



**FACTORS THAT INFLUENCE E-SHOPPING  
SATISFACTION OF HOUSEHOLD APPLIANCES  
CONSUMERS IN KLANG VALLEY, MALAYSIA**

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**Abstract:**

This study investigates the factors motivating the E-shopping satisfaction of consumers who purchase household appliances in Klang Valley, Malaysia. Four variables (security, website design, customer service, and customer experience) were identified and tested on their relationship to consumers' E-Shopping satisfaction with household appliances. To gather the data related to this study, questionnaires were distributed through the online Google platform to the consumers in Klang Valley. A total of 415 respondents contributed to the findings and conclusion of this study. These respondents are frequent internet users who are familiar with online purchasing. Therefore, it increased the research's credibility. Findings from this study indicated that three critical elements, website design, customer service, and customer experience, are significant and display a positive relationship to consumers' e-shopping satisfaction with household appliances. In contrast, this study illustrated that security is insignificant to consumers' e-shopping satisfaction with household appliances.

**Keywords:** security, website design, customer service, customer experience, customer satisfaction, e-shopping

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## 1. Introduction

In an age with the rapid development of science and technology, everything will be replaced by electronics; internet use has also increased. People are starting to adapt and rely on the convenience of internet technology (Kajandren et al., 2023; Kanapathipillai & Kumaran, 2022). People have begun to change their purchasing patterns in the past decade, slowly changing from shopping in actual stores to e-shopping (Sarangapani et al., 2023). Currently, the internet or web browser is the primary tool for e-shopping (Kanapathipillai & Kumaran, 2022). It allows target customers and merchants to make transactions. The process of e-shopping is also very convenient and easy for customers to understand the purchasing processes (Kajandren et al., 2023). Customers can connect devices such as desktop computers, laptops, tablets, and even smartphones through the internet and enjoy the fun of e-shopping anytime, anywhere (Kanapathipillai & Kumaran, 2022). The internet is slowly integrating into people's lives and changing traditional modes of purchasing (Sarangapani et al., 2023).

Companies can use e-commerce to transact their business globally twenty-four hours a day without being limited by time and place. Companies can also use e-commerce to conduct business activities such as operational skills, provide various information to consumers, and connect with customers, to ensure they provide customers with perfect pre-sales and after-sales service (Sivaraman et al., 2023; Saravanan et al., 2023). With fierce competition in the market, many companies are actively maximizing their e-business services to provide better service to existing customers and attract new customers (Kajandren et al., 2023; Kanapathipillai & Kumaran, 2022). This is also a characteristic of e-service quality (Edwar et al., 2018). Additionally, security is a primary consideration when implementing e-services. The e-service must be secure and trustworthy during the transaction process, leaving aside deceptive factors (Kanapathipillai & Kumaran, 2022; Ismail et al., 2022). The simple e-shopping transaction process allows customers to make purchase decisions without too complicated procedures during the transaction process (Kanapathipillai & Kumaran, 2022). Customers can quickly get the product information they need by e-shopping without going out (Kajandren et al., 2023). In addition, customers can also find a variety of categories of products through the internet (Sarangapani et al., 2023; Kanapathipillai & Kumaran, 2022). Saving time is a significant factor in e-shopping and fulfills every consumer's expectation while shopping (Sarangapani et al., 2023; Edwar et al., 2018).

Due to the gradual development of e-shopping, consumers will compare products on the internet with the after-sales service provided by e-shopping merchants (Kanapathipillai & Kumaran, 2022; Ismail et al., 2022). In this way, the relationship between salespeople and consumers in the e-shopping environment plays a key role. Salespeople must know the target consumer's preferences, ideas, and buying habits. This allows product categories to be updated promptly, achieving customer e-shopping satisfaction and acceptance, retaining long-term customers, and attracting new customer segments. This also helps e-retailers learn more about the impact of e-shopping on

customers and why they choose e-shopping more than physical stores (Kanapathipillai & Kumaran, 2022).

According to a survey (Jain & Kulhar, 2019), only 68.9 percent of the population in the United States began to embrace the internet in 2006. By 2016, the population had grown to 88.5 percent. This is the same in the Indian population. In 2006, 2.4 percent of the population had access to the internet, but by 2016, the population had grown to 34.8 percent.

Wen et al. (2020) also mentioned that in the East Asian region, e-commerce has begun to become more critical. This can be corroborated by recent research (Kajandren et al., 2023; Sarangapani et al., 2023; Sivaraman et al., 2023; Kanapathipillai & Kumaran, 2022; Ismail et al., 2022). Moreover, e-shopping in countries such as China, Japan, and South Korea has increased rapidly. In contrast, countries in Southeast Asia, such as Malaysia, Thailand, Vietnam, and Indonesia, are all new to e-shopping (Kajandren et al., 2023; Sarangapani et al., 2023). Among Southeast Asian countries, Malaysia has the highest number of e-shoppers. It has 20 million Internet users. The total volume of e-shopping purchases from mobile phones has grown from 3.7 million to 9.3 million between 2015 and 2016 (Ismail et al., 2022). However, at the macro level, e-commerce grew significantly, contributing tremendously to sellers and buyers in Malaysia (Kanapathipillai & Kumaran, 2022).

Even though e-commerce has gradually surpassed traditional brick-and-mortar stores as the preferred method of shopping, most consumers usually do not purchase home appliances online. However, online platforms have now steadily drawn numerous potential clients interested in purchasing all they need, including products such as household appliances, thanks to the efforts of e-merchants (Sivaraman et al., 2023).

## **2. Research Problem Statement**

This study aims to discover more about the elements influencing online shoppers who buy home appliances in Malaysia's Klang Valley. E-shopping has been increasingly popular recently, yet something seems off about it. The term "satisfaction" in the context of e-commerce refers to an affective state that captures the consumer's emotional response to the complete transaction process with an online retailer (Faraoni et al., 2018; Pandey & Chawla, 2018). Therefore, it is essential to consider the elements that affect customers' e-shopping satisfaction, including security, website design, customer service, and experience.

Customers' confidence in security was revealed to be a critical factor in their decision to conduct the transaction e-shopping (Al Dmour et al., 2018). According to research, security worries and customer pleasure with e-shopping buying have a good correlation (Malhotra et al., 2004). The most significant barriers to e-shopping buying were customer attitudes, risks associated with e-shopping related to consumer demographics and experience, and product category and channel of purchase (Jain, 2019). Consumers' security concerns remain one of the primary hindrances to the growth

of e-commerce and customer e-shopping satisfaction (Gurung & Raja, 2016). According to (Aziz & Wahid, 2018), there is a possibility that personal information will be misused, causing consumers to be hesitant to buy things over the internet. Their study of thrifty customers (Bansal & Zahedi, 2014) found that when security worries were high, users chose to trade sensitive information with only trusted websites, implying increased risk perception. Lack of education and information protection causes financial losses for consumers, vendors, surveillance businesses, and any institutions connected with e-commerce (Soliman, 2016). His study also found that this was only for young adults. Consumers of different generations have different requirements for e-shopping security. In contrast, the older generation is more aware of the security of e-shopping than the younger generation of customers (Sheng et al., 2018). Therefore, there is evidence of a gap regarding the relationship between security and consumers' e-shopping satisfaction.

Website design has a vital role in assisting customers in locating information. Well-designed websites reduce the time spent on information searches and avoid affecting customer e-shopping satisfaction (Masa'deh, 2019). As such, website design positively relates to customer e-shopping satisfaction (Masa'deh, 2019). Consumers are constantly influenced to purchase via e-shopping by the quality of website design and its features (Sultan & Uddin, 2011). Lack of essential product information on the website, according to (Kim & Lennon, 2011), can lead to customers leaving without making a purchase. Many websites need a clear and straightforward return and refund policy and precise information about product warranties and warranties. Vague return and refund rules confound consumers.

Regarding politics, the merchant refuses the customer's right to return or refund the goods if the terms and conditions are not correctly stated. This is one of the most significant difficulties that many internet clients encounter (Rangasamy, 2020). Furthermore, the results (Rangasamy, 2020) reveal no connection between website design and client satisfaction with e-shopping purchasing. Hence, there is no doubt that there is a void regarding the relationship between website design and consumers' e-shopping satisfaction.

