

# CUSTOMER SATISFACTION ON ONLINE PURCHASES: A CASE STUDY OF LOTUS'S MALAYSIA (TESCO)

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## Abstract

Technology has rapidly and effectively advanced over time, enabling people to work and complete their tasks more conveniently and efficiently. For a significant period, consumers have been able to purchase products online and search for their desired items through internet shopping. However, online shopping is typically limited to non-perishable goods, not grocery products, with a limited shelf life. Customers usually prefer to inspect and select their groceries before making a purchase, which has hindered the popularity of online grocery shopping. Nevertheless, during the COVID-19 pandemic, many consumers had no alternative but to buy groceries online. The possibility of online grocery shopping continuing as a way of life post-COVID-19 depends on whether online grocery shoppers are satisfied with their experience. Therefore, this paper aims to uncover the factors affecting customer satisfaction in online grocery purchases, using Lotus Malaysia as a case study. Through factorial analysis and multiple regression, data from 386 online shoppers at Lotus, aged 18 to 54, revealed that website design, reliability, product quality, and delivery performance impact customer satisfaction with online grocery purchases. Unsurprisingly, website design is the primary attraction for online grocery shopping because customers are more likely to purchase their groceries online if the website can display products creatively and attractively. However, to retain customers as online grocery shoppers, sellers must be reliable in providing quality products with an efficient delivery system.

**Keywords:** Website Design, Reliability, Product Quality, Delivery Performance, Customer Satisfaction.

## Abstrak

*Teknologi telah berkembang dengan pesat dan berkesan sepanjang masa, membolehkan kerja dan tugas-tugas dibuat dengan lebih mudah dan cekap. Perkembangan teknologi juga membolehkan pelanggan membeli produk dalam talian dan mencari produk yang mereka inginkan melalui pembelian dalam talian. Walau*

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*bagaimanapun, pembelian dalam talian biasanya terhad kepada barangan yang tidak mudah rosak dan produk makanan runcit yang tidak mudah rosak. Pada kebiasaannya, pelanggan akan memeriksa dan memilih produk makanan runcit mereka sebelum membuat pembelian dan ini menjadikan pembelian dalam talian kurang popular untuk produk makanan runcit. Namun, semasa pandemik COVID-19, banyak pelanggan tidak mempunyai pilihan lain selain membeli produk makanan runcit mereka dalam talian. Kemungkinan pembelian produk makanan runcit dalam talian terus menjadi satu gaya hidup selepas COVID-19 bergantung kepada sama ada pembeli produk makanan runcit dalam talian puas hati dengan pengalaman pembelian mereka. Oleh itu, artikel ini bertujuan untuk mendedahkan faktor-faktor yang mempengaruhi kepuasan pelanggan dalam pembelian produk makanan runcit dalam talian dengan menggunakan Lotus Malaysia sebagai kajian kes. Melalui analisis faktorial dan regresi, data daripada 386 pembeli dalam talian Lotus yang berumur antara 18 hingga 54 tahun telah menunjukkan bahawa reka bentuk laman sesawang, kebolehpercayaan, kualiti produk, dan prestasi penghantaran memainkan peranan penting dalam mempengaruhi kepuasan pelanggan dalam pembelian produk makanan runcit dalam talian. Tidak menghairankan bahawa reka bentuk laman sesawang adalah salah satu faktor utama yang mempengaruhi keputusan pelanggan dalam pembelian produk makanan runcit dalam talian kerana pelanggan akan cenderung untuk pembelian dalam talian jika laman sesawang mampu menampilkan produk dengan kreatif dan menarik. Walau bagaimanapun, bagi mengekalkan pelanggan sebagai pembeli produk makanan runcit dalam talian, penjual perlu menunjukkan kebolehpercayaan dalam menjual produk berkualiti dengan sistem penghantaran yang cekap.*

**Kata kunci:** *Reka Bentuk Laman Web, Kebolehpercayaan, Kualiti Produk, Prestasi penghantaran, Kepuasan Pelanggan.*

## **Introduction**

In the Internet age, implementing innovative ideas has significantly streamlined various life transactions, saving time and cost while providing maximum consumer benefits. Concurrently, the world has evolved into a global marketplace, primarily propelled by the advancements in online grocery shopping. However, it is essential to note that the adoption of online fresh food markets has experienced a different surge than other product categories (Wei, 2021). Nevertheless, many individuals whose mobility has been restricted by the COVID-19 pandemic have found no alternative but to resort to online grocery shopping. Consequently, researchers have begun to incorporate the COVID-19 context into their studies, acknowledging that such a substantial shift can lead to altered behavioural patterns, influencing factors, and changes in individuals' perceptions of online grocery shopping post-COVID-19 (Bauerová & Kopřivová, 2021).

Building trust and customer loyalty for online fresh food and grocery purchases is a complex challenge because customers are accustomed to purchasing groceries in person (Pahuja, 2021). Hence, many supermarkets and new food retailers have struggled to retain customers for online purchases even before the COVID-19 pandemic. For instance, one of Malaysia's largest supermarkets, Lotus's (formerly known as Tesco Malaysia), faced difficulties and challenges in providing the best services to its customers before COVID-19. According to Lotus's Malaysia's Facebook page (2021), the company has a consumer rating of 1.8 out of 5 based on the opinions of 426 people, indicating that most customers were generally dissatisfied with their online grocery purchases.

