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Factors Affecting Customer Satisfaction on Online Shopping: An Empirical Study

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Abstract

This paper examines the effect of website layout, privacy and security, customer experience, customer service, and product delivery service on online shopping satisfaction in Malaysia. With swift economic development and advanced digital technology infrastructure, online shopping in Malaysia is undergoing transformation. Businesses are advised to change their business operation towards digitalization. In this study, the survey link containing the questionnaire was sent to 300 respondents randomly via several online social media platforms. As a result, 257 responses were received with 85.67% of the response rate. Based on the findings from the multiple regression analysis, website design, customer experience, and product delivery service all had a significant impact on online shopping satisfaction. Further investigation also revealed that website layout was the most important determinant of satisfaction. Therefore, it is critical for online retailers to better understand their online customers' preferences to create better customer values that lead to customer satisfaction and the development of long-term profitable relationships.

Keywords: Customer Experience, Customer Satisfaction, Online Shopping, Product Delivery Service, Website Layout

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1. Introduction

E-commerce websites in Malaysia received more than 50 million website visits on monthly basis on average (Lim, 2019). In fact, Malaysia is the region's front runner of online shopping among Southeast Asia countries. Nine out of ten Malaysians are involved in online shopping (Vasanth, 2021). Online shopping in Malaysia is estimated to expand at a yearly growth rate of 11.4% and the total revenue generated for the whole industry is \$ 2.53 billion in year 2022 (ITA, 2021). The implementation of government initiatives such as Shop Malaysia Online by the National Economic Recovery Plan (PENJANA) encourages additional online buyers and induces current online buyers to boost their spending with domestic online sellers. As a result, the prospects for growth in e-commerce in Malaysia are very promising, and more and more companies are conducting the business online to increase brand awareness and customer engagement.

As online businesses expand, the competition in online shopping is expected to increase as well. Therefore, it is critical to observe variables that influence buyers intention towards online shopping satisfaction (Bucko, Kakalejcik & Ferencova, 2018). Without observing customer satisfaction, businesses are putting themselves in precarious position of losing their potential buyers to their competitors (Bucko, Kakalejcik & Ferencova, 2018). Positive online satisfaction level could encourage online shoppers to spend more; however negative online satisfaction will discourage online shoppers to continue to use the online platform. As shopping behaviour will change over time, it is critical to identify the gaps and relationship between variables of online purchase and online shopping satisfaction. Therefore, variables that influence online shopping satisfaction in Malaysia such as website layout, privacy and security, customer experience, customer service, and product delivery are important to be examined.

2. Literature Review

1.1 Online Shopping

Online shopping, also known as e-shopping refers to a form of electronic commerce (E-commerce) that allows consumers to seek for and buy goods and services over cyberspace via the presence of a web browser (Computer Hope, 2020). Covid-19 pandemic had accelerated the change in spending behaviours and online shopping now

became a new norm for Malaysians (NST Business, 2020). Online shopping becomes a new strategy to do business in Malaysia as many traditional businesses started pivoting online to sustain their businesses. Other than tangible goods, some traditional business offers intangible services such as air-conditioner repairs and CCTV installation in an online presence (NST Business, 2020). As online shopping became a new norm in Malaysia, it is vital to understand the shopping behaviors of Malaysians. Understanding customers enables online retailers to curate their campaigns fitting to meet market's needs and fulfil buyer is wants. (The Star, 2019).

According to e-Commerce Consumer Survey conducted by MCMC, women performed more online activities compared to men in terms of adoption rate (MCMC, 2018). The highest e-commerce adoption rate is from the age group of 20 - 29 years, followed by the age group of 30 - 39 years. The e-commerce adoption rate is in a downtrend from the age group of 40 – 49 years onwards. The age group above 60 years has the lowest e-commerce adoption rate (MCMC, 2018). Even though online shopping is popular in Malaysia, some Malaysians wish to perform physical shopping, especially people aged above 40 years old. They believe that physical shopping is much simple as they get the merchandise directly from the store (Vasudevan, 2021). Vasudevan cited that the common age of Malaysian shops online is 24 years old. Compared to Generation X and Y, Generation Z is famous for being digitally savvy and proficient in technology. They enjoy the benefit of digital technologies such as using cyberspace and social media (Vasudevan, 2021). In addition, the average monthly income above RM 3,000 has a positive trend to adopt e-commerce, however, low-income levels such as those below RM 1,000 and dependent have a low tendency to adopt e-commerce (MCMC, 2018). Online shopping is an aspect with significant potential for upcoming business expansion. When the number of internet users is increasing, it strengthens the foundation of online buyers to shop online (AB, SH, & WZ, 2018). A good online shopping experience is driven by an excellent online platform, together with a reliable payment gateway, responsive delivery, and customer service (Austrade, 2020).