Sellers know the various promotional programs that make their purchases more attractive and popular with buyers. Moreover, the quality of e-commerce is inseparable from customer service (Rangasamy, 2020). Customer support refers to the frequency with which an e-shopping marketplace voluntarily provides immediate responses to consumer requests and inquiries (Sivanesan, 2017). Customers enquiring about solutions that are delayed may have a negative influence on consumers, reducing their purchase intent (Teing, 2014). Most valued interactions with customers involve face-to-face encounters which typically take place at the suppliers' business locations. Factors such as the length of waiting time, the politeness of the sales staff, the opening hours, and the responsiveness of the service staff collectively determine customer service quality (MacKechnie, 2020). Keeping a close track of evolving consumer preferences and innovating swiftly to redesign journeys that matter to a different condition will be crucial (Diebner et al., 2020). As a result, these gaps or service failures may lead to customer

reactions ranging from simple feedback to contacting the whole e-commerce industry (Rojhe, 2020). Therefore, to understand the gaps in e-shopping, the present study was undertaken to identify the problems faced by customers in e-shopping regarding the relationship between customer service and consumers' e-shopping satisfaction.

Customers need to gain the necessary experience and knowledge to conduct e-shopping based on the cognitive and affective e-shopping experiences influencing e-shopping consumers' loyalty (Asong & Khan, 2021). One element that impacts this compatibility is the need for more assistance and physical contact while shopping on the internet. Another reason is the desire to feel, touch, smell, or test the material while shopping on the Internet (Asong & Khan, 2021). E-shopping frequently necessitates the use of a delivery service because of the physical distance between the buyer and the vendor according to (Jain, 2019). The most frequent causes of this include delivery delays and higher delivery prices compared to traditional buying methods, which discourage customers from making e-shopping purchases. A web store that uses value-added search engine techniques and provides clients with a demanding experience may boost customers' buying satisfaction. Furthermore, if clients return to the web store more frequently, their purchasing pleasure will be decided by their interaction with the goods (Rita et al., 2019). As a result, one of the significant influencing variables is experience. The experience of e-shopping consumers may determine their future behavior, including repurchasing intention, store revisits intention, and word of mouth (Rita et al., 2019). For an ideal experience that enriches a more intense connection between the consumer and the brand, the stimulation of multiple senses leads to positive outcomes, such as brand association and a positive memory for the brand (Rita et al., 2019). In other words, the customer sets expectations or goals about a product or service feature before engaging with the business. Dissatisfaction occurs if, after consumption, there is a mismatch between expectations or aims and reality (Barari & Suracharthkumtonkun, 2020). Experience is positively related to customer e-shopping satisfaction, according to (Wijayajaya et al., 2021). Therefore, there is evidence of a gap regarding the relationship between experience and customer e-shopping satisfaction.

Satisfied customers are more loyal to a brand or a store than customers who rely on other reasons, such as time restrictions and information deficits; and the internet extends this concept further because e-shopping customers spend a long time searching for and collecting quality products or store information; and this influence their purchase decision (Ahmad et al., 2019). The use of e-commerce in the industry is seen to improve performance. In e-shopping, if customers' e-shopping satisfaction is met, customers will eventually continue to use e-shopping as a means of purchase faithfully. Therefore, customer e-shopping satisfaction is necessary for successful e-shopping (Rasli et al., 2018). The E-shopping business should be revised with industry customers' e-shopping satisfaction as a precursor. Once these factors are proficiently understood, customer e-shopping satisfaction will increase, and thus business performance will improve (Rasli et al., 2018). Consumer e-shopping satisfaction is the result of comparing expectations and

experiences. In other words, consumers will feel happy when the delivery meets or exceeds their expectations (Vasic et al., 2019).

The components of the research problem reveal the significance of this study. According to the problem statement, e-commerce is expected in the Klang Valley. However, there are several issues, including late deliveries, unsuccessful e-commerce transactions, and other factors. Another issue is the constant updates from the marketing components of the goods and services (Izogo & Jayawardhena, 2018). Both the seller and the customer have a role to play in the success of the e-shopping perspective of shopping, including an approach of intense product marketing and promotion, and the buyers also must take up and review their products to get a clear idea about the products and services provided by the seller (Izogo & Jayawardhena, 2018). This differs from the traditional characteristics of the brick-and-mortar strategy in which buyers can visit the stores, inspect the products, and decide to purchase after hearing salesperson presentations (Izogo & Jayawardhena, 2018).

The issue stems from the notion that every transaction in online buying relies on how the vendors promote their goods online. Additionally, if a consumer has questions, a salesperson in the store is there to answer them. However, when buying online, the user must speak with bots with limited capabilities to respond to questions about the products. Additionally, there is a delay in receiving the different inquiries from the business selling the product directly (Barari et al., 2020). Therefore, the research is crucial because it will help to learn how people perceive online buying (Barari et al., 2020). identify the diversity of customer shopping experiences and the points or factors that make this process advantageous for sellers and buyers. This practice is prevalent in dynamically changing business scenarios worldwide and in the urban settlements and technologically advanced e-shopping in the Klang Valley. Therefore, through this research, we have the potential to bring about social change by making the e-shopping process much cheaper and more accessible for shoppers. It also lends itself to various innovative ideas from the customer's perspective that improve their shopping experience and enrich their practice (Barari et al., 2020).

This is beneficial from both a seller's and a buyer's point of view. Previous studies on the same or related topics lack a process to eliminate identified problems. Previous researchers' recommendations were general and needed to be better suited to address the dynamic changes in the e-shopping purchasing process. Therefore, this research will not only help improve business operations but also for large-scale changes in societal perspectives. This enriches the shopping process of e-shopping and leads to wide acceptance by the masses through reactions and recommendations even by customers (Kanapathipillai & Kumaran, 2022).

There are many similar studies on customer e-shopping satisfaction, but not all factors have been identified. Therefore, we started researching factors such as security, website design, customer service, and experience that lead to customers' e-shopping satisfaction in e-shopping for home appliances.

## 2.1 Research Questions

**RQ1:** Is there a statistically significant relationship between security and e-shopping satisfaction with household appliances?

**RQ2:** Is there a statistically significant relationship between website design and e-shopping satisfaction with household appliances?

**RQ3:** Is there a statistically significant relationship between customer service and e-shopping satisfaction with household appliances?

**RQ4:** Is there a statistically significant relationship between customers' experience and e-shopping satisfaction with household appliances?

## 2.2 Research Questions

**RO1:** To examine if there is a statistically significant relationship between security and e-shopping satisfaction with household appliances.

**RO2:** To study if there is a statistically significant relationship between website design and e-shopping satisfaction with household appliances.

**RO3:** To scrutinize if there is a statistically significant relationship between customer service and e-shopping satisfaction with household appliances.

**RO4:** To assess if there is a statistically significant relationship between customers' experience and e-shopping satisfaction with household appliances.

## 3. Theoretical Underpinning Literature Review and Hypothesis Development

This section focuses on the theoretical underpinning, literature, and hypothesis developed regarding security, website design, customer service, customers' experience, and e-shopping satisfaction.

### 3.1 Expectancy-Disconfirmation Theory (EDT)

E-shopping nowadays has gradually developed in the market. In such a competitive e-shopping market, people will consider more impact of customers' e-shopping satisfaction from various aspects of e-shopping. These include security, website design, customer service, and customer experience, which will have a more significant share of the e-shopping market. Therefore, more consideration is needed for customer e-shopping satisfaction. To measure customers' e-shopping satisfaction in e-shopping, the "Expectancy Disconfirmation Theory" (EDT) was introduced as an essential theory. EDT is a cognitive model of satisfaction decisions proposed by Oliver (1980), in which consumers' post-purchase satisfaction is determined by a combination of pre-purchase expectations and disconfirmations and is widely used in marketing and consumer behavior research (Lin & Wei, 2013).

"Expectancy Disconfirmation Theory" (EDT) measures customers' e-shopping satisfaction in terms of the perceived quality of a product or service. EDT is divided into two well-known variants, namely (expectation or desire) and (experience or perceived performance). Expectation or desire is a pre-purchase based on a customer's expectations

of the quality of a product or service purchased in e-shopping in an initial period. However, experience or perceived performance is the customer's perception of the quality of an e-shopping product or service after the customer has had an authentic experience during the post-sales period (Elkhani & Bakri, 2012). The difference between initial expectation or desire and perceived experience or performance is known as disinformation of expectation or desire.

According to the "Expectancy Disconfirmation Theory" (EDT), consumer satisfaction is directly influenced by the inconsistency between consumers' pre- and post-purchase expectations. EDT is a well-known theory for measuring customer e-shopping satisfaction. Currently, EDT has been applied by many researchers to understand better customer expectations and requirements to attract their satisfaction (Elkhani & Bakri, 2012). In this study, EDT can measure customers' e-shopping satisfaction according to its innate ability to evaluate customers' e-shopping satisfaction with e-shopping from security, website design, customer service, and customers' experience in e-shopping.