During the COVID-19 pandemic, Lotus's Malaysia partnered with the delivery service provider Foodpanda Malaysia to enhance its delivery of fresh produce and groceries to customers. Under this collaboration, customers could order up to 3,000 items from Lotus's stores and have them delivered to them within 40 minutes (Malay Mail, 2020). However, Lotus's faced various delivery issues, resulting in numerous negative customer feedbacks, including late deliveries, delays in processing exchanges or refunds, prolonged customer service response times, and more.

In addition to delivery issues, Lotus's also encountered problems related to product quality. Consequently, customers became increasingly sceptical and concerned about purchasing food and fresh produce through Lotus's online grocery store. To boost online grocery sales, Lotus's implemented several improvements to its online grocery purchasing process, including enhancements to web design and the delivery system, among other measures.

However, the ultimate success of online grocery purchases remains to be determined. Whether online grocery shopping will continue to gain traction or if consumers will revert to in-person grocery shopping in post-COVID time remains a significant question. Therefore, the gap lies in identifying the factors that will encourage consumers to stick with online grocery shopping and increase online grocery sales, enabling online grocery retailers like Lotus's to maintain and expand their market share.

## **Literature Review**

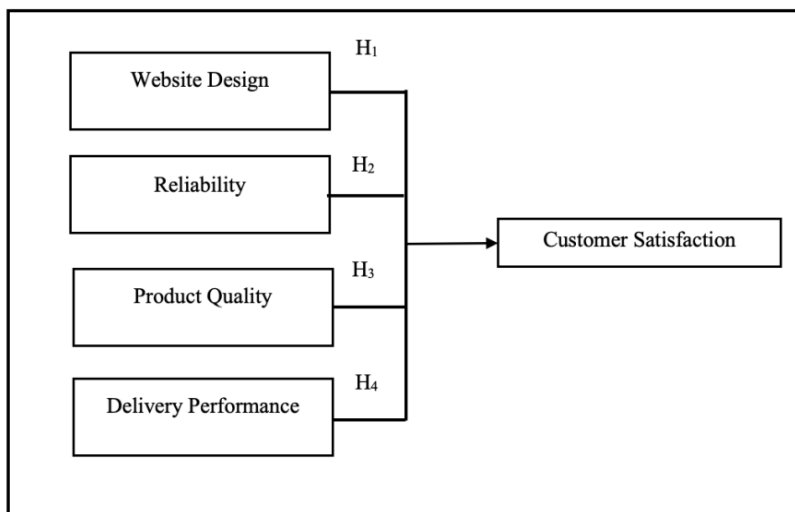
Online grocery shopping is a form of e-commerce where individuals purchase food and household items through dedicated websites or mobile applications (Driediger & Bhatiasevi, 2019). The experience of online grocery shopping differs from other types of online shopping (Mortimer et al., 2016). The likelihood of repeat purchases in online grocery shopping is notably higher than in different online shopping categories (Opreana, 2013) due to the habitual and recurring nature of grocery shopping

(Mortimer & Weeks, 2011). In general, online shopping brings enjoyment, pleasure, and excitement (To & Sung, 2014) as consumers explore new and unique products.

Moreover, online grocery shopping services enable supermarkets to build customer databases containing precise information about each service user. The unique nature of the technology allows for the immediate assessment of the effectiveness of all online marketing initiatives. It has been well-documented that the era of mass marketing has given way to one-to-one marketing. Providing individual consumers with tailored advertisements and promotional offers that align with their preferences is the most effective approach (Strycharz, Noort, Smit & Helberger, 2019).

However, online grocery shopping comes with challenges related to the perishable nature of certain products like baked goods, meat, and fresh produce, which poses a significant risk for online platforms (Huang and Oppewal, 2006). Nevertheless, Masoud (2013) concluded that perceived threat is not a barrier to online grocery shopping. Customer satisfaction is essential for business expansion and sustainability, whether in online or physical purchases.

Therefore, to measure customer satisfaction, this paper applies the research framework developed by Alam and Yassin (2010) for measuring online customer satisfaction.



Sources: [Alam](#) and Yasin (2010)

**Figure 1: Theoretical Framework**

## **Customer Satisfaction**

Customer satisfaction is vital for every company aiming to establish enduring relationships with consumers. Pei, Guo, Wu, Zhou, and Yeh (2020) assert that only some enterprises have succeeded in maintaining stable customer relationships. Positive customer experiences encourage repeat purchases and play a crucial role in marketing literature. A company's ability to retain and attract new customers is pivotal for its success (Hong Quan, Chi, Nhung, Ngan, & Phong, 2020). Happy online shoppers are more likely to make repeat purchases and advocate for online retailers to others (Pereira, Salgueiro, & Rita, 2017). Conversely, unsatisfied customers are more inclined to discontinue using online services without lodging complaints.

## **Website Design**

The significance of an excellent online application and website cannot be overstated when it comes to retaining customers, increasing website traffic, and ensuring customer loyalty (Jeon and Jeong, 2017). Customer e-satisfaction, in particular, pertains to the extent of contentment experienced by individuals when their pre-purchase and post-purchase experiences exceed their expectations. In online shopping, critical factors include website aesthetics, product availability, and usability (Kalia, 2017).

