students toward online food delivery systems are useful for both academic and practical purposes. This study contributes to the existing literature while also providing insights that may benefit industry stakeholders in improving service quality and customer satisfaction.

Literature Review

Food Quality and Consumer Satisfaction

Food quality is one of the significant factors in determining the level of consumer satisfaction in online food delivery services and includes dimensions of food freshness, temperature, packaging, and hygiene.). According to Shamsuddin et al. (2023), if the food is not served hot, not fresh, and not properly packaged, the students are likely to be dissatisfied. Thus, the issue

of hygiene is of utmost importance since young consumers are becoming more health conscious. Moreover, hygiene, although a part of food quality, assumes a critical position in food safety and hygiene during preparation, packaging, and delivery, especially in a post-COVID-19 scenario when consumers are more aware of food contamination risks. Moreover, consumers assess food quality based on safe packaging, presentation, look, and freshness, among other factors, which are important for their perception of service quality. According to Hasan et al. (2025), perceived changes in food quality, such as soggy food, incorrect orders, or contamination, can negatively influence consumer satisfaction, whereas high food quality standards can cultivate consumer loyalty for a particular food service. In summary, food service's success and sustainability will depend upon developing and maintaining a food-related focus (quality & hygiene), which will help provide high consumer satisfaction when using online-based food delivery.

Food quality is widely recognised as the most critical factor influencing customer satisfaction in online food delivery services. Key aspects such as freshness, taste, hygiene, and packaging significantly shape consumers' perceptions of service quality. Prior research indicates that food quality strongly determines customer satisfaction, particularly among student users, as it directly affects their overall evaluation of the service (D'Souza, 2025). In addition to enhancing customer experience, the provision of high-quality food fosters customer loyalty, thereby strengthening the competitive position of food delivery providers in a rapidly evolving market and contributing to sustained business advantage.

Eco-Friendly Packaging and Consumer Satisfaction

In the global food service sector, sustainable packaging materials have increasingly influenced customer choices on online food delivery sites and will continue to affect customer behaviour. Sustainable packaging supports the organization's sustainable and ethical business practices and provides the quality and safety necessary for food transport. According to Pan et al. (2021), sustainable packaging was found to significantly affect perceived corporate social responsibility and brand image and thereby enhance customer satisfaction and customer loyalty. According to Farooq et al. (2023), biodegradable, recyclable, and natural packaging materials have contributed to customers being more satisfied with their overall food orders. For college/ university students, sustainable packaging represents their increasing awareness of environmental concerns and is therefore a significant element in developing their assessment of service quality. In contrast, excessive use or inadequate use of packing material can create negative feelings of guilt, which may lead to a decrease in future purchasing decisions.

Additionally, sustainable packaging is perceived as of greater quality if its visual and tactile attributes ('air' and 'feel'). This means that eco-friendly packaging and labels provide consumers with an increased level of trust through the use of transparency in the environment (Aschemann-Witzel & Zielke, 2015). _Research shows that both the visual appeal and tactile experience of packaging add to the perception of quality to consumers and their overall levels of satisfaction with the products (Silayoi & Speece, 2007). In addition, researchers (Sun & Moon, 2024) have also found supporting evidence that eco-friendly packaging moderates the relationship among the perceived healthiness of food, consumer trust, and willingness to reuse an online food delivery application. That is, consumers who receive healthier food products in eco-friendly packaging are likely to trust the seller as well as the platform from which they purchased the product. Therefore, for university students, the interrelated positive effects of the environmentally friendly nature of the packaging, healthiness of the food product, and level of

service provided by the seller create a higher level of overall satisfaction, as these characteristics match their own personal value system and service standards.

Consumers are now increasingly aware of the environmental impact of packages and want to ensure their goods are packaged in the most sustainable way possible. Eco-Friendly Packaging is any type of packaging that minimizes waste through recycling, biodegradation, or other means and creates a greater perception of value and satisfaction for consumers who are interested in sustainability (Li & Li, 2024). While eco-friendly packaging will not replace basic service characteristics (e.g., food quality or delivery speed), offering packages that demonstrate a commitment to the environment improves brand image and provides another way to reach environmentally conscious consumers who tend to engage in sustainable buying behavior.