1.2 Customer Satisfaction

Customer satisfaction is the result of evaluation of expectation and experience. It is an inclusive feeling or thought from a customer regarding a product after purchasing it (Solomon, Marshall & Stuart, 2011). When a customer purchases a product or service, there are some expectations of product quality. The customer tends to evaluate the product or service quality by comparing a pre-existing performance standard. The standard could be formed via a combination of facts from marketing announcements, casual info sources such as friends and family, or from their previous understanding of the product type. The function of the good or service meets or exceeds those expectancies and controls customer satisfaction (Solomon, Marshall & Stuart, 2011).

Customer satisfaction is a common topic in marketing, psychology, and consumer study (Alam, Ali, Omar & Hussain, 2020). Usually, customer satisfaction is generated from customer's thought of the value obtained according to the product or service what is the expectation of the purchase, and the needs related to the purchase (Alam et al., 2020). From customer behavior's point of view, customer satisfaction is always presented as a purpose of transaction-specific satisfaction and multiple transaction specific's satisfaction. The perception gets the chance to evaluate as a decision performed by buyers regarding the quality of product and service as well as the price (Ismail, Rose, Tudin & Dawi, 2017). Also, customer satisfaction plays an important role in online shopping as it evaluates the achievement of online shopping activities (Zatalini & Pamungkas, 2017). The success of customer satisfaction will increase customer loyalty. As a result, it impacts the sales and profits of the business (Zatalini & Pamungkas, 2017).

2.3 Expectancy Disconfirmation Theory

Expectancy Disconfirmation Theory also known as Expectancy Theory, was a theory established in 1980 when Richard Oliver claimed that when a person's expectations failed to be fulfilled, this will cause psychological anxiety (Kinyanjui, 2020). There are four elements in Expectancy Disconfirmation Theory which are expectations, perceived performance, and disconfirmation as well as satisfaction (Kinyanjui, 2020).

Expectancy Disconfirmation Theory is a common theory regarding the processes of customer satisfaction. The theory embraces that customer satisfaction or dissatisfaction is derived from the evaluation between the performance of product or service and the predictive expectations from the customer (Swamidass, 2000). Based on the Expectancy Disconfirmation Theory, there are three potential results on the product or service performance which are positive disconfirmation, zero disconfirmation, and negative disconfirmation (Swamidass, 2000). When the customer is pleased with the product or service performance, it is a positive disconfirmation as the performance is perceived to be beyond the predetermined expectation. Zero disconfirmation happens when the performance is perceived as per the customer's expectation. When the performance is below the customer's expectation, it leads to an unpleasant or dissatisfied customer. This is called negative disconfirmation (Swamidass, 2000).

Expectancy Disconfirmation Theory explains a personal individual's responses in some activities such as spending experience or merchandise experience. Satisfaction in expectancy disconfirmation theory is a demonstrative response towards a perceived good or service (Qazi, Tamjidyamcholo, Raj, Hardaker & Standing, 2017). The direct outcome of perceived performance on customers and the impact of potential perceived performance will cause satisfaction and disconfirmations (Gillison & Reynolds, 2018). Qazi et al. (2017) explained that users experiences have a positive relationship with perceived usefulness, and it influences disconfirmation. The perceived performance impacts customer satisfaction directly and indirectly (Qazi et al., 2017).

In sum, Expectancy Disconfirmation Theory is applicable in several industries such as marketing and consumer behaviour to obtain a comprehensive understanding of the expectations and requirements of customers (Hopper, 2022). It has been applied by many researchers in different fields for a better understanding of the customer's expectations and requirements for attracting their satisfaction. For examples, Lin et al. (2018) reported that consumer disconfirmation is influenced by expectation, leads to satisfaction, and is followed by repurchase intention. In addition, Gillison and Reynolds (2018) revealed that shopper satisfaction is positively influenced when users reach positively for the product.