Additionally, the "Expectancy Disconfirmation Theory" (EDT) is commonly used in marketing literature to understand consumer satisfaction (Malik & Rao, 2019). EDT assumes that expectations can be combined with perceived performance to influence post-purchase satisfaction. This effect is mediated through disinformation between the expectations and performance of products or services. Positive disinformation will lead to post-purchase satisfaction if the product or service meets expectations; conversely, consumers may be dissatisfied if the product or service does not meet expectations (Chang et al., 2018).

In recent years, the "Expectancy Disconfirmation Theory" (EDT) has been widely used to understand the continued use of information systems (IS). Furthermore, customer e-shopping satisfaction is influenced by the difference between website quality expectations and uncertainty. In this context, EDT successfully explained satisfaction in various contexts, including e-shopping (Chang et al., 2018). In the e-shopping environment, customers make purchases through the website as an interface, and their satisfaction is still a personal behavior. Therefore, EDT can be applied appropriately to investigate the satisfaction of customer purchases.

Since (Ryzin, 2004) was the first study to test the applicability of EDT to public services, EDT has become the main framework for explaining citizen satisfaction. EDT was used in this study because it can accurately measure customer e-shopping satisfaction (Atila & Fisun, 2001). Expectation uncertainty theory holds that customers use their prior expectations of the characteristics or benefits offered by a product or service to form judgments about a product or service (Oliver, 1980). After experiencing the actual performance of the product or service, these expectations can be used as a comparative reference for forming satisfaction judgments (Oliver, 1997). Similarly, the study measures customer e-shopping satisfaction based on four factors: security, website design, customer service, and customers' experience when purchasing e-shopping. This theory is closely related to this study.



### **3.2 The Relationship between Security and E-Shopping Satisfaction**

E-shopping Payment Gateways, such as PayPal and iPay88, are being used to protect consumer safety during e-shopping. They operate as a middle person for e-shopping websites, accepting payment from customers and transferring it to the merchant while keeping track of the customer's payment information, such as credit card numbers. This would prohibit merchants from obtaining consumer information, which could lead to the information being stolen by others because merchants lack adequate security systems to secure consumer information. According to PayPal, when a transaction is paid through a respected payment method, more than 70% of respondents feel protected (Wen et al., 2020).

Security is described because of the feature of an internet site that protects customer non-public facts from unauthorized disclosure of records at some point in digital transactions. Security is a crucial thing that customers take significantly while shopping e-shopping. Safety and privacy problems are crucial in constructing considerations in e-shopping transactions (Barusman, 2019). Since e-shopping typically includes a fee via a debit or credit score card, customers can also be aware of the seller's information as a safeguard (Barusman, 2019). Consumers' willingness to go to and keep e-shopping is at once associated with their self-assurance within the provision of private records and credit score card payments. Consumers tend to shop for merchandise by relying on companies and famous branded merchandise. In e-commerce, consideration is one of the maximum crucial elements influencing the achievement or failure of e-tailers. Security is the foremost challenge preventing customers from e-shopping, as customers are afraid to be fooled by companies who misuse non-public records, specifically credit score card information (Vasic et al., 2019).

Customer's personal information and financial data have been maintained with the utmost care by e-shopping purchasing companies, which have helped build trust among customers and companies. As per thought of (Edwar et al., 2018), electronic service-providing companies have taken the security of customers' financial and personal data into first consideration for starting a business on e-commerce platforms. According to a study by (Raman & Viswanathan, 2013) the safety element (e-security) has a favorable and significant impact on consumers' purchasing decisions. It contains a section for all security-related tasks, including website security for e-shopping stores. Customers feel confident and secure making purchases from e-shopping stores because their personal information is secure and will not be misused by careless parties (Vasic et al., 2019).

Consumers who shop e-shopping often face two different challenges. Security refers to consumer concerns about the misuse of personal information, whereas privacy refers to consumer concerns that personal information may be compromised and shared with third parties (Martin & Murphy, 2017; Martin et al., 2017). You are likelier to shop e-shopping on sites supported by trusted payment processors. Several studies have already demonstrated the relationship between security and attitudes toward technology (Wen et al., 2020).

Studies on security have both positive and negative results. Some studies found that personalizing e-shopping transactions improves customer relationships, whereas some researchers found that personal information may stimulate security concerns and have adverse effects on e-shopping satisfaction (Wen et al., 2020). Customers frequently experience insecurity because e-shopping platforms hold a staggering amount of personal information about them. Customers typically leave when asked for personal information because they believe doing so in e-shopping could expose the information to other users. (Wen et al., 2020). According to research by (Yee et al., 2022), an incident regarding the hacking of thousands of Lazada e-wallet buyers occurred in mid-October 2020. Therefore, this is one of the reasons organizational capabilities do not have a customer e-shopping satisfaction relationship since they are not happy with the protection of payment.

According to (Muhammed et al., 2019), the security and e-shopping satisfaction coefficient is negative, which means that these two factors are expected to reduce the adoption of e-shopping. Additionally, research (Zuroni & Goh, 2012) found no correlation between security and e-shopping satisfaction. (Ha & Stoel, 2012) similarly illustrates that security significantly affects e-shopping intentions but not shopping satisfaction. (Hizza, 2014) found that only e-service quality and information quality positively impacted consumer e-shopping satisfaction, while security did not. However, they also mentioned that younger people only contested this, while older e-shopping consumers did appreciate the quality of e-shopping security (Ludin & Cheng, 2014). Among e-shopping consumers in Malaysia, especially young people, consumers' e-shopping satisfaction is unaffected by security. The study also found that the requirements for e-shopping safety are different for the younger and older generations. The older generation is more aware of the safety of e-shopping, while the younger generation is not (Sheng et al., 2018). As a result, there is a gap in the literature between security and e-shopping satisfaction.

**H1:** There is a statistically significant relationship between security and e-shopping satisfaction with household appliances.

### **3.3 The Relationship between Website Design and E-Shopping Satisfaction**

A reliable website design should prioritize the use of use, deliver the aesthetics, represent the power and related images of the company, and attract visitors. Information quality, site aesthetic, procurement process, the website, convenience of the site, price options, site personalization, and system availability were used to measure the website's size. The website's appearance correlates well with the typical quality of e-service (Dhingra et al., 2020). To build an e-shopping store, administrators must carefully analyze the e-service quality criteria. Enterprises must provide unique designs of websites with fast boot capabilities that are easy to read, provide specific discounts and stocks, and ensure higher service quality (Rita et al., 2019).

Website design is another factor that can attract customers to the e-shop. An attractive design of e-commerce websites can lead customers to visit that site and gain experience in services. Website designing for e-shopping purchasing sites has followed a way to ensure sustainability and customer retention for a longer time (Ijaz et al., 2018b). Studying Consumer behavior is a crucial activity needed for creating an effective e-shopping purchasing website design and doing a successful business. In this context, Malaysian e-shopping selling companies have designed their websites based on consumer behavior, which has resulted in customers switching buying modes from offline to e-shopping for household appliances (Rita et al., 2019).

Excellent website design with rich information, visually appealing content, simple payments, easy-to-read text, discount, promotional offers, and fast loading attracts e-shoppers. This can be corroborated by (Rita et al., 2019), who mention that the website design for an e-shopping store should be visually appealing, easy to read and contain enough product information. Recent studies have shown that customers on the Internet are particularly concerned about the quality of information on websites, which helps them to make the right purchase decisions. In e-shopping, when customers conduct pre-purchase information searches for products and services, customers use the quality of information as an essential attribute to assess the effectiveness of website usage (Tzeng et al., 2020).

Website design can save shoppers time, and an easy-to-use and effective way to provide information about the product category will satisfy customers (Brusch et al., 2019; Raman, 2019). Therefore, a well-designed website can help consumers quickly navigate and find relevant quality information, reduce uncertainty, and improve their post-purchase satisfaction with e-shopping (Mofokeng, 2021). Convenience should be one of the essential characteristics of a website builder when designing a reliable website (Ari, 2015). In addition, consumers may prefer to check out and buy from well-designed and distinctive e-shops (Liang & Lai, 2002; Trong et al., 2014). However, it must be considered that the design of a website that uses more animated graphics may experience delays from time to time. This can delay the user for a long time, which can considerably impact consumer's e-shopping satisfaction (Weinberg, 2000).

The website's appearance is crucial since it sets the tone for the e-shopping business, encourages visitors to remain longer, and persuades them to purchase (Rita et al., 2019). (Yang, 2019) added that when a user interacts with a portal or website, the user will focus on the information quality on the portal or website. This explains why the information provided on websites significantly impacts customers' pleasure. (Cyr, 2018) argued that even if detailed information is put on the site, the customers may leave it if they need help searching for the information he wants. (Ijaz et al., 2018a) had argued that proper navigation helps the customer to save time and overcome financial and performance risks and, therefore, leads to trust.