Delivery Service and Consumer Satisfaction

As previously stated, delivery service via online food delivery services includes many elements that contribute to the experience, including but not limited to: the professionalism of the delivery rider, communication between the customer and the delivery rider, package handling and presentation of the package to the customer, and overall experience associated with receiving and consuming food delivered through a food delivery service Azman et al. (2021) Also, according to Noor et al. (2024), a customer's satisfaction with his/her order's fulfillment will depend not only on the quality of the food received, but on how well the food was transported from the restaurant to the customer's location. Furthermore, fulfilment also plays a major role in providing customers with an excellent service experience because differences in service levels related to fulfilment will negatively affect customer satisfaction, even if the quality of the food is high Koay et al. (2022).

Similarly, the delivery service consists of technical and support services provided by the platform, which include the ease of ordering and customer support, as well as real-time tracking. The user-friendly interface and seamless logistics system are both crucial for students, as they typically rely heavily on food delivery services. Punctuality and reliability in the delivery service often serve to determine how satisfied customers will be with a service (Alalwan, 2019; Kapoor & Vij, 2021); consequently, any delays or missed deadlines that occur due to a lack of punctuality and/or reliability will produce customer dissatisfaction, which typically leads to negative consumer perception. Moreover, research indicates that the behaviour and demeanor of delivery personnel also affect consumer satisfaction. As noted by Ray et al. (2019), delivery personnel who treat consumers with respect, behave professionally, and have an acceptable appearance provide an experience that creates trust and adds value to the last mile of service. For university students, providing respectful and reliable service will provide an enhanced level of overall satisfaction and contribute toward repeat business and building brand equity.

Customer satisfaction is reliant on an efficient and reliable delivery service for restaurants and grocery suppliers. These key factors for consumer confidence are based upon such elements as on-time deliveries, proper food handling, and accurate tracking systems Yeo et al. (2016). Students who have a busy schedule benefit from being able to obtain food faster through the service of an efficient delivery method, as well as the food being delivered in perfect condition, positively reinforcing their view of the overall delivery service.

Price and Consumer Satisfaction

Price plays a significant role as a factor that affects consumer decision-making for online food delivery services, especially for university students who are price-conscious. Generally, consumers are more inclined to make purchases for a product or service based on their perception that the price charged for a product or service is reasonable and fair for what they are offered Setiawan et al. (2021). Perceived price fairness refers to the customer's perception or evaluation of whether or not they believe that what they are paying for a particular product or service is justified or reasonable Xia et al. (2004). Therefore, university students who perceive that the price charged for a particular product or service is too high for what they are offered will have a negative attitude towards the service provider, even though other factors are favourable, for example, quality of food, delivery, and packaging.

In the context of online food delivery, pricing strategies such as discounts, free delivery offers, bundling, and student vouchers are also important factors that impact consumer perception and satisfaction Sharma et al. (2023). Promotional pricing schemes have been shown to improve consumer perception of the value and trustworthiness of products and services (Ray et al. 2019). Additionally, Azman et al. (2021) found that Malaysian University students prefer to base their decision-making on price when selecting an online food delivery service in comparison to other attributes or features. It will, therefore, be necessary to understand the relationship between student perceptions of food quality and food costs since price is the most significant contributor to overall consumer satisfaction with digital food delivery services.

Methodology

Research Design

The research design for this study is a correlational research design, which tries to discover the possible relationship between four independent variables, such as Food Quality, Eco-friendly Packaging, Delivery Service, and Price, and the dependent variable, Customer Satisfaction with online food delivery services among UiTM Dungun students. A quantitative correlational research design approach to collect data in numbers to be analysed statistically to discover the relationship between variables. A quantitative correlational research design will be used to collect data on each variable at one point in time, so the researcher can study more than one variable at a time. Data collection will be conducted using a self-administered structured questionnaire, which provides an efficient means for participants to offer self-reported data at their own convenience. This method is most appropriate for this study because it will enable the collection of data from a relatively large number of participants without influencing any variables, thus making it a cost-effective and efficient method for data collection. This study aims to offer an understanding of the significant factors influencing student's satisfaction with online food delivery services. It may also help food service providers improve customer service, service quality, and meet the expectations of students as universities increasingly adopt online food services.