2.4 Relationship between Website Layout and Customer Satisfaction

The process of creating a website is known as website design. It involves webpage layout, graphic design, and content production. As website design displays interesting content, it plays a vital role in an online business. A good website design should contain a well-structured design and screen layout together with vibrant colour alignment and intelligible graphics (Rasli, Khairi, Ayathuray & Sudirman, 2018). Useful information reduces time searching on online platforms and encourage customers to purchase product displayed on the platforms as well (Iskandar & Sholihat, 2018).

Website layout is the backbone of online experience and impacts how online users navigate the online platform (Angelo, 2019). Angelo (2019) cites some design elements that need to be considered such as minimizing and removing unnecessary complexity on the platforms and customizing the customer's experience (Angelo, 2019). An online platform that is user-friendly and has simple navigation will boost online users to spend more time and search for more products (Sanyal, 2019).

Website layout also helps with brand image of the product or business. It builds the characteristics of businesses when a brand emerges with the brand service. When the public thinks about the product or service, they automatically will think about the business because a website layout with excellent communication and service will stamp on customer's mind. A successful web layout gives a positive value and affects mutual return to the online business (Iskandar & Sholihat, 2018). Bhatti, Akram, Shafique-Ur, Naqvi, Khan & Basit (2020) cited that website layout can motivate customers to purchase items. When customers realised a website is reachable and easy to use, they will continue to purchase on the website (Bhatti et al., 2020). As a result, website layout plays an important role in customer satisfaction. Deyalage & Kulathunga (2019), Rasli et al. (2018), Alam et al. (2020) and Zatalini & Pamungkas (2017) cited that website layout has significant relationship with online shopping satisfaction.

2.5 Relationship between Privacy, Security and Customer Satisfaction

Privacy refers to the capability to protect sensitive information and data about personal information (Ted, 2018). The principle of privacy guidelines is information about a customer who belongs to the customer (Solomon, Marshall & Stuart, 2011). Customers should be aware of information collection and how the information about them will be used. Besides, customers should be able to refuse to provide information (Solomon, Marshall & Stuart, 2011). The information about customers should never be sold or given to another party without the permission of the customer (Solomon, Marshall & Stuart, 2011). Security defines as the ability to protect personal information (Ted, 2018). Security always is a concern to customers as some customers have unpleasant experiences such as credit cards and other identifying information have been stolen. Even though credit card companies usually absorb the loss, the damage to the reputation of the organization can last for years (Solomon, Marshall & Stuart, 2011).

The use of technology increases and causes the public to become more dependent on technology (MHAF, 2018). However, it makes personal information more vulnerable to security threats such as email hacks and identity theft. When an e-commerce user creates an account on the e-commerce platform to use the service, the platform has the responsibility to protect customer data. Privacy and security should be maintained and protected (Steve, 2021). Dehghanpouri, Soltani & Rostamzadeh (2020) studied hazard-free transactions, private data protection, and online privacy have a significant impact on customer satisfaction. Protecting customers' personal data such as credit card or debit card numbers from online transactions is one of the factors that influence customer satisfaction (Dehghanpouri, Soltani & Rostamzadeh, 2020). When customer satisfaction increase, customer loyalty will also increase and benefits businesses as well (Dehghanpouri, Soltani & Rostamzadeh, 2020).

2.6 Relationship between Customer Experience and Customer Satisfaction

In the digital era, customers have a lot of options to get the information that they wanted. Therefore, the organization should navigate the new world and the key is improving customer experience to gain customer loyalty (Panetta, 2019). Customer experience or

CX is the customers' overall perception of their experience with a brand (Morgan, 2017). Customer experience is also an outcome of every interaction between customer and business such as the messaging used on the website, product sold on the platform, the sales process, the after-sales service, and so forth (Morgan, 2017). Customer perception is very delicate, and it changes with every communication. Therefore, continuously maintaining a solid customer experience among customers is important as customers are always the most valuable asset of a company (Morgan, 2017).