## **Reliability**

In the realm of online shopping, customer trust and loyalty are influenced by a company's ability to fulfil promises consistently. Customers compare items through online channels, saving time compared to physical stores, and receive their purchased products quickly. Contrary to popular belief, gaining customer loyalty in an e-marketplace is more complex due to concerns related to security, trust, and privacy (Faraoni, Rialto, Zollo, & Pellicelli, 2019). Reliability, along with accessibility and searchability, instils confidence in customers and signifies product variety (Eastman & Bradley, 2009).

## **Product Quality**

Product quality pertains to a product's or service's capacity to fulfil customer needs. While online shopping does not allow consumers to assess product quality physically, website feedback can offer some insights into the product's quality (Guo, Ling & Liu, 2012). Customers are more likely to view an online shop favourably and return for future purchases if the product quality aligns with their expectations. Product quality results from how well a product meets customer needs based on its features (Kotler and Keller, 2016).

## **Delivery Performance**

In an online shopping environment, dependable, secure, and swift delivery is the primary goal of online purchasers (Ziaullah, Feng, and Akhter, 2014). The quality of e-service is primarily determined by the website and online service quality (Pigatto, Ferraz Machado, Santos Negreti, & Machado, 2017). In order to ensure high-quality deliveries are made correctly, on time, and securely, e-commerce should collaborate with delivery providers to enhance product tracking (Khalid, Lee, Choi, & Ahn, 2018).

## **The relationship between website design and customer satisfaction**

Websites serve as the initial point of contact between customers and retailers. Customers encounter numerous websites when navigating social media, and appealing visual designs reduce their search efforts. User-friendly websites that facilitate quick purchases are preferred by customers (M. Hult, Sharma, Morgeson, & Zhang, 2018). Website design is crucial in bridging the gap between buyers and sellers. Sellers can indirectly communicate with buyers through their websites by providing information about their products or services. Buyers, in turn, evaluate the product or service and make purchasing decisions based on the information presented (Wilson, Keni, and Tan, 2019). Past research has consistently demonstrated a positive relationship between website design and customer satisfaction during online purchases (Kaya, Behraves, Abubakar, Kaya, & Orús, 2019; Chen, Ling, Ying, & Meng, 2012). Therefore, this study proposes the following hypothesis:

H1: There is a relationship between website design and customer satisfaction.

## **The relationship between reliability and customer satisfaction**

Customer satisfaction is closely linked to reliability (Zaim, Bayyurt, & Zaim, 2010). Reliability reflects a company's consistent ability to fulfil its promises. When businesses deliver on their promises to customers, it fosters satisfaction and establishes the perception of reliability. Higher customer trust in a company's reliability increases customer satisfaction (Omar, Saadan, & Seman, 2014). Research also emphasises that reliability significantly influences customer satisfaction in online purchasing (Singh, Jasial, Misra, & Bansal, 2023; Ying, Omar, & Thurasamy, 2015). Thus, this study posits the second hypothesis:

H2: There is a relationship between reliability and customer satisfaction.

## **The relationship between product quality and customer satisfaction**

Product quality refers to a product's ability to meet its intended purpose. It encompasses attributes such as durability, reliability, physical characteristics, packaging, performance, and alignment with stated needs (Trentin, Perin, & Forza,

2012). Product quality is considered a crucial determinant of customer satisfaction (Deyalage & Kulathunga, 2021). Studies have found a positive correlation between product quality and customer satisfaction in e-commerce (Guo, Ling, & Liu, 2012; Lin, Wu, & Chang, 2011). Therefore, product quality significantly influences customer satisfaction in online purchases, and this study proposes the following hypothesis:

H3: There is a relationship between product quality and customer satisfaction.

### **The relationship between delivery performance and customer satisfaction**

The entire online shopping experience, including website quality, product quality, and customer satisfaction, is influenced by the performance of the delivery system (Annaraud & Berezina, 2020). Timely and accurate service is crucial, and delays in delivery can lead to customer dissatisfaction (Annaraud & Berezina, 2020). Untimely service harms a company's reputation and erodes long-term customer relationships. Delivery delays are common in online businesses, and customers generally prefer clear communication regarding delays (Annaraud & Berezina, 2020). Therefore, this study proposes the following hypothesis:

H4: There is a relationship between delivery performance and customer satisfaction.

## **Research Methodology**

### **Research design**

The selected respondents are customers who have made purchases of Lotus's products through the online platform. For this study, an exploratory approach has been chosen to investigate and delve into the customer service issues on Lotus's online platform. The research primarily focuses on a correlational study aimed at examining the relationship between website design, reliability, product quality, and delivery performance as factors influencing customer satisfaction in the context of online purchases via Lotus's website.

### **Sampling design**

In this study, the research framework is not well-defined; hence, we have opted for a non-probability sampling method, specifically purposive sampling. The target population comprises individuals between 18 and 55, comprising customers who have made online purchases through Lotus's website within the Klang Valley area. The rationale behind using purposive sampling is the limited accessibility to the target population, making it the most practical option (Andrade, 2021). This approach facilitates the quick and efficient gathering of essential information from customers. Convenience sampling also enables data collection in a cost-effective and time-efficient manner.