Population

The population of this study consists of students currently enrolled at Universiti Teknologi MARA (UiTM) Dungun. According to Utusan Borneo (2025), the campus population consists of over 6,000 students from various faculties. The students come from different backgrounds,

age groups, genders, education levels, and food consumption behaviours. This makes the population an appropriate group to study the level of satisfaction among customers using the service. Students in the university make the best population to study the level of satisfaction among customers using the service. This is because students are the major population that uses the service. Most students use the service because they are always busy with their activities. They do not have the time to prepare meals since their academic activities keep them busy. Most students do not own cooking utensils; hence, the service is essential.

Sample Size and Sampling Technique

To determine the required sample size, the study relies on the sample size table provided by Krejcie and Morgan (1970). The total student population is 6,000, and the required sample size is at least 361 students to attain a 95% confidence level and a margin of error of 5%. The required sample size is adequate to represent the population and ensure the reliability and validity of the results. However, due to time and resource limitations, a convenience method of sampling is used, which does not involve any form of random selection. Selection will be made from among those who volunteer and are available to participate in research studies. Participating will not be recommended for studies involving the entire study population because this sampling technique lacks sufficient assurance of coverage, but the study will utilize this sampling technique for exploratory correlational research. The goal of the research will be to investigate the relationships among the selected variables in order to better understand the factors affecting customer satisfaction for those who are familiar with using food delivery services over the internet.

Based on Krejcie & Morgan's sample size determination table, a population of 6,000 students requires a minimum sample size of 361 respondents. The research used a total number of 386 students for sampling purposes, which is slightly higher than the minimum required sample size, thus providing added reliability and accuracy to the overall results. Consequently, using a sample size that is slightly greater than the minimum sample size causes the results related to the relationships among food quality, eco-friendly packaging, delivery service, price and customer satisfaction to be more valid than if a sample size were used below this minimum threshold.

Instrument Development

Data were collected using a structured questionnaire developed by the researcher based on prior studies related to the subject area. The instrument was designed according to the variables of the study and comprised five sections, namely Food Quality, Eco-Friendly Packaging, Delivery Service, Price, and Consumer Satisfaction. However, each variable was measured using a five-point Likert scale. The questionnaire was further validated by experts to ensure its clarity, relevance, and content validity. In addition, a pilot test involving 36 students was conducted to assess the reliability of the instrument and to ensure that respondents could clearly understand the items prior to the actual survey. Following the pilot test, minor revisions were made to improve the clarity and comprehensibility of the questionnaire. These procedures confirmed that the instrument was a reliable tool for data collection among the targeted respondents.

Pilot Testing

A pilot study was done to determine whether a survey measuring different dimensions related to the use of online food delivery services is valid and reliable, and whether the items developed in the instrument could be understood and measure the desired characteristics. A sample of 36 participants (students) that meet the sample criteria (i.e., they have used online food delivery services) were selected as subjects to validate the tool developed for the main study (i.e., the main research study). Five dimensions of instrument for this study which are (food quality, environmentally friendly packaging, delivery service, price, and customer satisfaction) in the form of a questionnaire. The data was analysed for reliability using SPSS software.