According to Zaki & Neely (2018), building a solid customer experience is a tactical urgency for businesses. Organizations leverage new technology like social media platforms, mobile applications, drones, virtual reality (VR), and the Internet of Things (IoT) deliver intelligence facilities to activate a comprehensive customer experience (Zaki & Neely, 2018). Customer experience is shaped by successful brand through embedding fundamental value proposition in every feature offering (Meyer & Schwager, 2007). An outstanding customer experience impacts the perception of a company, product, or service. At the same time, it also generates real customer loyalty and leads to the success of an organization. Based on Zendesk Customer Experience Trends Report, 74% of respondents feel loyalty to a brand and 52% are going to purchase the product or service from that brand (Hueffner, 2020). Customer experience have been developed to be an element influencing customer satisfaction in the present-day market experience. It also become an essential pointer of a successful, and long-standing supportable attractiveness for businesses (Pei, Guo, Wu, Zhou & Yeh, 2020).

Zatalini & Pamungkus (2017) cited that trust can affect and improve customer satisfaction. Customer experience positively influences customer satisfaction (Pei et al., 2020), Ma, Mather, Ott, Fang, Bremer & Miroso (2022), Gulfraz, Sufyan, Mustak, Salminen & Srivastava (2022), and Bhattacharya, Srivastava & Verma (2019) cited that online customer experience significantly drives customer' repurchase intention by enhancing customer satisfaction.

2.7 Relationship between Customer Service and Customer Satisfaction

Customer service defines as the support and assistance provided by an organization to the customers who buy or use the product or services. The customer's welfare is taken care of by delivering helpful, professional, high-quality assistance and service as well as beyond the customer's expectations (Tara, 2020). Additionally, customer service is a part of communication between the customer and the organization that sells the product or service (Grant, 2020).

According to the survey done by Zendesk, the leading 4 principles of customer service are fast resolution, immediate response, friendly interaction, and convenient channels (Tara, 2020). For example, customers manage to get a fast resolution through an agent, a chatbot, or a self-service platform when they have some issues with the platform, product, or service. Customers also expect the platform is taking the facility to respond once they raise an issue. A wonderful customer service experience is formed in the interaction with a helpful and friendly customer service executive or agent. Eventually, customers agree that excellent customer service comes from the contact support to reach the most convenient channel (Tara, 2020). Alam et al. (2020) cited that customer service is an important factor for online consumer satisfaction (Alam et al., 2020). Unpleasant customer service caused customer dissatisfaction. It is important to monitor customer service due to the rivalry in online businesses. Therefore, it is highly recommended that online retailers provide a designated customer service executive to reply to customer inquiries and resolve their issues immediately (Alam et al., 2020).

2.8 Relationship between Product Delivery Service and Customer Satisfaction

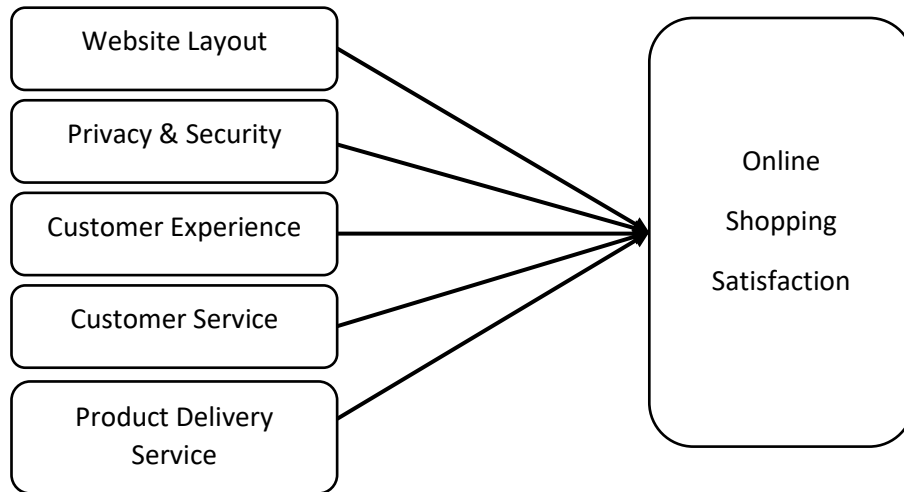
Fulfilment represents the activities that make sure customers get the product that they purchased. It also consists of delivery time, order accuracy, and condition of delivery (Rita, Oliveria & Farisa, 2019). Supportable logistics plays an important role in online shopping satisfaction. A prompt logistics can fulfil the goods through several channels such as road, railway, wetland, land, or air (Choi, Chung, & Young, 2019). Based on current practice, customers receive the product that they purchased within several days.

