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E-Ticaret Hizmet Kalitesinin Yeniden Satın Alma Üzerindeki Etkisi
The Impact of E-Commerce Service Quality on Repurchase Intention

Abstract

In the last decade, there has been a significant increase in the number of companies joining e-commerce platforms because more and more people shop online worldwide. This phenomenon has given the competition a more international flavor. Many companies sell products of the same price and quality. Therefore, customers have different expectations when they purchase products and services. The most important expectation is service quality and trust. Millions of consumers shop for their daily needs online and expect the goods to be delivered timely and safely onto their doorsteps, making logistics service quality more critical than ever. Therefore, companies interested in increasing their sales volume should pay attention to service quality. This study investigated the effect of e-commerce service quality (information quality, courier services, and privacy and security) on online shoppers' trust and repurchase intention. The sample consisted of 612 e-commerce users. Data were collected using a survey. The data were analyzed using a structural equation model. The results showed that information quality, courier services, and privacy and security positively affected customer trust. The results also showed that courier services, customer trust, and privacy and security positively affected repurchase intention.

Keywords: E-commerce, service quality, structural equation modeling

Jel Codes: M11, M30

Öz

Günümüzde Dünya'da olduğu gibi Türkiye'de de alışverişlerde e-ticaretin kullanımı yaygınlaşmıştır. Dolayısıyla internet üzerinden satış gerçekleştiren işletmelerin sayısında da artış meydana gelmiştir. İnternet üzerinden yapılan ticaretin yaygınlaşması rekabeti küresel boyuta taşımıştır. Küresel çapta aynı fiyat ve kalitedeki ürünleri satan çok sayıda işletme faaliyet göstermektedir. Bu durum müşterileri ürünün fiyat ve kalitesinin yanında farklı beklentilere yönlendirmektedir. Bu beklentilerden en önemlisi ise hizmet kalitesi ve güvendir. Günümüzde müşterilerin siparişlerinin zamanında, eksiksiz ve sağlam olarak teslim etmeleri ile ilgili beklentilerinin de artmış olması nedeniyle lojistik hizmet kalitesinin de önemi artmıştır. Bu nedenle işletmelerin satış hacimlerini artırabilmeleri için hizmet kalitesine gereken önemi vermeleri gerekmektedir. Bu bağlamda bu çalışmada e-ticaret hizmet kalitesi boyutlarından bilgi kalitesi, kargo hizmetleri ile gizlilik ve güvenliğin müşteri güveni ve tekrar satın alma niyeti üzerindeki etkisi araştırılmıştır. Bu amaçla 612 e-ticaret kullanıcılarından anket ile veri toplanmıştır. Veriler yapısal eşitlik modeli ile analiz edilmiştir. Analiz neticesinde bilgi kalitesi, gizlilik ve güvenlik ile kargo hizmetlerinin müşteri güvenini pozitif yönde ve anlamlı olarak etkilediği tespit edilmiştir. Gizlilik ve güvenlik, kargo hizmetleri ve müşteri güveninin tekrar satın alma niyetini pozitif yönde anlamlı olarak etkilediği bulgusuna ulaşılmıştır.

Anahtar Kelimeler: E-Ticaret, Hizmet Kalitesi, Yapısal Eşitlik Modellemesi

Jel Kodları: M11, M30

Introduction

The Internet has paved the way for a new platform for consumers to meet their needs and desires. E-commerce is defined as buying and selling products and services on online services or over the Internet. E-commerce has been the fastest-growing channel over the last decade. Every day, new companies move into e-commerce to remain competitive in the market. Companies need to keep their customers and get new ones to stay afloat and thrive. However, acquiring new customers is costly and time-consuming. Companies must improve brand loyalty to gain a competitive advantage in the face of fierce competition. Customers satisfied with all parts of the buying cycle are more likely to become loyal customers. In recent years, researchers have turned their attention to the impact of the Internet on marketing. Companies use the Internet for marketing purposes. They promote their products and services and interact with their customers over the Internet to achieve their marketing goals. The Internet is a cheaper and faster medium that allows companies to engage with their audience and change their spending habits through personalized messages (Diaz et al., 2013, p. 373).