Table 1: Reliability Test (Pilot Testing)

Variables	Cronbach's Alpha	Number of Items	Number of Respondents
Food Quality	0.878	5	36
Eco-friendly Packaging	0.793	5	36
Delivery Service	0.745	5	36
Price	0.838	5	36
Customer Satisfaction	0.917	5	36

The reliability analysis revealed that all constructs in the questionnaire achieved Cronbach's Alpha values above the recommended threshold of 0.70, indicating acceptable to excellent internal consistency. Customer Satisfaction recorded the highest reliability, followed by Food Quality and Price, which also demonstrated strong reliability. Consistent with the recommendations of Nunnally and Bernstein (1994) and Hair et al. (2019), these results confirm that the questionnaire is a reliable instrument for data collection. Furthermore, the pilot test indicated that all questionnaire items were appropriate, and no modifications or deletions were required. The pilot test provided valuable feedback on the clarity and comprehensibility of the questionnaire items, ensuring that respondents could easily understand and respond accurately to the statements. As a result, the pilot study confirmed the validity and reliability of the research instrument, thereby enhancing the credibility and accuracy of the data collected and the overall study findings.

Plan For Data Collection

The design of this study is quantitative research. The data collected from the self-administered questionnaire will be analysed using SPSS Version 29.0. The purpose of this study is to examine how students of UiTM Dungun respond to Food Quality, Eco-friendly Packaging, Delivery Service, and Price as factors that affect Consumer Satisfaction. The questionnaire will be sent via WhatsApp and Telegram to students who frequently order food online for two weeks. However, descriptive statistics will be conducted to summarize the collected data. The analysis will include the frequency, percentage, mean, and standard deviation of each variable. Through this analysis, it is possible to gain insight into both basic demographics of the

individuals who participated in this research (the survey respondents), and to provide trends about the perceptions of most aspects of food delivery services (both positive and negative).

In addition, we will use inferential statistics, including Pearson correlation and multiple linear regression, to evaluate the relationship between independent variables and consumer satisfaction. This will allow us to identify the strongest contributing factors to consumer satisfaction and provide feedback that can be used to improve consumer satisfaction in terms of meeting the needs of students in the use of online food delivery services.

Findings

Data Analysis

The findings of the study were based on responses from 386 participants, with data analysed using SPSS to ensure the accuracy of the results. Several statistical techniques were employed in line with the research objectives, including reliability analysis, demographic analysis, descriptive statistics, Pearson correlation, and multiple regression. These analyses were conducted to examine the influence of Food Quality, Eco-Friendly Packaging, Delivery Service, and Price on Customer Satisfaction in online food delivery services. The chapter also summarises respondents' perceptions of each independent variable and evaluates their relationships with the dependent variable. Overall, the statistical analyses provide evidence on whether and to what extent each independent variable affects customer satisfaction.

Reliability Test

To assess the reliability of the questionnaire based on the data collected from real participants in the current study, Cronbach's Alpha was calculated to evaluate the internal consistency of all constructs. The survey included responses from a sample population of 386 students at the Universiti Teknologi MARA (UiTM), Dungun Campus; this number meets and exceeds the minimum sample size of 361 students as per Krejcie and Morgan (1970), which is required for a larger population > 6,000 students. Thus, this sample was suitable for providing reliable stability coefficients. The reliability testing results can be found in the following table.

Table 2: Reliability Test

Variables	Cronbach's Alpha	Number of Items	Number of Respondents
Food Quality	0.790	5	386
Eco-friendly Packaging	0.790	5	386
Delivery Service	0.796	5	386
Price	0.817	5	386
Customer Satisfaction	0.846	5	386

A reliability test was performed to determine how reliable the questionnaire items are in measuring UiTM Dungun students' perceptions of online food delivery service satisfaction. Since the reliability coefficient for all constructs is Cronbach's Alpha, it is evident that all constructs have acceptable levels of reliability because all constructs have Cronbach's Alpha which is higher than .70, which is required to prove the reliability of the constructs. According to the results of the current research, the reliability of all constructs measured using this questionnaire is higher than the acceptable level of reliability. The highest reliability (that is, Cronbach's Alpha) is shown by Customer Satisfaction (0.846), then comes Price (0.817), while Food Quality and Delivery Service have almost equal reliability (0.796). The lowest but statistically acceptable level of reliability was obtained for Eco-Friendly Packaging (0.790). Overall, the findings of the current research show that questionnaire items are internally reliable, and therefore, the questionnaire used in this research may produce reliable results.