As an increasing number of customers buy from e-shopping websites, e-shopping must have an interactive effect between website design and e-shopping customers, and website design is a significant positive explanatory variable for e-shopping customers' e-

shopping satisfaction (Hsin, 2019). The visual appeal of a website creates expectations in the minds of visitors. Website design gives visitors the impression of the services that e-commerce will provide and gives them expectations. In summary, website design quality competencies positively impact customer e-shopping satisfaction (Chanla et al., 2015). Therefore, e-shopping and e-commerce companies should strengthen website design to increase attractiveness. (Bai et al., 2008) found that website quality has a direct positive impact and relationship to customer e-shopping satisfaction, while customer e-shopping satisfaction has a direct and positive impact on purchase intention. Similarly, (Magerhans, 2006) found that customers liked to visit a new website with a wide selection and variety of products, decent price incentives, customer feedback, easy-to-find products, easy order processing, and a simple return policy.

The quality of the product can be best communicated through the design and content of the website. The website should be designed to meet the customer's needs and make it easy for e-shopping customers to read the information they are looking for on the website. An informative website can attract customers to visit the site repeatedly (Carroll & Broadhead, 2001). (Hoskins, 2002) argues that a well-designed homepage is essential for customers' e-shopping satisfaction in e-shopping marketing. It highlights key content and allows customers to search for the product information they need instantly. Similarly, (Ranganathan & Ganapathy, 2002) states that website design should include high-value information about the product and highlight its advantages and details, which will help visitors decide to purchase the product.

When shopping e-shopping, the website design, graphics, and colour scheme make the product more attractive than the actual product. Therefore, e-commerce companies must balance the visual appearance of the product on the website with the actual appearance of the product, which will increase consumer confidence and satisfaction (Rao et al., 2021). According to (Ranganathan & Grandon, 2002), website design represents how content is arranged. However, (Wolfenbarger & Gilly, 2003) argue that when customers interact with e-shopping, they prefer to interact through a technical interface rather than through any employee. Therefore, website design as an interface will influence customer e-shopping satisfaction.

Additionally, (Benslimane & Yang, 2019) argued that adding advanced functionalities to a full-fledged website design hurts website efficiency. Therefore, extra functionality can reduce the performance of a website design. To meet the requirements of consumers, it is critical to understand and balance the functionality of website design. Contrarily, (Sharma & Bahl, 2018) mention that there is no impact between website design and e-shopping satisfaction. In addition to this (Fernandus & Legowo, 2020), survey results in Jakarta, Indonesia, also show that website design, security, and information quality do not significantly impact customer e-shopping satisfaction. As a result, e-shopping customers in Jakarta do not believe that website design affects their e-shopping satisfaction. Hence, there is a gap in the literature regarding website design and e-shopping satisfaction.

**H2:** There is a statistically significant relationship between website design and e-shopping satisfaction with household appliances.

### **3.4 The Relationship between Customer Service and E-Shopping Satisfaction**

Customer service is one of the most critical aspects for e-shoppers worldwide. For example, in China, e-tailers develop e-shopping-related customer service to satisfy and attract worldwide customers (Jane et al., 2017). Customer service has been a significant factor in e-shopping platforms, attracting many people to shop for necessities from e-shopping stores. Components involved in customer service of e-shopping portals can be faster product and service delivery, selling decent quality products at affordable prices or discounts, and sharing enough product information. As opined by (Lu et al., 2020), achieving customer e-shopping satisfaction has been a significant target of e-shopping service-providing companies while planning customer service through a website. Thus, it has been implied that Malaysian customers have been satisfied with the customer service systems of e-shopping companies that have shown positive effects on e-shopping, causing e-commerce of household appliances (Lu et al., 2020). There are countless ways to provide excellent service in e-shopping without having to meet face-to-face. Customer service includes seller services for product selection and support, troubleshooting, answering frequently asked questions via email and other channels, disseminating desired information, completing credit and payment transactions, and related coordination (Cao & Ajan, 2017).

In the e-shopping context, failure to provide a high-quality experience for customer service can be particularly detrimental to a firm (Kawaf & Tagg, 2017) as customers have access to extensive information to compare their options and control the quality of their experience (Jung & Seock, 2017). A company's failure to satisfy customer expectations encourages the customer to switch to other e-shopping retailers, a task that is quickly undertaken (Holloway & Beatty, 2003; Singh & Crisafulli, 2016). Further, the dissatisfied customer has access to numerous e-shopping channels to distribute news of a negative experience in a noticeably brief time (Singh & Crisafulli, 2016; Sousa & Voss, 2009).

Previous research has examined customer service quality and e-shopping satisfaction depending on the customer service provided by e-shopping retailers (Arslan et al., 2014). According to previous research, quality of service directly contributes to maintaining e-shopping customer loyalty. It helps e-shopping customers provide an effective and efficient way to shop when shopping and shipping products and services (Guo et al., 2012). E-commerce needs to maintain quality to ensure that it can provide a quality service to satisfy customers (Christodoulides & Michaelidou, 2010). Therefore, it also shows that the service sector is a crucial indicator of customer e-shopping satisfaction (Alabboodi, 2019). Customer e-shopping satisfaction is achieved when the customer needs can be met through e-shopping retailer customer service performance (Alabboodi, 2019). In addition, customer service will increase satisfaction by meeting customers'

requirements, providing timely order confirmation, and answering their queries and questions quickly (Saadah & Ying, 2020).

When e-commerce focuses on providing exceptional customer service and exceeding customer expectations, it can achieve customer e-shopping satisfaction and build customer loyalty. Excellent customer service can help retain customers (Ali & Sankaran, 2010). According to (Carroll & Broadhead, 2001), e-shopping offers exclusive discounts, promotional offers, exclusive services, and premium customer services to their customers. In this way, e-commerce makes customers feel they have received additional benefits, so they are regarded as their first e-shopping e-commerce. (Karim, 2013) research has mentioned that the lack of e-shopping customer service inhibits e-shopping and increases anxiety. The study illustrates respondents' belief that poor return policies for e-shopping products and failure to receive good personal customer service have affected their satisfaction with e-shopping purchases.

Customer service is seen as essential in e-shopping, such as simple return policies and faster delivery services, influencing consumers' purchasing decisions (Raman, 2019). (Okeke, 2019) believes that quality customer service is critical in maintaining healthy customer relationships and increasing customer e-shopping satisfaction. Customer service is one service that e-shopping e-commerce companies provide to their customers; however, one bad customer service experience and the company name of the e-commerce company will spread in a derogatory way on social media. This is the motivation why today's innovative companies are taking their customer service to a new level through the intelligent use of information and communication technologies to achieve a certain level of e-shopping satisfaction for the company's long-term relationship with its customers (Bisht, 2015).

On the other hand, some studies show no correlation between customer service and e-shopping satisfaction. The findings of (Okeke, 2019) indicate that customer service does not impact customers' e-shopping satisfaction. Additionally, the (Okeke, 2019) study also declares that attempts to meet customer expectations with customer service are unnecessary. Instead, to improve customer e-shopping satisfaction, e-commerce companies only need to focus on performance improvement (Okeke, 2019). However, an analogous situation was found in the study by (Barusman, 2019). Customer service has a negative and indirect impact on customer e-shopping satisfaction. Meanwhile, customer service factors have a negative and insignificant effect on customers' e-shopping satisfaction on e-shopping websites (Barusman, 2019). In addition, (Rita et al., 2019) findings show that service quality impacts customer e-shopping satisfaction, but customer service is insignificant. Thus, there are gaps in the literature that needs to be bridged.

**H3:** There is a statistically significant relationship between customer service and e-shopping satisfaction with household appliances.

### **3.5 The Relationship Between Customer Experience and E-Shopping Satisfaction**

Experience factors have involved brand image and packaging of products that can affect the intention of customers to buy household appliances from e-shopping platforms. A good brand image and proper product packaging in an e-commerce platform can assure customers that they purchase high-quality services, leading to increased purchase ratings from an e-shopping portal (Wijayajaya et al., 2021). Through flow experience, people concentrate entirely on their activity while also experiencing pleasure and loss of awareness (Jackson & Marsh, 1996). Increasing the user experience is essential because these emotions are highly significant for satisfaction in the e-shopping environment (Chang & Zhu, 2012). Additionally, (Kabadayi & Gupta, 2005) showed that the flow experience is positively evaluated when revisiting websites. Therefore, it is likely that flow experiences help to understand the consumers' e-shopping behavior decisions (Lee & Tsai, 2010).