## Instrument

The questionnaire has been adopted and adapted from various sources, as detailed in Table 1. It comprises two main sections. Section A covers the demographic profile of the respondents. In contrast, section B consists of five (5) items related to the dependent variable (customer satisfaction) and 20 items related to independent variables (website design, reliability, product quality, and delivery performance). The questions are designed to address the pertinent variables that impact customer satisfaction in the context of online purchases through Lotus's website. The Likert scale requires respondents to specify their level of agreement with each statement, ranging from "strongly disagree" (1) to "strongly agree" (5).

**Table 1: Sources of Questionnaires**

Sections	No. of Items	Source
A: Respondent's Profile	9	Author's own work
B1: Customer Satisfaction	5	(Pei, Guo, Wu, Zhou, & Yeh, 2020) (Safa & Solms, 2016)
B2: Website Design	5	(Guo, Ling, & Liu, 2012) (Swaid & Wigand, 2007)
B3: Reliability	5	(Swaid & Wigand, 2007)
B4: Product Quality	5	(Guo, Ling, & Liu, 2012)
B5: Delivery Performance	5	(Singh & Söderlund, 2019)

## Data collection

Survey distribution enables easy access to selected respondents for posing various questions, analysing real-time data and making swift decisions. However, in light of the COVID-19 pandemic, the researcher chose to distribute questionnaires through online surveys (Google Forms) to reach the respondents. A total of 384 questionnaires were completed by customers who use Lotus's online platform. The questionnaire distribution took place over a period of four (4) months, spanning from February 2022 to April 2022.

## Findings And Analysis

### Background of respondents

A total of 386 respondents provided feedback for this study, and all had experience purchasing Lotus's products online. There are 207 female respondents. The highest number of respondents were within the age range of 21 years old and 30 years old. Most respondents reported that they are currently employed and have earned an income between RM4,851 and RM10,970, which falls into the M40 category. This

reflects that those customers who fall into the M40 income category are most likely to purchase Lotus’s products online. This is due to the fact that Lotus’s is well-known for selling its products at reasonable prices. The sixth demographic variable is the size of the respondent’s household. Based on the responses received, the highest number of people in the respondents’ households is five, derived from 95 respondents. At the same time, a total of 144 respondents have been purchasing from Lotus’s online several times a month. About 350 respondents purchased groceries, which contributed to the highest frequency of the types of goods purchased.

Table 2 shows that 386 respondents provided feedback for this study, and all had prior experience purchasing Lotus’s products online. Among these respondents, 207 were female. The majority of respondents fell within the age range of 21 to 30 years old. Most participants reported current employment and incomes ranging between RM4,851 and RM10,970, placing them in the M40 income category. This suggests that customers in the M40 income bracket are more likely to make online purchases of Lotus’s products, likely due to Lotus’s reputation for offering reasonably priced items.

The fifth demographic variable pertains to the size of the respondents' households. Based on the collected responses, the most common household size is five individuals, with 95 respondents reporting this figure. Additionally, 144 respondents stated that they make several online purchases from Lotus’s per month.

Regarding the types of goods purchased, approximately 350 respondents mentioned buying groceries, indicating that grocery items represent the most frequently purchased category among respondents.

**Table 2: Background of Respondents**

<b>Variables</b>	<b>Frequency(n)</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	179	46.4
Female	207	53.6
<b>Age (years old)</b>		
18-20	41	10.6
21-30	151	39.1
31-40	100	25.9
41-50	59	15.3
51 above	35	9.1
<b>Are you currently employed?</b>		
Yes	293	75.9
No	93	24.1

**Table 2 (continues)**

<b>Variables</b>	<b>Frequency(n)</b>	<b>Percentage (%)</b>
<b>Which income categories your household fall into?</b>		
B40 (RM4,850 and below)	134	34.7
M40 (RM4,851 - RM10,970)	209	54.1
T20 (RM10,970 and above)	43	11.1
<b>How many people are in your household?</b>		
0	12	3.1
1	8	2.1
2	37	9.6
3	68	17.6
4	80	20.7
5	95	24.6
6	44	11.4
7	19	4.9
8	17	4.4
9	4	1.0
10	2	0.5
<b>Are you in charge of purchasing groceries for your household?</b>		
Yes	311	80.6
No	75	19.4
<b>How often have you purchased from Lotus’s online for the past 6 months?</b>		
Every week	43	11.1
Several times per month	144	37.3
Once per month	142	36.8
Once in 6 months	57	14.8
<b>Types of products you frequently purchased</b>		
Groceries	350	32.7
Household (e.g., laundry, floor cleaners, air freshener)	304	32.7
Health and Beauty (e.g., skin care, bath toiletries, hair care, male grooming)	175	18.8
Baby’s Products	61	6.6
Toys	39	4.2
Others	0	0.0

**Confirmatory factor analysis**

Confirmatory factor analysis is a statistical technique employed to extract latent variables from a set of indicators (Hoyle, 2000). Table 3 below illustrates the five (5) extracted variables or factors, all meeting the requirements for factor analysis. Firstly, Cronbach's alpha for all variables within each factor significantly exceeds the acceptable threshold of 0.6 (Sekaran & Bougie, 2016). Secondly, the Kaiser-Meyer-

Olkin (KMO) test indicates sample size sufficiency exceeding 0.5, which is deemed satisfactory (Field, 2013). Moreover, all Bartlett's Test of Sphericity results demonstrate significance, affirming that the data are suitable for factor analysis. Finally, factor analysis indicates that all extracted factors account for between 80% and 92% of the variance. In conjunction with selected demographic variables, these factors are subsequently utilised in a regression analysis to ascertain the percentage of the dependent variable explained by the four (4) independent variables.