Companies use the Internet for marketing their products or services online because it helps them connect with customers they have never seen or met. Online services allow companies to answer customers' questions, provide additional services about the sale of complementary items, and evaluate customer satisfaction. Companies can provide all those services without contacting face to face with their customers. Therefore, the Internet allows companies and consumers to interact and transact securely on online networks (Kassim & Ismail, 2009, p. 56).

Unlike traditional commerce, e-commerce does not limit its marketplace to a physical transaction location. Therefore, it is much easier to access products and services online. E-commerce also allows consumers to compare the features and prices of products and services across brands. Therefore, e-service quality is a distinctive feature of competitiveness and a determinant of success. E-commerce undergoes rapid transformation and growth that creates a competitive environment where there is intense rivalry among companies and considerable bargaining leverage on the part of both companies and customers. Therefore, researchers have conceptualized e-commerce quality in various ways over the last decade (Paweloszek & Bajdor, 2020, p. 3122).

E-commerce is growing worldwide. Therefore, companies use it to interact with their customers and gain a competitive advantage. Experienced and successful companies are beginning to realize that success or failure depends not only on website presence and low prices but also on e-service quality (Lee & Lin, 2005, p. 161).

Although more and more companies use the Internet as a marketing, communication, and distribution medium, there is limited research investigating how consumers view e-services and what the dimensions of e-service quality are. Therefore, there is little data on the impact of e-service quality on consumer experiences and behavior. Marketing managers need to understand the driving force behind consumer behavior to allocate appropriate resources to design e-marketing strategies, increase customer loyalty, and develop long-term relationships (Carlson & O'Cass, 2010, p. 114).

Rapid advances in information technology have led to a paradigm shift. Consumers prefer shopping online to visiting brick-and-mortar stores. Physical companies use e-commerce to interact with customers and gain a competitive advantage. Online companies can also enter the competitive market easily due to low barriers. Customers can switch from one online store to another at low costs. Positive shopping experiences affect consumer behavior. For example, consumers who are satisfied with the products or services provided by a brand are more likely to come back and recommend it to others (Rita et al., 2019, p. 7). Therefore, managers should focus more on e-services. E-commerce stores that deliver orders on time can earn customer trust and increase foot traffic to their store. In other words, it contributes to customer satisfaction and loyalty. E-retailers should find new customers instead of just selling more stuff to the existing customer base to improve their e-service quality (Khan et al., 2019, p. 296).

E-commerce has many benefits for both companies and customers. E-commerce helps companies reduce their costs and increase the number of customers (Xie & Wang, 2020, p. 1). Companies that recognize those benefits are more likely to be involved in e-commerce. In addition, customers do not have to go from one store to another looking for things. The whole world has experienced epidemics in the last two decades. Scientists have warned companies that epidemics affect business performance (Tran, 2020, p. 1).

The world has fought against the novel coronavirus 2019 (COVID-19) for almost three years. Since the onset of the pandemic, millions of people have stayed indoors to halt the spread of the coronavirus. Consumers' shopping patterns have changed since the pandemic, emphasizing e-commerce and contactless payments (Tran, 2020). Therefore, e-commerce has become more critical than ever during the pandemic. This study was carried out when the adverse impacts of the COVID-19 still prevailed. Therefore, the study focused on consumers' views on e-commerce service quality during the COVID-19 pandemic.

1. Theoretical Framework

1.1. E-commerce Service Quality

E-commerce is the sale or delivery of goods and services by electronic means. Consumers use the Internet to purchase products and services (Akbar & James, 2014, p. 2). More broadly, e-commerce involves the following aspects, p. (1) customers can purchase goods and services via online platforms, (2) companies can market their products and services and provide information about them on online platforms, and (3) customers can access promotions and special offers and live track the whereabouts of their parcels (Dal & Özbek, 2006, p. 110).