Satisfaction is a goal that can underpin a flow experience (Chang & Wang, 2008). Flow is often created by exploration and a positive mental experience (Webster et al., 1993). Flow experiences are likely to attract consumers, reduce price sensitivity and positively influence future attitudes and behaviors (Novak et al., 2000). The customer experience is impacted by the information provided (Chau et al., 2000). Information quality significantly affects user experience and, subsequently, satisfaction and loyalty (Zhou & Lu, 2011). Additionally, the e-shopping experience is separate from the traditional "bricks-and-mortar" experience, which amplifies the need for system quality (McKinney et al., 2002). Furthermore, (Zhou & Lu, 2011) acknowledged that system quality positively impacts flow and loyalty (Zhou & Lu, 2011). Additionally, without system quality, it is not easy to monitor the quality of the service, which, in turn, reduces customers' e-shopping flow experience. Moreover, (Hsu et al., 2012) argue that positive perceptions of the quality of e-services lead to flow experiences and website immersion (Hsu et al., 2012a). For customers to experience flow in the e-shopping environment, a positive perception of information, system, design, engagement, and service quality is necessary.

Contrarily, according to (Marcos Komodromos, 2018), e-shopping is not a personal experience because customers cannot try the items they are purchasing and are still hesitant to give their credit card information e-shopping. Moreover, e-shopping operators can affect the outcome of the virtual interaction and purchasing process by concentrating their sales efforts on the factors shaping the consumers' virtual experience and comprehending their role in e-shopping decision-making (Marcos Komodromos, 2018). Moreover, (Barari & Suracharthkumtonkun, 2020) shows that both e-shopping and offline affective and cognitive experiences encourage customers to engage in word of mouth. Notably, when a customer fails to have the expected cognitive and affective experiences, a negative customer experience may result, which could encourage the customer to share this negative experience with others via various social media. Furthermore, in an e-shopping context, customers usually share their experiences with known and unknown people (Le et al., 2018), as when sharing a negative service

experience on social media (Jarvi et al., 2018). Only customers with a string of distinct positive interactions with the e-shopping merchant will get to the loyalty stage (Tan, 2021). According to (Menidjel et al., 2020), satisfaction positively influences consumer behavior. However, consumers will buy the same brand because they think looking for alternatives is not worth the time and effort it would take, indicating a weak commitment (Tan, 2021).

As a result of the development of e-commerce platforms (Kim et al., 2009), the e-shopping customer experience has become a key focus for service marketing researchers (Nambisan & Watt, 2011). The customer experience is based on cognitive, affective, psychological, social, and sensory responses to the website (Verhoef et al., 2009). Moreover, (Wolfinbarger & Gilly, 2003) mentioned that on websites, customer experiences range from customers searching for information to acquiring and publishing purchase experiences on various e-shopping platforms. The customer's after-sales experience is one of the most critical components of the e-shopping customer experience. The after-sales experience begins with the delivery of the product and ends with the final use/consumption of the delivered product. It is also one of the main factors in improving customers' e-shopping satisfaction and the resulting repurchase intention (Endo et al., 2012). Customers' e-shopping purchasing behavior is also influenced by the e-shopping customer experience (Bridges & Florsheim, 2008).

In recent years, different scholars have defined customer experience based on different perspectives. Based on (Hult et al., 2019), customer experience is an intrinsic subjective response to gain direct or indirect contact between a customer and a company, including the quality of service the company provides. (Sebald & Jacob, 2020) argues that the customer experience stems from various levels of consumers' feelings, including mindset, psychology, rationality, and emotion. To maintain long-term sustainable customers' e-shopping satisfaction, retailers must continuously improve the customer experience in different shopping situations (Pei et al., 2020). A study by (Pei et al., 2020) also found that customer experience in terms of staff service, shopping environment, and shopping process positively impacted customers' e-shopping satisfaction. Therefore, retailers must pay close attention to changes and differences in customer experience to improve customers' e-shopping satisfaction and thus gain a sustainable long-term competitive advantage (Bhattacharya & Srivastava, 2018).

Furthermore, customers who have had experiences using e-shopping platforms like to share the e-shopping links about products or services they like or dislike with their peers, friends, and relatives on social media platforms (Greenhow, 2011). At the same time, they also read reviews and ratings of other users on the product to determine whether they have decided to buy it (Greenhow, 2011). At this stage, customers cognitively and emotionally process sensory information gathered from the e-shopping environment and subsequently formed impressions to be stored in the memory for the next purchase (Martin et al., 2015).

Some studies show no significant correlation between customers' experience and e-shopping satisfaction. For example (Shih, 2005) illustrates that the e-shopping



customers' experience may not be synchronized with customers' e-shopping satisfaction. Similarly, in a study in Malaysia (Alam & Yasin, 2010) discovered that customer experience is insignificant to customers' e-shopping satisfaction. However, the paradoxical result here may be because only a few people in Malaysia regularly e-shopped at that time. When respondents do not have experience shopping e-shopping regularly, their perception tends to be different from those who have experienced it before. Therefore, there is a gap in the literature regarding customer experience and e-shopping satisfaction, which needs to be narrowed.

**H4:** There is a statistically significant relationship between a customer experience and e-shopping satisfaction with household appliances.

### 3.6 Proposed Conceptual Framework

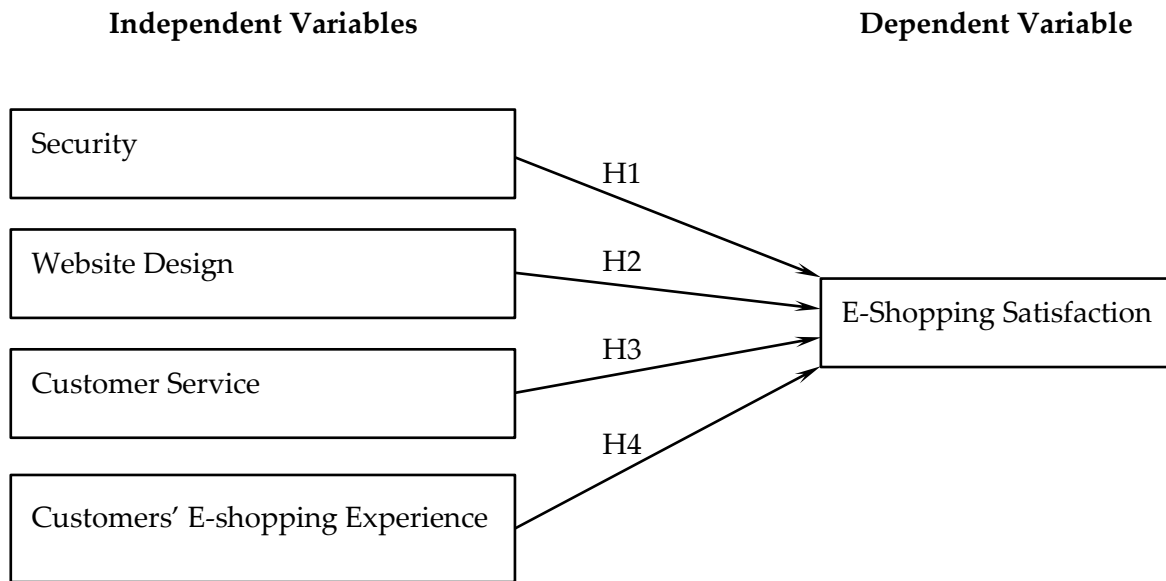
This study is on the aspect of e-shopping satisfaction of customers in the Klang Valley, Malaysia; thus, the variables tested in this research are presented in Figure 1 Proposed Conceptual Framework. The dependent variable is customers' e-shopping satisfaction. The following are the independent variables.

The first independent variable, security, is described because of the feature of an internet site that protects customer non-public facts from unauthorized disclosure of records at some point in digital transactions. Security is a crucial thing that customers look forward to while shopping online. Safety and privacy are crucial when considering e-shopping transactions (Barusman, 2019).

The second independent variable, website design, is another factor that can attract customers to do e-shopping. An attractive design of an e-commerce website can lead customers to visit that site and gain experience in services. Excellent website design with rich information, visually appealing content, simple payments, easy-to-read text, discount, promotional offers, and fast loading is crucial for customers. The website design for an e-shopping store should be visually appealing, easy to read, and contain enough information about the products (Rita et al., 2019).

The third independent variable, customer service, has been a significant factor in online shopping platforms that have attracted many people to shop for necessity products from online stores. Components involved in customer services of online shopping portals can be immediate product and service delivery, selling good quality products at affordable prices or discounts, and sharing enough product information (Lu et al., 2020).

The fourth independent variable, experience factors, involves brand image and product packaging that can affect customers' intention to buy household appliances from an online store. A good image of brands and proper packaging of products in an e-commerce platform can give customers a feeling of assurance of buying good quality services that can lead to increased purchase ratings from an online shopping portal (Wijayajaya et al., 2021).