**Table 3: Results from Factor Analysis**

Variables	Items	Cronbach Alpha	KMO Test	Bartlett's Test of Sphericity Chi-Square (degree of freedom)	Percentage of Variance Explained
Website Design (IV1)	5	0.950	0.897	1898.907 (10)	83.250
Reliability (IV2)	5	0.948	0.896	1948.184 (10)	82.885
Product Quality (IV3)	5	0.980	0.912	3096.519 (10)	92.425
Delivery Performance (IV4)	5	0.947	0.852	1986.264 (10)	82.416
Customer Satisfaction (DV)	5	0.945	0.888	1802.650 (10)	81.893

**Regression analysis**

Table 4 shows multiple regression analysis. The adjusted R-square of 65.1% of the dependent variable, customer satisfaction, is explained by all four (4) independent variables: website design, reliability, product quality and delivery performance. All independent variables do not explain the remaining 34.9% of the dependent variable. This indicates that other independent variables are not included in this study and could further strengthen the regression equation. Meanwhile, the result for F-Value is at F=180.434 with a significant value of 0.000. Hence, the linear model is statistically valid and significant.

The first independent variable under investigation, website design, exhibited a highly significant relationship with customer satisfaction in the context of Lotus's online platform, as evidenced by a significance value of 0.000, well below the conventional threshold of 0.05. The Beta Standardized Coefficient further supported this relationship, registering at a substantial 0.315. This outcome substantiates the acceptance of hypothesis H1, aligning with prior research findings that have consistently identified a positive correlation between website design and customer satisfaction. These findings suggest that customers perceive Lotus's online website and application as user-friendly, characterised by an organised interface that

facilitates smooth transactions, potentially enhancing the fulfilment of customer needs (Kaya, Behraves, Abubakar, Kaya, & Orús, 2019).

Furthermore, the research findings align with earlier investigations conducted by Loureiro, Cavallero, and Miranda (2018), reinforcing the notion that a well-designed website contributes to customer pleasure and satisfaction through an enhanced user experience. Notably, an effective website design aids in site navigation, emphasising the importance of user-friendliness and user control, ultimately improving overall usability and user freedom during navigation. According to this study, most respondents expressed strong confidence in Lotus's online store's ability to provide them with comprehensive product information. As a result, meticulous website content and presentation management, highlighting high-quality materials, remains paramount for Lotus to maintain customer satisfaction.

Gim (2014) research also supports the significance of website design as a predictor of online consumer satisfaction, alongside other crucial factors such as transaction capacity, security/privacy, shopping payment processes, and overall transactional procedures. These elements collectively contribute to the success of an e-commerce platform like Lotus's online presence. To further enhance the customer experience, standardising the steps in the online purchasing process could be advantageous, fostering better customer understanding and instilling greater confidence during transactions. Ultimately, the research underscores the pivotal role of website design as the most influential independent variable driving customer satisfaction compared to the other three independent variables tested concerning the dependent variable.

Reliability, the second independent variable under scrutiny, demonstrated a highly significant relationship with customer satisfaction within Lotus's online platform. The Beta Standardized Coefficient further substantiates this relationship, registering at a substantial 0.260. This result corroborates the acceptance of hypothesis H2, corroborating prior research findings that have consistently linked reliability to heightened customer satisfaction. Previous studies from San, Omar, and Thurasamy (2015) found that reliability positively influences customer satisfaction in online shopping. This underscores that higher customer satisfaction is associated with a company's perceived trustworthiness and reliability.

In the context of online purchasing, the website serves as the primary medium for communication and interaction with customers. At the same time, the company delivers its products or services through this digital channel. Reliability, therefore, becomes a critical factor in online shopping, encompassing the website's ability to consistently deliver the promised service performance (Swaid & Wigand, 2007). The reliability of an online shopping website hinges on various factors, including its capacity to fulfil orders accurately, transparent representation of products online, regular website updates, seamless functionality, error-free online transactions,

safeguarding personal information, ensuring order accuracy, and timely order delivery.

The regression analysis results also indicate a statistically significant relationship between product quality and customer satisfaction, confirming the acceptance of Hypothesis 3. However, it is noteworthy that among the four independent variables examined, product quality emerges as the least significant, as evidenced by its lowest standardised coefficient beta weight of 0.107. This suggests that product quality exerts the weakest influence on customer satisfaction compared to the other three independent variables concerning the dependent variable. This aligns with the broader body of research, including Nisar and Prabhakar (2017), which emphasises the pivotal role of product quality in shaping customer satisfaction in online contexts. Despite being the least influential of the four variables in this study, the outcome remains consistent with the existing literature.