Demographic Profile

Based on the demographic profile of the respondents, a total of 386 participants were involved in the study, with a slightly higher proportion of females (62.7%) compared to males (37.3%). The majority of respondents (72.3%) were aged between 18 and 25 years, followed by those aged 26 to 30 years (18.4%), while a smaller proportion were age 31 years and above (9.3%). In terms of faculty distribution, most respondents were from the Faculty of Hotel and Tourism Management (31.9%), followed by the Faculty of Business and Management (18.9%) and the Faculty of Electrical Engineering (18.1%). Regarding academic level, the respondents were relatively evenly distributed across semesters, although Semester 1, Semester 4, and Semester 6 recorded the highest representation. In addition, the majority of respondents reported using online food delivery services either less than once a month (25.4%) or one to two times per week (24.6%).

Descriptive Analysis

The summary of the descriptive analysis for the five variables in this study is presented in Table 4. For the first variable, Food Quality, the mean scores ranged from 3.90 to 4.14, with standard deviations between 0.950 and 1.061, indicating generally positive perceptions among respondents. The second variable, Eco-Friendly Packaging, recorded mean values ranging from 3.89 to 4.01, with standard deviations between 0.887 and 1.147. For the third variable, Delivery Service, the mean scores ranged from 3.89 to 4.08, with standard deviations between 0.919 and 1.062, suggesting a generally satisfactory perception of delivery service reliability and consistency. The fourth variable, Price, showed mean values ranging from 3.83 to 4.04, with standard deviations between 0.952 and 1.106, indicating an acceptable level of perceived pricing. Lastly, Customer Satisfaction, the fifth variable, recorded mean scores between 3.78 and 4.09, with standard deviations ranging from 0.913 to 1.208, reflecting a high level of satisfaction with online food delivery services provided by service providers.

Multiple Regression

The multiple regression analysis examined the effects of Food Quality, Eco-friendly Packaging, Delivery Service, and Price on Consumer Satisfaction. The model was statistically significant ($F = 242.400$, $p < 0.001$) and demonstrated strong explanatory power, explaining 71.8% of the variation in Consumer Satisfaction ($R^2 = 0.718$). Among the predictors, Price had the strongest positive influence on Consumer Satisfaction ($\beta = 0.319$, $p < 0.001$), indicating that more

reasonable pricing leads to higher satisfaction with online food delivery services. Delivery Service ($\beta = 0.253$, $p < 0.001$) and Food Quality ($\beta = 0.250$, $p < 0.001$) also significantly contributed to satisfaction, showing that both efficient delivery and good food quality are key factors in enhancing customer experience. Eco-friendly Packaging had a smaller but still significant positive effect ($\beta = 0.115$, $p = 0.017$). Overall, all variables were positively and significantly related to Consumer Satisfaction, supporting all four hypotheses in the study.

In addition to the overall significance of the regression model, the results also indicate the relative contribution of each predictor in explaining consumer satisfaction. Specifically, Price emerged as the most influential variable, as it recorded the highest standardized coefficient as well as the greatest unique variance contribution among all predictors. This suggests that price is a key determinant for UiTM Dungun students in their use of online food delivery services. Similarly, Food Quality and Delivery Service demonstrated comparable effects in the regression analysis, indicating that students place considerable importance on both food and service quality when utilising such services. Although Eco-Friendly Packaging exhibited a comparatively lower beta coefficient than the other variables, its significant relationship indicates that, while it is less influential, it still plays a meaningful role in shaping consumer satisfaction.

Discussion

The analysis of 386 respondents from UiTM Dungun indicates that the survey instrument is highly reliable, as all constructs (Food Quality, Eco-friendly Packaging, Delivery Service, Price, and Customer Satisfaction) recorded strong Cronbach's Alpha values ranging from 0.790 to 0.846. The demographic results show that most respondents were young female students, with 62.7% female and 72.3% aged between 18 and 25 years. This aligns with Lau et al. (2019), who noted that university students are key users of online food delivery services due to their digital proficiency and busy academic lifestyles. Additionally, the descriptive findings reveal that Food Quality, particularly hygiene, achieved the highest mean score of 4.14, indicating it was the most positively perceived aspect among respondents.