This is the main factor that impacts online shopping as everyone wants a good delivery time and gets the product within a short timeframe (Zandi et al., 2021).

The process of online purchase is quick and simple. Customers just need to click a button to place an order, hence they also expect the delivery is fast, accurate, and trustworthy (Vasic, Kilibarda & Kaurin, 2019). As a result, delivery plays an important role in online purchases. Due to the demands and increasing business activities, customers expect online retailers to provide same-day deliveries to fulfil their purchases (Choi, Chung, & Young, 2019). Alam et al. (2020) cited that customer dissatisfaction can be caused by delayed delivery (Alam et al., 2020). Reducing the delivery time can decrease the possibility of customer regret on the purchase and avoid goods return after purchase (Tzeng, Ertz, Jo & Sarigollu, 2020). Customers are unable to see and touch their product directly before the online retailers deliver the product. Online retailers have the responsibility to ensure the delivery schedule, order accuracy, and quality of delivery to provide outstanding service to customers (Rita, Oliveria & Farisa, 2019).

3. Research Methodology

This study intends to investigate the effects of website layout, privacy and security, customer experience, customer service, and product delivery service on online shopping satisfaction. The framework was adapted from Raj (2018) and supported by past literature. Raj (2018) found that customer experience and customer service have a significant impact on online shopping satisfaction. However, for website design and privacy as well as security, there were no significant impact on online shopping satisfaction (Raj, 2018). This framework was re-examined and extended to include another independent variable which is product delivery service. The conceptual framework is illustrated in Figure 3.1

Figure 3.1: Conceptual Framework

Based on the research framework presented in Figure 3.1, the following hypotheses were proposed to be tested:

H1: There is a significant relationship between website layout and online shopping satisfaction.

H2: There is a significant relationship between privacy and security as well as online shopping satisfaction.

H3: There is a significant relationship between customer experience and online shopping satisfaction.

H4: There is a significant relationship between customer service and online shopping satisfaction.

H5: There is a significant relationship between product delivery service and online shopping satisfaction.

In this study, the survey link contained the questionnaire was sent to 300 respondents randomly via several online social media platforms such as WhatsApp, Facebook Messenger, and private message in LinkedIn. As a result, 257 responses were received with 85.67% of the response rate. Structured questionnaire is designed in an online format using Google Form. The questionnaire comprises 2 segments, Section A and Section B. In Section A, there are 6 questions related to demographic details. For example, the responses on online purchase experience, gender, age, race, education levels, and monthly salary are on a nominal scale. In Section B, a 5-point Likert Scale is used to measure the independent variables and dependent variables.

The items in the online questionnaire were adopted from the past empirical studies to ensure the validity and reliability of the variables. For instances, six items used to measure the website layout were adapted from Wu et al. (2013), and four items used to measure privacy and security were adapted from Nepomuceno et al. (2012). As for the measurement of customer experience items, there were three items adapted from Khan et al. (2016). Three items from Thaichon et al. (2014) and three items from Rita et al. (2019) were adapted to measure customer service and product delivery. Lastly, another four items were adapted from Fang et al. (2011) to measure the dependent variable, which was online shopping satisfaction. There are 5 ratings on the scale, whereby the rate of '1' indicates strongly disagree, '2' refers to disagree, '3' shows neutral, '4' means agree and '5' denotes strongly agree. A total of 23 questions identifies the effects of website layout, privacy and security, customer experience, customer service, and product delivery service on online shopping satisfaction. Respondents are required to answer all questions before submission to avoid missing value.

Pilot test was conducted on 30 respondents in Malaysia to evaluate the reliability and validity of the adapted questions. The Cronbach's alpha value of the pilot test is higher than 0.70 which means the variables are acceptable. Besides, the factorability of the research data can be evaluated by Kaiser-Meyer-Olkin (KMO), and Bartlett's test of Sphericity (Shrestha, 2021). The KMO value is higher than 0.60 whereas the significant value of Bartlett's test is below 0.05. As a result, the sampling is sufficient and useful for the research.