This study underscores the significance of accurately representing product quality on online shopping websites, as customers cannot assess products physically. When customers receive products that align with their expectations and are accurately depicted online, they are more inclined to revisit the online store and potentially become loyal patrons, often sharing their positive experiences through word-of-mouth recommendations. Conversely, poor product quality and unmet expectations can deter future purchases from the same online store. This finding resonates with prior research, such as Deyalage and Kulathunga (2021), which identifies product quality as one of the key factors influencing online customer satisfaction. It underscores that enhancing product quality positively contributes to consumer satisfaction, a relationship affirmed by the results of this research with a significance level of 0.005, lower than the customary threshold of 0.05, thus validating the hypothesis.

The analysis of the fourth independent variable, delivery performance, reveals a significant relationship with customer satisfaction, leading to the acceptance of Hypothesis 4. The obtained significance value of 0.000, below the customary threshold of 0.05, along with a Beta Standardized Coefficient of 0.215, confirms the presence of a meaningful association between delivery performance and customer satisfaction in the context of Lotus's online platform.

This study's findings resonate with previous research; notably, studies such as Ziaullah, Feng, and Akhter (2014) have consistently reported a positive correlation between delivery performance and customer satisfaction in online shopping. Customers who engage in online purchases are prone to encountering delivery-related issues, including delays, product damage, or receipt of incorrect items. Even if the online platform offers an excellent user experience or an easy shopping process, customers may opt for alternative online retailers or revert to in-person shopping if delivery performance falls short in terms of timeliness or reliability. It is worth noting

that some delivery issues may arise due to external factors beyond the company's control, such as traffic, road conditions, or adverse weather during specific seasons.

Furthermore, customers may experience product defects or damaged packaging, which can be attributed to the handling of products during transportation or the company's failure to conduct thorough inspections before dispatching orders to delivery personnel. Research exemplified by Aleixo (2022) underscores that the quality of the delivery experience directly impacts business outcomes, with a significant proportion of consumers indicating that a poor delivery experience would deter them from recommending a retailer to potential new customers.

In addition to efficient and reliable delivery performance, maintaining product quality and consistency with the online representation is essential for upholding the customer experience. Any discrepancies between the online description and the actual delivered product, coupled with delivery-related issues, can potentially disappoint customers and erode the perception of the company's reliability. Customers increasingly favour faster and more timely delivery services, making the provision of punctual and efficient deliveries a critical factor in ensuring customer satisfaction and fostering repeat business for Lotus's online platform.

**Table 4: Multiple Regression Analysis**

<b>Dependent Variable: Customer Satisfaction</b>		
<b>Independent Variables</b>	<b>Standardised Coefficient (Beta)</b>	<b>Sig. Value</b>
Website Design (IV1)	0.315	0.000
Reliability (IV2)	0.260	0.000
Product Quality (IV3)	0.107	0.005
Delivery Performance (IV4)	0.215	0.000
Adjusted R <sup>2</sup>	0.651	
F Value	180.434	
Significance	0.000 <sup>b</sup>	

## Conclusion

This study delves into the intricate interplay between website design, reliability, product quality, and delivery performance as critical determinants of customer satisfaction in the context of online purchases via Lotus's website. The results unequivocally support the hypotheses, confirming that all four factors directly impact customer satisfaction. Notably, the regression analysis underscores the prominence of website design, boasting the highest standardised coefficient beta value of 0.315 among the independent variables. Given its paramount influence, it is recommended that Lotus meticulously curate the content and information displayed on its website,

ensuring high-quality, comprehensive, and user-friendly presentations. The website's design serves as customers' initial point of contact, making a lasting impression on their purchasing journey. A well-designed website enhances user experience and streamlines site navigation, fostering ease of use and user autonomy during browsing. This heightened usability contributes to customer happiness, elevating the likelihood of repeat online purchases. In conclusion, all four independent variables—website design, reliability, product quality, and delivery performance—demonstrate a significant relationship with the dependent variable, customer satisfaction. Among these variables, website design stands out as the most influential, signifying the most substantial impact on customer satisfaction compared to the other three independent variables.

Moving forward, online grocery firms should emphasise their top products prominently, whether they are bestsellers, highly rated by customers, or generate substantial revenue. Utilising attention-grabbing elements like contrasting colours, optimised layouts, image sizes, and promotional banners can effectively highlight these essential products, ultimately boosting sales. Moreover, employing high-resolution images and dynamic product displays can enhance product representation and align with the brand's identity. An unwavering focus on user-centric design, seamless purchasing processes, informative product descriptions, and a harmonious colour palette is pivotal for sustaining customer loyalty. Additionally, maintaining reliability, product quality, and an efficient delivery system remains essential for upholding customer satisfaction.

Lastly, future research endeavours could expand beyond a single online grocery store, encompassing various platforms, and consider additional factors influencing loyalty and satisfaction in online grocery shopping.

## References

- Alam, S. S., & Yasin, N. (2010). An Investigation into the Antecedents of Customer Satisfaction of Online Shopping. *Journal of Marketing Development and Competitiveness*, 5(1), 71-78.
- Aleixo, C. (8 February 2022). *4 Great Ways to Improve Delivery Service*. Retrieved from Circuit Blog: <https://getcircuit.com/teams/blog/how-to-improve-delivery-service>
- Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86-88.