**Figure 1:** Proposed Conceptual Framework

## 4. Methodology

The following section provides the reliability analysis, population, sampling and measurements used in this research.

### 4.1 Reliability Analysis

**Table 1:** Reliability Analysis (N = 415)

Factors	Cronbach's Alpha	No of Items
Security	0.729	5
Website Design	0.857	5
Customer Service	0.916	5
Customer Experience	0.798	5
E-shopping Satisfaction	0.849	5

Table 1, Reliability Analysis, shows the value of Cronbach's Alpha for security (0.729; 5 items), which is acceptable, and the second variable is the website design, which showed Cronbach's alpha value of (0.857; 5 items), which is good. Additionally, Cronbach's alpha values of customer service and customer experience are (0.916; 5 items), which is excellent, and (0.798; 5 items), which is acceptable, respectively. Finally, Cronbach's alpha value of Consumer e-shopping satisfaction (0.849; 5 items) is good. All Cronbach's values are between 0.7 and 1.0, which means the construct is adequate for this study

## 4.2 Population, Sampling and Measurements

This research aims to learn about factors influencing the e-shopping satisfaction of household appliance consumers in Klang Valley, Malaysia. Hence, the selected respondents are consumers within Klang Valley who usually purchase family household appliances via e-shopping platforms. This group of people are adults in Malaysia and comprises 70% of the population. Klang Valley's estimated population is 8.2 million (DOSM, 2021).

Based on the aims of this study, the (Krejcie & Morgan, 1970) table furnished the estimated sample size. The population of Klang Valley is estimated at 8.2 million people (DOSM, 2021); therefore, a suitable sample size based on the (Krejcie & Morgan, 1970) tabulation is 384.

Questionnaires were circulated through multiple social media platforms such as email, WhatsApp, Telegram, and QR codes to reach a more significant and diverse audience. 500 sets of questionnaires were distributed to consumers in the Klang Valley. The response was 415, which is approximately 83 percent response rate. According to (Nulty, 2008), when sending out 500 surveys, a 65 percent response rate is adequate. Therefore, the response rate of 83 percent was deemed excellent and adequate for this study.

## 5. Findings and Interpretation

The following section provides the findings of this study, including the respondents' demographic profiles, descriptive analysis, correlation, and regression analysis.

### 5.1 Demographic Profile

The profile of the respondents studied is displayed in Table 2.

**Table 2: Demographic Profile of E-Shoppers (N = 415)**

Demographics	Category	Frequency	Percentage
Gender	Male	170	40%
	Female	245	60%
Age	21 to 30 years old	91	22%
	31 to 40 years old	160	39%
	41 to 50 years old	67	16%
	Above 50 years old	26	6%
	Below 20 years old	71	17%
Ethnicity	Chinese	120	29%
	Indian	185	45%
	Malay	86	21%
	Others	24	6%
Academic Qualification	DEGREE	123	30%
	MASTER	84	20%
	PHD	15	4%
	SPM	95	23%

	STPM / DIPLOMA	98	24%
Experience in e-shopping	NO	6	1%
	Yes	409	99%
Frequency of e-shopping	Annually	86	21%
	Daily	34	7%
	Monthly	182	44%
	Weekly	113	27%

Table 2, Demographic Profile of E-shoppers, shows the number of respondents (N=415). The survey exhibits that the majority of respondents were females (60%) or 245. In terms of age, the majority were between (31-40) years old, which is (39%) or 160 respondents. A majority of 185 or (45%) of the respondents were Indians. In terms of academic qualification, a majority of 123 or (30%) of the respondents have attained an undergraduate degree. A majority of 409 or (99%) of the respondents e-shop. Finally, a majority of 182 or (44%) of the respondents e-shop monthly.

## 5.2 Mean, Standard Deviation and Normality Analysis

**Table 3: Descriptive Statistics (N = 415)**

Factors	Mean	SD	Skewness	Kurtosis	Min	Max
Security	3.517	0.790	-0.151	0.281	1	5
Website Design	3.903	0.777	-0.437	-0.044	1	5
Customer Service	3.626	0.886	-0.417	-0.092	1	5
Customer Experience	3.824	0.754	-0.279	-0.007	1	5
E-shopping Satisfaction	3.775	0.763	-0.429	0.547	1	5

Table 3, Descriptive Statistics, shows the factor website design with the highest mean value of  $3.903 \pm 0.777$ . The lowest mean value is security,  $3.517 \pm 0.790$ . Moreover, the normality test in Table 3 reveals that the skewness and kurtosis values have a threshold of  $\pm 2$ ; therefore, the data are distributed normally, as quoted by (Chinna & Yuen, 2015; Gravetter & Wallnau, 2014).

## 5.3 Correlation Analysis

To study how the variables in this study are associated, Pearson's Correlation Analysis was used.

**Table 4: Pearson's Correlation Matrix (N = 415)**

Factors	SC	WD	CS	CE	ES
Security (SC)	1				
Website Design (WD)	0.484**	1			
Customer Service (CS)	0.598**	0.632**	1		
Customer Experience (CE)	0.572**	0.607**	0.472**	1	
E-shopping Satisfaction (ES)	0.450**	0.614**	0.670**	0.499**	1

\*\* Correlation is significant at the 0.01 level (2 tailed)

Based on Pearson’s correlation matrix shown in Table 4, it was noted that the data significantly supported the measurement model. The correlation matrix recorded that security (SC) and e-shopping satisfaction (ES) display a moderate positive association ( $r = 0.450$ ;  $p < 0.001$ ). The association between website design (WD) and e-shopping satisfaction (ES) is positive and highly correlated ( $r = 0.614$ ;  $p < 0.001$ ). Furthermore, the association between customer service (CS) and e-shopping satisfaction (ES) also illustrates a high positive correlation ( $r = 0.670$ ;  $p < 0.001$ ). Additionally, the association between customer experience (CE) and e-shopping satisfaction (ES) shows a moderate positive correlation ( $r = 0.499$ ;  $p < 0.001$ ). Therefore, it can be concluded that there is a mixed strength but positive association between the independent variables (security, website design, customer service, customer experience) and the dependent variable (e-shopping satisfaction).

#### 5.4 Regression Analysis

The multiple regression procedure is used to test the relationship between the independent variables and dependent variable.

**Table 5: Model Summary (N = 415)**

Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.721 <sup>a</sup>	0.521	0.516	0.531
a. Predictors: (Constant), Security, Website Design, Customers’ Service, Customers’ Experience.				
b. Dependent variable: Customers’ E-Shopping Satisfaction.				

From Table 5, Model Summary,  $R = 0.721$  indicates the multiple correlation coefficient value, which exhibits a high degree of predictive accuracy. The  $R^2 = 0.521$ . This implies that 52.1% of the variation in the dependent variable (Customers’ e-shopping satisfaction) can be explained by the independent variables (security, website design, customer service, and customers’ experience).

**Table 6: ANOVA (N = 415)**

Model 1	Sum of Squares	df	Mean Square	F	Sig
Regression	120.607	4	30.152	107.042	0.001 <sup>b</sup>
Residual	110.419	392	0.282		
<b>Total</b>	<b>231.027</b>	<b>396</b>			
a. Dependent variable: Customers’ E-Shopping Satisfaction					
b. Predictors: (Constant), Security, Website Design, Customers Service and Customers’ Experience					

Table 6, ANOVA shows that the independent factors statistically and substantially predict the dependent variable, ( $F = 107.042$ ,  $p < 0.001$ ) Therefore, the regression model fit is good. Thus, the independent variables (Security, Website Design, Customers Service, and Customers Experience) can be used to predict the dependent variable (Customers’ E-Shopping Satisfaction)

**Table 7: Coefficients (N = 415)**

Model Coefficients	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std Error	Beta		
(Constant)	4.676	0.790		5.920	0.000
Security (SC)	-0.045	0.047	-0.046	-0.950	0.343
Website Design (WD)	0.236	0.050	0.241	4.770	0.000
Customer Service (CS)	0.400	0.043	0.466	9.270	0.000
Customer Experience (CE)	0.165	0.049	0.163	3.360	0.000
Dependent Variable: E-shopping satisfaction (ES)					

From Table 7, Coefficients show that website design ( $B = 0.236$ ;  $p < 0.001$ ), customer service ( $B = 0.400$ ;  $p < 0.001$ ), and customers' experience ( $B = 0.165$ ;  $p < 0.001$ ) are statistically significant. Meanwhile, security ( $B = -0.045$ ;  $p > 0.001$ ) is statistically insignificant. Thus, this implies a significant relationship between the predictor variables (Website Design, Customers Service, and Customers' E-Shopping Experience) and the dependent variable (Customers' E-Shopping Satisfaction). However, the security factor shows an insignificant relationship with customers' e-shopping experience.