4. Results

In this study, the respondents are the online buyers who have purchased any products via an online store, and they consists 164 (63.80%) females and 93 (36.20%) males. Majority of the respondents are from the age range of 30-39 years old (49.40%), followed by 18-29 years old (29.50%), 40-49 years old (14.80%), 50-59 years old (5.10%), and above 60 years old (1.20%). In terms of race, 63.40% of respondents are Chinese, followed by Malay (22.20%) and Indian (13.20%). Other races occupied 1.2% in the survey. Most of the respondents have undergraduate degree with 109 (42.40%) respondents. Other qualifications are postgraduate degree 64 (24.90%), diploma (16.00%), secondary qualification (10.10%), professional qualification (5.80%), and primary qualification (0.80%). Regarding the monthly income, 120 (46.70%) earn RM 5,000 and above for their monthly income. The second highest salary group is RM 3,000 – RM 3,999 (19.50%), and followed by RM 4,000 – RM 4,999 (17.50%), RM 2,000 – RM 2,999 (8.60%), RM 1,000 – RM 1,999 (4.70%) as well as below RM 1,000 (3.10%). The demographic profiles are summarized in Table 4.1.

The outcomes of the Multiple Regression Analysis is presented in Table 4.2. The R-square value is 0.474, which means that 47.40% of the deviations in online shopping satisfaction could be explained by website layout, privacy and security, customer experience, customer service, and product delivery service. As the F-value is 45.171 and the significant value is less than 0.001 which is below the 0.05 p-value, both figures indicated that the model is significant and manage to determine the hypotheses of this study. The VIF value is between 1.402 and 2.117 which is below 5. Based on the general rule of thumb on multicollinearity, VIF value between 1 and 5 shows moderate correlation between the predictors; however, it is not critical and no additional attention is required. Tolerance values are above 0.10, it demonstrates that no collinearity is detected. Therefore, multicollinearity is not an issue in this regression model.

Table 4.1: Demographic Profiles

Variable	Category	Frequency	Percent
Gender	Female	164	63.80
	Male	93	36.20
Age	18 - 29 years	76	29.50
	30 - 39 years	127	49.40
	40 - 49 years	38	14.80
	50 - 59 years	13	5.10
	Above 60 years	3	1.20
Race	Malay	57	22.20
	Chinese	163	63.40
	Indian	34	13.20
	Other	3	1.20
Highest Education Attained	Primary	2	0.80
	Secondary	26	10.10
	Diploma	41	16.00
	Undergraduate Degree	109	42.40
	Postgraduate Degree	64	24.90
	Professional Qualification	15	5.80
Monthly Salary	Below RM 1,000	8	3.10
	RM 1,000 - RM 1,999	12	4.70
	RM 2,000 - RM 2,999	22	8.60
	RM 3,000 - RM 3,999	50	19.50
	RM 4,000 - RM 4,999	45	17.50
	RM 5,000 and above	120	46.70

Table 4.2: Multiple Regression Analysis

	Standardized Coefficient (Beta)	t-Value	Significance	Collinearity Tolerance	Statistics VIF
Constant		4.091	<0.001		
Website Layout	0.343	5.145	<0.001	0.472	2.117
Privacy and Security	0.094	1.734	0.084	0.713	1.402
Customer Experience	0.238	3.877	<0.001	0.558	1.791
Customer Service	0.028	0.429	0.668	0.509	1.966
Product Delivery Service	0.137	2.161	0.032	0.525	1.906
$R^2 = 0.474$ $Adjusted R^2 = 0.463$ $F \text{ value} = 45.171$ $Significance = <0.001$					

Based on the p-value significant in Table 4.1, the hypothesis of website layout (<0.001), customer experience (<0.001), and product delivery service (0.032) is supported while the hypothesis of privacy and security (0.084) as well as customer service (0.668) is not supported. As the beta coefficient is positive, this means that when website layout, customer experience, and product delivery service are improved, online shopping satisfaction will improve as well. The highest standardized coefficients beta value is 0.343 (website layout). This shows that website layout has the strongest effect on online shopping satisfaction. After website layout, the second highest beta coefficient value is customer experience (0.238) followed by product delivery service (0.137). In addition, the t-value of website layout, customer experience, and products are 5.145, 3.877, and 2.161 respectively. When the t-value is higher, this shows that the confidence levels and the predictive power of the independent variable are higher as well. Hence, among the five proposed hypotheses, H1 and H3 were supported, and H2, H4 and H5 were not supported. The hypotheses of this study are summarized in Table 4.3.