Hypothesis testing through multiple regression analysis and Pearson's correlation tests revealed that price was the most important factor for customer satisfaction. Its correlation coefficient ($r = 0.718$) and beta coefficient ($b = 0.319$) confirmed this, indicating that while food quality ($b = 0.250$) and delivery service ($b = 0.253$) are also influential, there is a weaker influence from eco-friendly packaging ($b = 0.115$). The results of this study corroborate the results of Yeo's (2016) research, which also cited that secondary factors like packaging have great importance for customer satisfaction in the digital food sector; however, primary service attributes, such as competitive price and food quality, are what primarily drive customer satisfaction in the digital food sector. The multiple regression results also indicate that 71.8% of the variance in CS can be explained by this model and provides evidence to support the four hypotheses.

The findings of this study indicate that price is the most significant factor influencing customer satisfaction among UiTM Dungun students. This is supported by both the correlation results and the beta coefficient, which show a strong relationship between price and satisfaction. As mentioned by, Azman et al. (2021), who also found that price plays a crucial role in shaping satisfaction among Malaysian university students, such as those with limited financial capacity. Furthermore, the analysis revealed that food quality received the highest mean score among respondents, especially in terms of hygiene. This suggests that cleanliness is a key

consideration when students choose online food delivery services. The results also align with those who emphasised that food quality is a major predictor of customer satisfaction, where factors such as freshness and food temperature influence consumer trust and their intention to reuse the service in the future Hasan et al., (2025).

Furthermore, delivery service and environmentally friendly packaging were also found to have a significant impact on customer satisfaction, although the effect of packaging was relatively weaker compared to the other key factors. As mentioned by Alalwan (2020) and Azman et al. (2021), the positive influence of delivery service particularly courteous courier behaviour and punctual delivery, is consistent with the findings of who reported that prompt delivery and careful handling of food generate favourable emotional responses and enhance perceptions of service quality. The increasing use of environmentally friendly packaging also reflects growing environmental awareness among students. According to Sun and Moon (2024), who noted that such practices foster consumer trust and strengthen the alignment between individual values and brand image. In summary, while price and quality remain the primary determinants of consumer satisfaction, these secondary factors are becoming increasingly significant among students in the contemporary digital food delivery service context.

Recent research has shown that digital characteristics can help consumers with online food delivery services and improve their level of satisfaction. Specifically, real-time tracking and personalised recommendation systems provide perceived value and promote customer loyalty to the service as well as be supportive of traditional attributes such as quality of food, cost, and time of delivery. By combining both attributes, consumers' overall experience will be shaped regardless of their specific technological capabilities and frequency of usage, especially among university students. Additionally, the incorporation of sustainability-related digital attributes will likely create positive consumer perceptions amongst those who are environmentally conscious. Together, traditional service attributes will still be the main driving factors for satisfaction. Thus, the digital attributes create a significant opportunity for online food delivery companies to increase competitiveness and create a better experience for their customers.

The study found that all four independent variables, which are Food Quality, Eco-Friendly Packaging, Delivery Service, and Price, significantly influence Customer Satisfaction among UiTM Dungun students. Correlation analysis further indicated that Price is the most dominant predictor, followed by Food Quality and Delivery Service, while Eco-Friendly Packaging shows a moderate level of influence. These results support and confirm the hypotheses proposed in the conceptual framework. The findings demonstrate interrelationships among the variables, where Food Quality is closely associated with Delivery Service due to proper food handling during delivery, while Eco-Friendly Packaging is linked to perceptions of Food Quality by enhancing perceived hygiene and overall satisfaction.