- Annaraud, K., & Berezina, K. (2020). Predicting satisfaction and intentions to use online food delivery: What really makes a difference? *Journal of Foodservice Business Research*, 305-323.
- Bauerová, R., & Bracíníková, V. (2021). Customer's Choice of Purchasing Channel: Do Channel Characteristic, Brand, and Loyalty Matter When Shopping in Hybrid Retailers? *Sustainability*, 13(5), 2453.
- Chen, Z., Ling, K. C., Ying, G. X., & Meng, T. C. (2012). Antecedents of Online Customer Satisfaction in China. *International Business Management*, 168-175.
- Cowling, A., & Newman, K. (1994). Turning Doctors Into Managers: an Evaluation of A Major NHS Initiative to Improve the Managerial Capabilities of Medical Consultants. *Human Resource Management Journal*.
- Deyalage, P. A., & Kulathunga, D. (2021). Factors Affecting Online Customer Satisfaction: The Sri Lankan Perspective. *International Journal of Business and Management*, 14(2).
- Dorgan, T. (1997). Belief in the Future. *Progressive Grocer*, 76(2), 67-68.
- Driediger, F., & Bhatiasevi, V. (2019). Online grocery shopping in Thailand: Consumer acceptance and usage behaviour. *Journal of Retailing and Consumer Services*, 48, 224–237.
- Dundar, A. O., & Özturk, R. (2020). The effect of on-time delivery on customer satisfaction and loyalty in channel integration. *Business & Management Studies: An International Journal*, 8(3), 2675-2693.
- Eastman, J. K., Iyer, R., & Randall, C. (2009). Understanding internet shoppers: an exploratory study. *Marketing Management Journal*, 19(2), 104-117.
- Faraoni, M., Rialti, R., Zollo, L., & Pellicelli, A. C. (2019). Exploring e-Loyalty Antecedents in B2C e-Commerce: Empirical results from Italian grocery retailers. *British Food Journal*, 121(2), 574-589.
- Field, A. (2013). *Discovering statistics using SPSS (4th ed.)*. London, UK: SAGE Publications.
- Fiore, A. M., Yah, X., & Yoh, E. (2000). Effects of a product display and environmental fragrancing on approach responses and pleasurable experiences. *Psychology & Marketing*, 17(1), 27-54.

- Guo, X., Ling, K. C., & Liu, M. (2012). Evaluating factors influencing consumer satisfaction towards online shopping in China. *Asian social science*, 8(13), 40.
- Hansen, T. (2006). Determinants of consumers' repeat online buying of groceries. *The International Review of Retail, Distribution and Consumer Research*, 16(1), 93–114.
- Huang, Y., & Oppewal, H. (2006). Why consumers hesitate to shop online: An experimental choice analysis of grocery shopping and the role of delivery fees. *International Journal of Retail & Distribution Management*, 34(4/5), 334-353.
- Hult, G. T. M., Sharma, P. N., Morgeson III, F. V., & Zhang, Y. (2019). Antecedents and consequences of customer satisfaction: do they differ across online and offline purchases?. *Journal of Retailing*, 95(1), 10-23.
- Hoyle, R. H. (2000). Confirmatory factor analysis. In *Handbook of Applied Multivariate Statistics and Mathematical Modelling* (pp. 465-497). Academic Press.
- Isa, K., Shah, J. M., Palpanadan, S., & Isa, F. (2020). Malaysians' popular online shopping websites during movement control order (Mco). *International Journal of Advanced Trends in Computer Science and Engineering*, 9(2), 2154-2158.
- Jeon, M. M., & Jeong, M. (2017). Customers' perceived website service quality and its effects on e-loyalty. *International Journal of Contemporary Hospitality Management*, 29(1), 438-457.
- Kalia, P. (2017). Service quality scales in online retail: methodological issues. *International Journal of Operations & Production Management*, 37(5), 630-663.
- Kaya, B., Behraves, E., Abubakar, A. M., Kaya, O. S., & Orús, C. (2019). The Moderating Role of Website Familiarity in the Relationships Between e-Service Quality, e-Satisfaction and e-Loyalty. *Journal of Internet Commerce*, Vol. 18, 369-394.
- Keller L. N, & Kotler. P. (2009). *Marketing Management* (13th ed.). New Jersey: Pearson Prentice Hall.
- Khalid, A., Lee, O. O. K., Choi, M., & Ahn, J. (2018). The effects of customer satisfaction with e-commerce system. *Journal of Theoretical and Applied Information Technology*, 96(2), 481-491.
- Lin, C. C., Wu, H. Y., & Chang, Y. F. (2011). The critical factors impact on online customer satisfaction. *Procedia Computer Science*, 3, 276-281.