Table 4.3: Summary of Hypothesis Testing

No.	Hypotheses	P-Value Significant (P<0.05)	Finding
1	There is a significant relationship between website layout and online shopping satisfaction.	<0.001	Supported
2	There is a significant relationship between privacy and security as well as online shopping satisfaction.	0.084	Not supported
3	There is a significant relationship between customer experience and online shopping satisfaction.	<0.001	Supported
4	There is a significant relationship between customer service and online shopping satisfaction.	0.668	Not supported
5	There is a significant relationship between product delivery service and online shopping satisfaction.	0.032	Supported

5. Discussions

The objective of this study is to examine the effects of website layout, privacy and security, customer experience, customer service, and product delivery service that influence online shopping satisfaction. Based on the finding, there is a significant relationship between website layout and online shopping satisfaction. Generally, service is highly intangible. The online shoppers **can only evaluate their satisfaction after they have experienced the entire service delivery process**: This means that the online shoppers cannot know how satisfied they are with an online shopping service until they have completed the entire process, from browsing for products to making a purchase to receiving the product. Hence, the layout of online shopping websites is essential for the shoppers to easily navigate and find the products they are looking for given that the rapid expansion of e-commerce technologies and the rising popularity of online shopping in Malaysia. A simple and intuitive website design can lead to a more positive experience for online shoppers, which can increase satisfaction. The result corresponds with the previous studies from Iskandar & Sholihat (2018), Bhatti et al. (2020), Deyalage & Kulathunga (2019), Rasli et al. (2018), Alam et al. (2020), Zatalini & Pamungkas (2017) and Tandon & Kiran (2019).

Next, in this study, online privacy and security concern have no significant impact on online shopping satisfaction. The finding is different as compared to the results reported by Raj (2018). Generally, the privacy concern is always the primary obstacle for the customers to participate in online transactions, as they often concerned about how their personal information will be used. They may worry that their information will be sold to third-party companies or that it will be used to commit identity theft. Hence, protecting consumers' privacy is an important factor for the success of e-commerce. Nevertheless, it is interesting to note that the study's findings suggest that privacy and security concerns may not be a major factor in the satisfaction of online shoppers. The age of the respondents in this study may have influenced their level of concern about privacy and security issues. Younger people are generally more comfortable with technology and may be less concerned about these issues. This comfort with technology may lead to a decreased concern about privacy and security issues. However, more research is needed to confirm this finding.

In addition, the result reported that there is a significant relationship between customer experience and online shopping satisfaction. Previous studies reported from Zatalini & Pamungkas (2017), Pei et al. (2020), Ma et al. (2022), Gulfraz et al. (2022) and Bhattacharya, Srivastava & Verma (2019) also confirmed that customer experience significantly drives online shopping satisfaction. The online shopping experience, from researching products to making a purchase, shapes how online shoppers perceive a company. In general, customers who have a positive buying experience are more likely to be satisfied with the product, repurchase it, and recommend it to others. When online shoppers become more comfortable with their online shopping experiences, they are more likely to leave a positive review or share their experience on social media. Conversely, if shoppers have a negative experience, they are more likely to share that as well.

In addition, there is no significant relationship between customer service and online shopping satisfaction. The outcome of this study is not aligned with the finding reported from Raj (2018) who has reported a significant relationship between these two variables. Online shopping is a convenient and increasingly popular way to shop. Consumers can browse and purchase products from a variety of retailers without having to leave their homes. This can lead to a limited interaction between the seller and buyer, which can make customer service less crucial in determining satisfaction. Next, the result in this study also demonstrated that product delivery service impacted online shopping satisfaction positively. There are a few examples of the excellent delivery service such as **on-time delivery, free shipping, secure delivery, and damage-free delivery**. The result is aligned with the previous studies from Vasic, Kilibarda & Kaurin (2019), Choi et al. (2019), and Alam et al. (2020). Last but not least, further investigation revealed that website layout was the most important factor in determining customer satisfaction, outperforming customer experience and product delivery service in this study.

6. Implications of the Findings

6.1 Managerial Implications

To succeed in online businesses, online retailers need to develop their business strategies according to the needs, and demands of online users. It is critical for online retailers to understand how website layout, privacy and security, customer experience, customer service, and product delivery service impact their businesses. Firstly, website layout is discovered to have a positive impact on online shopping satisfaction. A good user interface on a website play an important role in an online business. It can aid the interaction between users and the website as well as convert potential online visitors to online buyers.