Technology allows consumers to access products and services anywhere at any time. Therefore, unlike before, e-commerce has become vital for businesses to reach out to larger markets at cheaper costs. Today, more and more companies use technology for commercial purposes and open up new online platforms to gain a competitive advantage (Coşkun, 2004, p. 244). The Internet has made e-commerce the most popular way of doing business. New businesses set up online shops, while traditional marketers, vendors, and retailers turn their physical stores into e-commerce websites. Business-to-consumer (B2C) is the most common type of e-commerce for end-users (Khan et al., 2019, p. 283). Companies use the Internet to offer products and services and build customer rapport. The Internet offers companies and consumers more opportunities for interaction and individualization (Kassim & Abdullah, 2010).

Service quality is the gap between customers' expectations and perceptions of services. Companies with good service quality solve their customers' problems quickly. Customer perceptions and expectations of service quality change over time. Therefore, companies have realized that they should focus on customer satisfaction. Customers today want more information and inquire about it (Yalçın & Baş, 2012, p. 5).

Unlike traditional consumers, online consumers browse websites to search, compare, order, and pay for products and services. However, e-commerce is imbued with more uncertainties than traditional commerce because online consumers cannot check the quality of the products and services they purchase. Moreover, when an online customer places an order online, he/she is asked to enter his/her personal and credit card information, causing security and privacy concerns among customers and end-users (Su et al., 2008, p. 361). Online shoppers face more uncertainty than traditional customers because they cannot interact with products/services and sellers (Tam et al., 2020, p. 445).

Advances in information technology have paved the way for a revolutionary paradigmatic change in e-services. Websites with high e-service quality have effective distribution connections and consultancy services that allow online shoppers to inquire about products, browse pages, and shop for products and services. E-services include all comprehensive online and offline services across the pre-sale, sale, and post-sale stages (Luo et al., 2020, p. 2).

E-commerce companies depend on website traffic, purchases, and repurchases. There are many websites that customers can use. If a customer is dissatisfied with a website's performance, he/she moves on to another website without hesitation (Cao et al., 2005, p. 645).

Consumers today are more demanding, informed, and experienced. E-service quality is critical also because negative word of mouth (WoM) spreads quickly online (Tzavlopoulos et al., 2019, p. 578). E-commerce has brought many concepts with it. E-communication, e-system operational, e-aesthetics, and e-change process quality increase websites' capabilities and service quality, affecting WoM behaviors and website loyalty. Therefore, it is critical to focus on these issues for a positive perception of website service quality (O'Cass & Carlson, 2012, p. 431).

As long as e-commerce websites can handle procurement and logistics, stores are mainly free from burdensome problems, such as physical space and storage costs. E-commerce websites have a wider range of products than physical stores. E-commerce websites provide information about their products and thus attract more customers. Online shopping is also an engaging and fun experience for customers. E-commerce websites are full of visuals and information about products and services. Websites should be well-designed and user-friendly so that customers can browse through a collection of items and purchase products and services in just a few simple steps. The quality of a website is related to objective and functional factors (efficiency, ease of navigation, ease of access, and flexibility) (Wen et al., 2014, p. 1515).

System quality measures the desired features of an e-commerce system. Websites should always be fast and accessible. They should also have an effective navigation design and links for necessary information. Information quality is about the relevance, timeliness, and accuracy of the information produced by an information system. Websites play an important role in information distribution in e-commerce. Quality is also a critical issue (Saha et al., 2012, p. 307).

E-commerce companies should allow consumers to access information, browse for products and services, and shop virtually anywhere and at any time. High-quality e-commerce websites should stand out from the crowd with their visually striking and alluring designs. Online companies should offer information and options to meet consumers' needs (Flavian et al., 2009, p. 1104).