- Lotus. (2021). Lotus Official Facebook. Retrieved from Facebook: <https://www.facebook.com/LotussMalaysia/>
- Malay Mail. (2020). Tesco partners Foodpanda to deliver produce and groceries. Retrieved from Malay Mail: <https://www.malaymail.com/news/life/2020/11/10/tesco-partners-foodpanda-to-deliver-produce-and-groceries/1921256>
- Masoud, E. Y. (2013). The effect of perceived risk on online shopping in Jordan. *European Journal of Business and Management*, 5(6), 76-87.
- Mortimer, G. S., & Weeks, C. (2011). Grocery product pricing and Australian supermarket consumers: gender differences in perceived importance levels. *The International Review of Retail, Distribution and Consumer Research*, 21(4), 361–373.
- Mortimer, G., e Hasan, S. F., Andrews, L., & Martin, J. (2016). Online grocery shopping: the impact of shopping frequency on perceived risk. *The International Review of Retail, Distribution and Consumer Research*, 26(2), 202–223.
- Nisar, T. M., & Prabhakar, G. (2017). What factors determine e-satisfaction and consumer spending in e-commerce retailing?. *Journal of retailing and consumer services*, 39, 135-144.
- Omar, H. F. H., Saadan, K. B., & Seman, K. B. (2015). Determining the influence of the reliability of service quality on customer satisfaction: The case of Libyan E-commerce customers. *International journal of learning and development*, 5(1), 86-89.
- Opreana, A. (2013). Examining Online Shopping Services in Relation to Experience and Frequency of Using Internet Retailing. *Expert Journal of Marketing*, 1(1), 17–27.
- Pahuja, R. (2021, September 3). How analytics helped Tesco improve its customer satisfaction amid Covid. Retrieved from The Economic Times: <https://cio.economictimes.indiatimes.com/news/business-analytics/how-analytics-helped-tesco-improve-its-customer-satisfaction-amid-covid/85887530>
- Pee, L. G., Jiang, J., & Klein, G. (2018). Signalling effect of website usability on repurchase intention. *International Journal of Information Management*, 39, 228-241.

- Pei, X. L., Guo, J. N., Wu, T. J., Zhou, W. X., & Yeh, S. P. (2020). Does the effect of customer experience on customer satisfaction create a sustainable competitive advantage? A comparative study of different shopping situations. *Sustainability*, 12(18), 7436.
- Pereira, H. G., de Fátima Salgueiro, M., & Rita, P. (2017). Online determinants of e-customer satisfaction: application to website purchases in tourism. *Service Business*, 11, 375-403.
- Pigatto, G., Machado, J. G. D. C. F., dos Santos Negreti, A., & Machado, L. M. (2017). Have you chosen your request? Analysis of online food delivery companies in Brazil. *British Food Journal*, 119(3), 639-657.
- Quan, N., Chi, N. T. K. C., Nhung, D., Ngan, N., & Phong, L. (2020). The influence of website brand equity, e-brand experience on e-loyalty: The mediating role of e-satisfaction. *Management Science Letters*, 10(1), 63-76.
- Safa, N. S., & Von Solms, R. (2016). Customers repurchase intention formation in e-commerce. *South African Journal of Information Management*, 18(1), 1-9.
- San, L. Y., Omar, A., & Thurasamy, R. (2015). Online purchase: A study of Generation Y in Malaysia. *International Journal of Business and Management*, 10(6), 1.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & sons.
- Singh, S., Jasial, S. S., Misra, R., & Bansal, A. (2023). Online Retail Service Quality: What Matters Most for Customer Satisfaction? *FIIB Business Review*, 23197145231151736.
- Singh, R., & Söderlund, M. (2020). Extending the experience construct: an examination of online grocery shopping. *European Journal of Marketing*, 54(10), 2419-2446.
- Swaid, S. I., & Wigand, R. T. (2007). Key dimensions of e-commerce service quality and its relationships to satisfaction and loyalty. *BLED 2007 proceedings*, 29.
- Tandon, U., Kiran, R., & Sah, A. (2017). Analysing customer satisfaction: users' perspective towards online shopping. *Nankai Business Review International*, 8(3), 266-288.

- Trentin, A., Perin, E., & Forza, C. (2012). Product configurator impact on product quality. *International Journal of Production Economics*, 135(2), 850-859.
- To, P. L., & Sung, E. P. (2014). Hedonic motivations for online shopping. *International Journal of Economics and Management Engineering*, 8(7), 2230-2232.
- Wilson, N., Keni, K., & Tan, P. H. P. (2019). The effect of website design quality and service quality on repurchase intention in the e-commerce industry: A cross-continental analysis. *Gadjah Mada International Journal of Business*, 21(2), 187-222.
- Wolfenbarger, M. (2001). Shopping Online for Freedom, Control, and Fun. *California Management Review*, 43(2), 34–55.
- Yavas, U., Benkenstein, M., & Stuhldreier, U. (2004). Relationships between service quality and behavioural outcomes: A study of private bank customers in Germany. *International journal of bank marketing*, 22(2), 144-157.
- San, L. Y., Omar, A., & Thurasamy, R. (2015). Online purchase: A study of Generation Y in Malaysia. *International Journal of Business and Management*, 10(6), 1.
- Zaim, H., Bayyurt, N., & Zaim, S. (2010). Service quality and determinants of customer satisfaction in hospitals: Turkish experience. *International Business & Economics Research Journal (IBER)*, 9(5).
- Ziaullah, M., Feng, Y., & Akhter, S. N. (2014). E-Loyalty: The influence of product quality and delivery services on e-trust and e-satisfaction in China. *International Journal of Advancements in Research & Technology*, 3(10), 20-31.