Besides, a business cannot survive without customers. Thus, online retailers must manage customer experience such as engaging online users, creating credibility for the brand, and gaining the trust of online users as customer experience affect online shopping satisfaction significantly. Online retailers can take this opportunity to extend their customer base, and create a competitive advantage, in order to generate more revenues.

With a well-established and trustworthy reputation, online customers will be willing to select the online store without any hesitation.

In addition, product delivery service impacts online shopping satisfaction significantly. Online customers are now more demanding and expect items are delivered on time, and in good condition. It is important for online retailers to deliver these items according to the promised time and condition. A brand promise allows online customers to feel comfortable with the online products, and services as online customers are unable to see, hold, and feel the items before they receive these items. Consequently, website layout, customer experience, and product delivery service are key elements that influence online shopping satisfaction. It is important for online retailers to create good relationship with their customers as it will contribute towards business's success.

6.2 Theoretical Implications

This study provides researchers better knowledge about potential elements that impact online shopping satisfaction. Consequently, the results contributed to the knowledge in the study area of customer satisfaction in online shopping and narrow the gaps in the respective area.

The research extended the investigation of customer satisfaction towards online shopping identified by Raj (2018). It provides comprehensive knowledge to the existing model in explaining customer satisfaction. Other than re-examining the identified predictors such as website layout, privacy and security, customer experience, and customer service, another construct, product delivery service is also examined as a predictor and recognized as an additional variable to impact online shopping satisfaction.

Moreover, the findings indicate that only customer experience has the same result compared to the previous framework by Raj (2018) while website layout, privacy and security as well as customer service have opposite result instead. The difference between the two results might be due to data collection from different targeted respondents. As the result, the study demonstrates another viewpoint towards online shopping satisfaction as customer satisfaction changes all the time. This finding also provides greater understanding of this topic for future study.

7. Conclusion

Businesses are encouraged to transform their business operations to further catalyse online activities and initiate digital transformation. The purpose of this study is to identify the effects of website layout, privacy and security, customer experience, customer service, and product delivery service on online shopping satisfaction. The framework of this study was underpinned by Expectancy Disconfirmation Theory (EDT), whereas the data was collected via an online questionnaire among online users in Malaysia.

The results of the survey showed that website layout, customer experience, and product delivery service impact online shopping satisfaction in Malaysia significantly. Nevertheless, privacy and security, as well as customer service were not significant on online shopping satisfaction. The implications of this study are useful for online retailers to build their brands and help in the longevity of their businesses. It also represents opportunities for businesses to always stay connected with their customers on their shopping preferences. The results also contributed to the knowledge in the area of customer satisfaction in online shopping and narrowed the gaps in the respective area.

There are some limitations identified in the online questionnaires. Closed-ended questions are used in the online questionnaire. In this situation, the respondents are unable to express their feeling and idea directly via the online questionnaire as they are only allowed to select the selections that are given in the online questionnaire. Besides, cross-sectional approach is used in this study to collect data with no subsequent follow up. As a result, respondents are unable to change their selection after they submitted the online questionnaire due to a wrong selection or change of mind. As the perception and satisfaction level of online shopping will change over time, it may lead to inaccurate data. In addition, the geographical area and shopping preferences are not identified in the study. Therefore, data collected could be inaccurate, and biased. The online survey is not mobile responsive which means that the online survey form is not optimized to be functional, and aesthetically pleasing on devices of different sizes. Thus, respondents may not be aware that they need to scroll through the navigation to select some selections in the online questionnaire. As a result, the respondents could be tempted

to simply choose the selections on the questionnaire instead and this might lead to the data inaccuracy.

To overcome the limitations, several recommendations are also provided to contribute to future study. For example, the use open-ended questions and a longitudinal study approach in the study. The open-ended questions allow respondents to express their feeling and idea easily, whereas longitudinal study approach allows researchers to investigate the changes in online shopping satisfaction. Future study can include geographical area in the study to obtain a better understanding of online shopping satisfaction in Malaysia. At the same time, observing the purchase habit such as the types of goods or services purchased and repurchase intention is recommended for future study. This allows researchers to understand the online users' shopping preferences and the after sales service in online shopping industry for customer retention. Finally, using a mobile responsive survey in the future study can reach more respondents as most respondents are using mobile phone to complete the survey.

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