Based on Table 7, the linear regression equation is as follows:

$$ES = 4.676 + 0.236(WD) + 0.400(CS) + 0.165(CE)$$

Where;

ES = E-Shopping Satisfaction;

WD = Website Design;

CS = Customer Service;

CE = Customer Experience;

Constant or the y-intercept = 4.676.

The result indicates that with a one-unit increase in website design, there is an increase in the consumers' e-shopping satisfaction (ES) of 0.236. Similarly, one unit increase in customer service (CS) and customer experience (CE) will increase customers' e-shopping satisfaction (ES) by 0.400 and 0.165, respectively.

Additionally, the outcome of the multiple regression analysis rates the influence of independent factors (Website Design, Customers Service, and Customers' E-Shopping Experience) on the dependent variable (Customers' E-Shopping Satisfaction). The stronger the standardization coefficient, the more significant the influence of the predictor variables on customers' e-shopping satisfaction. With a standard coefficient (Beta = 0.466), the predictor variable customer service contributes the most to the variance in customers' e-shopping satisfaction. Website design follows with (Beta = 0.241), and customer experience (Beta = 0.163).

## 5.5 Summary of Hypothesis Results

**Table 8:** Summary of Hypothesis Test (N=318)

Hypothesis	P-value	Result
H1: There is a statistically significant relationship between security and e-shopping satisfaction with household appliances.	0.343	$p > 0.001$
H2: There is a statistically significant relationship between website design and e-shopping satisfaction with household appliances.	0.000	$p < 0.001$
H3: There is a statistically significant relationship between customer service and e-shopping satisfaction with household appliances.	0.000	$p < 0.001$
H4: There is a statistically significant relationship between a customer experience and e-shopping satisfaction with household appliances.	0.000	$p < 0.001$

The first hypothesis (H1) is to examine if there is a statistically significant relationship between security (SC) and e-shopping satisfaction with household appliances. H1 is not accepted by data (p-value of SC  $> 0.001$ ). The p-value of SC = 0.343. Therefore, indicating a statistically insignificant relationship between security and e-shopping satisfaction with household appliances.

The second hypothesis (H2) is to study if there is a statistically significant relationship between website design (WD) and e-shopping satisfaction with household appliances. H2 is accepted by data (p-value of WD  $< 0.001$ ). Hence, demonstrating a statistically significant relationship between website design and e-shopping satisfaction with household appliances.

The third hypothesis (H3) is to scrutinize if there is a statistically significant relationship between customer service (CS) and e-shopping satisfaction with household appliances. H3 is accepted by data (p-value of CS  $< 0.001$ ). Consequently, denoting a statistically significant relationship between customer service and e-shopping satisfaction with household appliances.

The last hypothesis H4: is to assess if there is a statistically significant relationship between a customer's experience (CE) and e-shopping satisfaction with household appliances. H4 is accepted by data (p-value of CE  $< 0.001$ ). Thus, this implies a statistically significant relationship between customer experience and e-shopping satisfaction with household appliances.

## 6. Discussion

The first objective of this research was to identify if there is a statistically significant relationship between security and customers' e-shopping satisfaction. To realize this objective, it was hypothesized that there is a statistically significant relationship between security and customers' e-shopping satisfaction with household appliances.

Multiple regression analysis was applied to determine the relationship between security and customers' e-shopping satisfaction. Then, Pearson's correlation coefficient was observed to determine the size and direction of the relationship and whether it was

statistically significant. The results showed that the relationship between security and customers' e-shopping satisfaction is statistically insignificant (p-value more than 0.001), as shown in Table 7.

This shows that the results are consistent with the literature, suggesting that security is an insignificant determinant of customers' e-shopping satisfaction. The features of an internet site that protect customers' security as a factor that influences, which leads to e-shopping satisfaction among the consumers in this study, are insignificant. Customers frequently experience insecurity because e-shopping platforms hold a staggering amount of personal information about them. Customers typically leave when asked for personal information because they believe doing so in e-shopping could expose the information to other users. (Wen et al., 2020). According to research by (Yee et al., 2022), an incident regarding the hacking of thousands of Lazada e-wallet buyers occurred in mid-October 2020. This study parallels the discoveries of (Zuroni & Goh, 2012; Ha & Stoel, 2012), who found that security does not impact customers' e-shopping satisfaction.

The findings of this study negate the discoveries of (Edwar et al., 2018 & Raman, 2019), who confirm that security significantly affects customers' e-shopping decisions and that they are confident and secure in making purchases from e-shopping stores because their personal information is secure and will not be misused by careless parties. Thus, hypothesis H1 is not supported by data. The findings of this study were able to address, conclude, and narrow the gap in the literature and affirm that the relationship between security and customers' e-shopping satisfaction is insignificant.

The second objective of this research was to study the relationship between website design and customers' e-shopping satisfaction. To attain this objective, it was hypothesized that there is a statistically significant relationship between website design and customers' e-shopping satisfaction with household appliances.

Multiple regression analysis was used to determine the relationship between website design and customers' e-shopping satisfaction. Then, Pearson's correlation coefficient was scrutinized to determine the size and direction of the relationship and whether it was statistically significant. The results showed a statistically significant relationship between website design and customers' e-shopping satisfaction (p-value less than 0.001).

This shows that the results are coherent with the literature, suggesting that website design significantly determines customers' e-shopping satisfaction. The importance of customers on the internet is particularly concerning about the quality of information on websites, which helps them to make the right purchase decisions. When customers conduct pre-purchase information searches for products and services, they use the quality of information as an essential attribute to assess the effectiveness of website usage.

Therefore, this study has proved that website design is a vital element that leads to customers' e-shopping satisfaction in the Klang Valley, Malaysia.

The findings of this study are parallel to the discoveries of (Rita et al., 2019; Yang, 2019; Cyr, 2018), who confirm that web design significantly affects customers' e-shopping



satisfaction. Therefore, website design is, without question, for e-shopping purchasing sites, followed in a way that can ensure sustainability and customer retention for a longer time. Additionally, this study invalidates the findings of (Fernandus & Legowo, 2020), who found that website design does not impact customers' e-shopping satisfaction.

Thus, hypothesis H2 is supported by data. The findings of this study highlight, conclude, and narrow the literature gap and validate a positive and statistically significant relationship between website design and customers' e-shopping satisfaction. The third objective of this research was to test the relationship between customer service and customers' e-shopping satisfaction. To reach this objective, it was hypothesized that there is a statistically significant relationship between customer service and customers' e-shopping satisfaction with household appliances.

Multiple regression analysis was applied to determine the relationship between customer service and customers' e-shopping satisfaction. Then, Pearson's correlation coefficient was observed to determine the size and direction of the relationship and whether it was statistically significant. The results showed that the relationship between customer service and customers' e-shopping satisfaction was statistically significant (p-value less than 0.001). This shows that the results support the literature, suggesting that customer service is a significant determinant of customer e-shopping satisfaction. This study's findings align with the outcomes of (Lu et al., 2020; Okeke, 2019; Rita et al., 2019; Jane et al., 2017; Bisht, 2015), who confirmed that customer service positively affects customers' e-shopping satisfaction. Bad customer service experience and the company name of the e-commerce company will spread in a derogatory way on social media. This is why today's innovative companies are taking their customer service to a new level through intelligent information and communication technologies to achieve a certain level of satisfaction for the company's long-term relationship with its customers.

Additionally, this study refutes the conclusions of (Okeke, 2019; Barusman, 2019), who found that customer service negatively impacts customers' e-shopping satisfaction. Thus, hypothesis H3 is supported by data. Therefore, the findings of this study addressed, concluded, and narrowed the gap in the literature. It validates the hypothesis that a statistically significant relationship exists between customer service and customers' e-shopping satisfaction with household products.

The fourth objective of this research was to scrutinize the relationship between customers' experience and e-shopping satisfaction. To achieve this objective, it was hypothesized that a statistically significant relationship exists between customers' experience and e-shopping satisfaction with household appliances. Multiple regression analysis determined the relationship between customer experience and e-shopping satisfaction. Then, Pearson's correlation coefficient was observed to determine the size and direction of the relationship and whether it was statistically significant. The results showed that the relationship between customers' experience and customers' e-shopping satisfaction is statistically significant (p-value less than 0.001).

This shows that the results are consistent with the literature, suggesting that customer experience is a significant determinant of customer e-shopping satisfaction.