Conclusion and Recommendations

The current research analyses students' perceptions of the online food delivery service in UiTM Dungun in terms of several key criteria, which include food quality, eco-friendly packaging, delivery service and cost. It becomes clear from the obtained findings that the four factors above are very important in satisfying the needs of the consumers under consideration due to their busy lifestyle, absence of a kitchen at home, and other reasons, including food freshness, its temperature, and hygiene. The pilot study helped to prove that the four variables mentioned above are highly reliable and important predictors of consumer satisfaction among the target

population. It was found out that future research should take into account not only the factors indicated above, but also some other, like ease of use of the online platform, marketing strategy and customer interaction. At the same time, it would be possible to conduct the research using other research techniques, including qualitative ones, as well as using more representative samples in other universities or regions. Thus, the current research adds to the existing knowledge about the determinants of the consumers' satisfaction among university students in terms of food delivery services.

Acknowledgements: The authors would like to express their sincere gratitude to University Teknologi MARA UiTM Cawangan Kampus Dungun, Terengganu for providing the necessary resources and support throughout the course of this research. Special appreciation is extended to colleagues and peers who contributed valuable insights and constructive feedback, which greatly enhanced the quality of this paper.

Funding Statement: No Funding

Conflict of Interest Statement: The authors declare that there is no conflict of interest regarding the publication of this paper. All authors have contributed to this work and approved the final version of the manuscript for submission to the International Journal of Tourism, Hospitality And Environment Management (JTHER)

Ethics Statement: This research was carried out according to the set standards of ethics in research. All the participants gave their informed consent before being asked questions. It was done on voluntary basis, and the confidentiality of the respondent was maintained.

Author Contribution Statement: All authors contributed significantly to the development of this manuscript.

References

- Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International journal of information management*, 50, 28-44.
- Aschemann-Witzel, J., & Zielke, S. (2015). Can't Buy Me Green? A review of consumer perceptions of and behavior toward the price of organic food. *Journal of Consumer Affairs*, 51(1), 211–251. <https://doi.org/10.1111/joca.12092>
- Azman, N. I. B., Mashuri, N. a. B. A., & Ibrahim, S. O. a. B. W. (2021). The Online Food Delivery Service and their Impact on Customer Satisfaction among University Students in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(6). <https://doi.org/10.6007/ijarbss/v11-i6/10014>
- Dsouza, D., George, A., Khawatmi, R., & Rehman, S. U. (2025). Factors Influencing Students' Satisfaction with Online Food Delivery Services: An Empirical Study. *SAGE Open*, 15(3). <https://doi.org/10.1177/21582440251378022>
- Farooq, H., Majid, M. B. M. B., & Ahmed, H. (2023). Impact of green packaging, perceived consumer effectiveness, and social influence on green consumption Behavior: the mediating role of green satisfaction and the moderating role of environmental awareness. *Global Management Sciences Review*, VIII(I), 54–69. [https://doi.org/10.31703/gmsr.2023\(viii-i\).04](https://doi.org/10.31703/gmsr.2023(viii-i).04)
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hasan, N. H. M., Ibrahim, N. F., & Jun, K. C. (2025). Drivers of customer satisfaction in Malaysia's online food delivery services: a pilot study. *International Review of Management and Marketing*, 15(3), 1–9. <https://doi.org/10.32479/irmm.17803>
- Jiang, P., & Rosenbloom, B. (2005). Customer intention to return online: Price perception, attribute-level performance, and satisfaction. *Journal of Retailing*, 81(1), 45–54. <https://doi.org/10.1016/j.jretai.2005.01.004>
- Kapoor, A. P., & Vij, M. (2021). Technology at the dinner table: Ordering food online through mobile apps. *Journal of Retailing and Consumer Services*, 58, 102272. <https://doi.org/10.1016/j.jretconser.2020.102272>
- Koay, K. Y., Ong, D. L. T., & Lin, W. L. (2022). Understanding consumers' satisfaction in online food delivery services. *Journal of Retailing and Consumer Services*, 65, 102876. <https://doi.org/10.1016/j.jretconser.2021.102876>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Lau, T.-C., & Ng, D. C. Y. (2019). Online food delivery services: Making food delivery the new normal. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(2S4), 1–5. <https://www.researchgate.net/publication/334050513>
- Li, R., & Li, H. (2024). The impact of food packaging design on users' perception of green awareness. *Sustainability*, 16(18), 8205. <https://doi.org/10.3390/su16188205>
- Namkung, Y., & Jang, S. (2007). Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, 31(3), 387–409. <https://doi.org/10.1177/1096348007299924>
- Noor, I. I. M. M., Roslan, M. A. H., Farook, F., Ahmad, R., & Ismail, A. (2024). Examining University Students' Satisfaction with Online Food Delivery Apps. *Gading Journal for the Social Sciences (e-ISSN 2600-7568)*, 27, 62-71.