Therefore, experience factors have involved brand image and product packaging that can affect customers' intention to buy household appliances from an e-shopping store. A good brand image and proper product packaging in an e-commerce platform can assure customers that they purchase high-quality services. This leads to increased purchase ratings from an e-shopping portal.

The findings of this study are parallel to the research findings of (Jackson & Marsh, 1996; Chang & Zhu, 2012; Lee & Tsai, 2010), which confirm that customers' experience significantly affects customers e-shopping satisfaction. The e-shopping experience is separate from the traditional "bricks-and-mortar" experience, which amplifies the need for system quality. Without system quality, it is difficult to monitor the quality of the service, which, in turn, reduces customers' e-shopping experience, including flow.

Additionally, this study contradicts the findings of (Shih, 2005) and illustrates that e-shopping customers' experience may need to be synchronized with customers' e-shopping satisfaction. Thus, hypothesis H4 is supported by data. The findings of this study were able to reveal, conclude, and narrow the gap in the literature and validate a positive and statistically significant relationship between customers' experience and e-shopping satisfaction with household products.

## 7. Conclusion

Responses for the first independent variable, security, indicated a statistically insignificant relationship between perceived security and customers' e-shopping satisfaction. This answers the first research question: Is there a statistically significant relationship between security and e-shopping satisfaction with household appliances? As per thought of (Edwar et al., 2018), electronic service-providing companies have taken the security of customers' financial and personal data into first consideration for starting a business on e-commerce platforms. According to a study by (Raman & Viswanathan, 2019), the safety element (e-security) has a favorable and significant impact on consumers' purchasing decisions. However, this study found otherwise. It contradicts the study by (Aziz & Wahid, 2018). Whereby this study found that there is no correlation between security and customer e-shopping satisfaction. Additionally, (Sheng et al., 2018) conducted a study on e-shopping consumers in Malaysia and found that security did not affect customers' e-shopping satisfaction, especially among young people, which is in line with this study. This indicates that consumers of different generations have different requirements when security is concerned when e-shopping. In contrast, the older generation is more aware of the security of e-shopping than the younger generation of customers (Sheng et al., 2018). Several studies have demonstrated the relationship between security and attitudes toward technology (Wen et al., 2020). Some studies have found that personalizing e-shopping transactions improves customer relationships. In contrast, some researchers found that personal information may stimulate security concerns and negatively affect e-shopping satisfaction (Wen et al., 2020). Therefore, this study proves that security does not influence customers' e-shopping satisfaction. Another

important research topic is individual trust in online environments that support relationships and commerce. Due to the risk, security is crucial in online situations (Lankton, 2006). Utilizing the expectation disconfirmation theory, which forecasts consumers' happiness with security, this research has also looked at technological acceptance. Consequently, the expectation-disconfirmation theory was utilized to forecast how security will affect customers' e-shopping satisfaction with online buying (Oliver, 1980). Thus, this study contradicts the theory of EDT proposed by (Oliver, 1980). This is because technology is so advanced now that customers who purchase through e-shopping are less concerned about personal information leaks or security. Therefore, consumers continue to purchase online, which does not influence their purchase behaviour.

Responses for the second independent variable, website design, indicated a statistically significant relationship between website design and customers' e-shopping satisfaction. This solves the second research question: Is there a statistically significant relationship between website design and e-shopping satisfaction with household appliances? The website's appearance correlates well with the typical quality of e-service (Dhingra et al., 2020). In addition, excellent website design with rich information, visually appealing content, simple payments, easy-to-read text, discount and promotional offers, and fast loading is crucial. The website design for your e-shopping store should be, This can be corroborated by (Rita et al., 2019) that visually appealing, easy to read, and contain enough information about the products sold is vital for a website. Therefore, marketers who use reliable website design in viral marketing will be able to increase the consumers' purchase intention. The expectation disconfirmation theory was used to identify how website design affected customers' e-shopping satisfaction and was strengthened by the findings of this study. Increasing interaction is a viable way to increase consumer trust in e-commerce websites through enhanced usability since user happiness has been highlighted as a significant component in defining usability and because bad website usability is a primary reason for mistrust in e-commerce websites (Lowry et al., 2006). In this case, EDT effectively described customer satisfaction across various scenarios, including online purchasing (Oliver, 1980). Customers make purchases using a website as an interface when they shop online, yet they still act personally when satisfied. EDT can therefore be effectively used to examine client satisfaction with purchases. Therefore, website design influences consumers to purchase online.

Responses for the third independent variable, customer service, revealed a statistically significant relationship between customer service and customers' e-shopping satisfaction. The answer to the third research question: Is there a statistically significant relationship between customer service and e-shopping satisfaction with household appliances? As opined by (Lu et al., 2020), achieving customers' e-shopping satisfaction has been a significant target of e-shopping service-providing companies while planning customer service through a website. Thus, it can be implied that Malaysian customers are satisfied with the customer service systems of e-shopping companies that have shown positive effects on e-shopping, causing e-commerce of household appliances (Lu et al.,

2020). In the e-shopping context, failure to provide a high-quality experience for customer service can be particularly detrimental to a firm (Kawaf & Tagg, 2017) as customers have access to extensive information to compare their options and control the quality of their experience (Jung & Seock, 2017). The expectation disconfirmation theory favours customer service over performance that exceeds expectations regarding its impact on satisfaction and repurchase intentions (Oliver, 1980). Customer service is one of the significant factors used to forecast a consumer's satisfaction with purchasing. This is because the best customer service will provide an effective and efficient way to shop. EDT can therefore be effectively used to examine customers' satisfaction with purchases. Therefore, customer service influences consumers to purchase online.

Responses for the fourth independent variable, customer experience, indicated a statistically significant relationship between customer experience and customers' e-shopping satisfaction. This answers the fourth research question: Is there a statistically significant relationship between customer experience and e-shopping satisfaction with household appliances? A good brand image and proper product packaging in an e-commerce platform can assure customers they purchase high-quality services, increasing purchase ratings from an e-shopping portal (Wijayajaya et al., 2021). Additionally, (Kabadayi & Gupta, 2005) showed that the flow experience is positively evaluated when revisiting websites. Therefore, it is likely that flow experiences help to understand the user's e-shopping behaviour decisions (Lee & Tsai, 2010). According to the expectation disconfirmation theory (Oliver, 1980), a company can raise customer satisfaction by improving the perceived quality of its products or lowering customers' expectations. Buyers may encounter a pre-purchase experience of the good or service during the satisfaction evaluation process. Therefore, this study is supported by EDT. Hence, it can be deduced that customers' experiences influence consumers to purchase online.

## **8. Managerial Implications**

Regarding managerial implications, this research will aid corporate executives and advertisers in understanding Malaysian consumers' opinions about e-shopping satisfaction on household appliances. It aids them in comprehending customers' perception of critical elements within e-shopping: security, website design, customer service, customer experience, and its influence on their purchasing satisfaction. Marketers will indeed be able to use the output of this study to tailor the content of their advertising.

## **9. Limitations and Further Research**

This study focused on the factors influencing the e-Shopping satisfaction of household appliance consumers in Klang Valley, Malaysia. Subsequently, to acquire further knowledge in this research area, an analysis can be conducted to compare the factors influencing e-Shopping satisfaction with household appliances in urban and rural areas. A comparison study can also be undertaken between different consumer segments.

Various limitations were found and noted to ensure that the upcoming research's quality is improved. First, the size of the samples collected from respondents may only be representative of some e-shopping buyers. Compared to other ethnic groups, Indian people made up most of the study's responses. As a result, the analytical findings reported here may be biased against a specific ethnic group. In addition, the results were obtained using just one sector of the electronic industry, the e-shopping household appliances sector. Uncertainty exists over the applicability of the analytical findings to other domains, such as services or other product categories. Therefore, care should be taken when applying the results to other areas.

For upcoming research studies, several recommendations and ideas can be made. This study can give a thorough understanding of how e-shopping quality dimensions affect customer satisfaction. Choose a sample more typical of the overall population to get a broad picture of e-shopping buying in Malaysia. Secondly, to allow for richer coverage of website design, security, customer service, customer experience, and e-shopping satisfaction, the future study may consider constructing and discovering other factors, predictors, and antecedents. Future studies may also duplicate existing scale measurements of e-shopping quality aspects and e-shopping pleasure to compare results across cultures and ethnic groups and to examine other retail industry segments.

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### **Conflict of Interest Statement**

The authors of this research would like to proclaim that there are no conflicts of interest linked with this research, and this research was not subsidized by anyone that could have manipulated its results. As the researchers of this study, the authors validate its novelty, emphasize that this study has yet to be published previously, and verify that it is not presently intended for publication elsewhere.

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FACTORS THAT INFLUENCE E-SHOPPING SATISFACTION OF  
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