- Noor, I. I. M. M., Roslan, M. A. H., Farook, F., Ahmad, R., & Ismail, A. (2024). Examining University Students' Satisfaction with Online Food Delivery Apps. *Gading Journal for the Social Sciences (e-ISSN 2600-7568)*, 27, 62-71.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Pan, C., Lei, Y., Wu, J., & Wang, Y. (2021). The influence of green packaging on consumers' green purchase intention in the context of online-to-offline commerce. *Journal of Systems and Information Technology*, 23(2), 133–153. <https://doi.org/10.1108/jsit-11-2019-0242>
- PJRM@Kampus manfaatkan lebih 6,000 pelajar UiTM Dungun. (2025, June 22). Utusan Borneo Online. <https://www.utusanborneo.com.my/2025/06/22/pjrmkampus-manfaatkan-lebih-6000-pelaja-uitm-dungun>
- Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, 51, 221–230. <https://doi.org/10.1016/j.jretconser.2019.05.025>
- Setiawan, H., Putri, F. A., & Wahyuni, N. L. (2021). The effect of price perception and service quality on customer satisfaction of food delivery apps. *International Journal of Multicultural and Multireligious Understanding*, 8(5), 125–134. <https://doi.org/10.18415/ijmmu.v8i5.2609>
- Shamsuddin, N. S. @., Zakaria, N. S., & Ismail, T. a. T. (2023). Food quality and online fooddelivery services during COvID-19 pandemic: Are customers satisfied? *International Journal of Academic Research in Business and Social Sciences*, 13(5). <https://doi.org/10.6007/ijarbss/v13-i5/17045>
- Sharma, D. R., Singh, B., & Jaiswal, K. (2023). Understanding the Influence of Mobile In-App Price Promotions in Food Delivery Apps on Customer Engagement and Advocacy. *Indian Journal of Marketing*, 53(7), 8. <https://doi.org/10.17010/ijom/2023/v53/i7/170023>
- Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: a conjoint analysisapproach. *European Journal of Marketing*, 41(11/12), 1495–1517. <https://doi.org/10.1108/03090560710821279>
- Sun, K., & Moon, J. (2024). The Relationship between Food Healthiness, Trust, and the Intention to Reuse Food Delivery Apps: The Moderating Role of Eco-Friendly Packaging. *Foods*, 13(6), 890. <https://doi.org/10.3390/foods13060890>
- Vijayan, S. K., Ong, C. H., & Yong, S. C. (2023). Online food delivery service satisfaction among university students during COVID-19 in Klang Valley, Malaysia. *Asia Pacific Journal of Business, Humanities and Education*. <https://apjbhe.segi.edu.my/index.php/segi/article/view/35>
- Wang, R., Liu, W., & Zhang, Y. (2021). Green packaging and its impact on customer satisfaction: An empirical study from the food industry. *Sustainability*, 13(3), 1457.
- Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of Marketing*, 68(4), 1–15. <https://doi.org/10.1509/jmkg.68.4.1.42705>
- Yeo, V. C. S., Goh, S., & Rezaei, S. (2016). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services*, 35, 150–162. <https://doi.org/10.1016/j.jretconser.2016.12.013>