1.2. E-Commerce Logistics Service Quality

E-commerce service quality is about logistics (courier services) and website quality. Consumers expect accurate information about products and timely and intact delivery at their doorsteps.

E-commerce companies that would like to thrive should recognize the importance of logistics support. Physical delivery is critical for online shoppers (Zhang et al., 2020, p. 2). Delivery quality consists of customer service quality and physical distribution service quality (Bienstock et al., 2008, p. 206).

Customers' impressions of logistics services can be assessed using a nine-dimensional scale devised by Mentzer et al. (1999). The nine dimensions are: quality of personnel interaction, quantity of orders released, quality of information, ordering procedures, accuracy of orders, order condition, quality of orders, handling of order discrepancies, and timeliness.

A competitive edge and long-term customer relationships are more likely for businesses that offer high-quality logistics services. Based on client needs and satisfaction, companies should evaluate and enhance the quality of their logistical services (Sohn et al., 2017, p. 680). Customers' expectations and impressions of courier services are used to measure the quality of logistics services. Many clients have preconceived notions about what their service providers will be able to deliver them before they even place their purchase. It is the discrepancy between what a customer perceives and what he or she expects when it comes to logistics service quality (Meidutė-Kavaliauskienė et al., 2014, p. 332).

1.3. Trust in E-Commerce

Service quality depends on the connection and relationship between customers and employees. It is more dependent on one person than the company. Trust between players is a prerequisite for good relations. Trust in a company and its staff also depends on their ability to solve problems and manage critical events (Edvardsson, 1998, p. 146).

Perceived reliability is what builds trust in a business. In other words, when clients have faith in their service providers, they are more likely to have good feelings about them. When clients have faith in service providers, they believe that they can rely on them to deliver on their promises (Huma et al., 2020, p. 46).

Several aspects critical to online transactions are influenced by trust. Trust can be defined as a belief, emotion, or anticipation regarding an exchange partner's intentions and/or expected behavior. According to conventional wisdom, trust has a direct correlation with customer purchasing habits. Consumers' inclination to buy is closely linked to their purchasing habits. When a customer has confidence in a brick-and-mortar business, that confidence is transferred to the online retailer. In the store's eyes, the more people she refers because of her great experience, the more money the merchant makes (Wu et al., 2018, p. 31). The foundation of social capital is trust, and trust is vital for any successful business transaction. Uncertainty is reduced when people have faith in one another, which in turn inspires them to act in ways that reflect their shared values. Because there is no actual interaction in the virtual world, trust is more crucial than in the real world (Luo et al., 2020, p. 3).

Trust plays an essential role in establishing and maintaining relationships, but it is hard to manage (Kassim & Abdullah, 2010, p. 356). Online shopping consists of customers and online stores. Online trust between customers and online stores is critical. Trust encourages online shoppers to purchase as it affects their purchasing behaviors (Lee & Lin, 2005, p. 165).

The likelihood of a consumer making another purchase is positively correlated with their level of satisfaction. An internet business's ability to satisfy its clients fosters a relationship of mutual respect and confidence. Intimacy and trust are built on previous transactions, resulting in a reduction in customer uncertainty and perception of risk. Customer happiness is based on meeting the needs and expectations of the customers. Reducing customer doubts about a company's ability to deliver on its promises is impossible without a high level of customer happiness and trust. Consumer perceptions of risk and cost also play a role (Tzavlopoulos et al., 2019, 578).

Consumers who trust online companies are more likely to shop online. Companies should build trust by providing high-quality services, ensuring communication, and keeping responsiveness at a high level (Gummerus et al., 2004, p. 183). Consumers trust companies they believe can provide quality goods and services (Jarvenpaa et al., 2000, p. 47).

Online shopping leads to customer uncertainty because they cannot touch, feel, or try on the products they purchase. This is a major concern for online consumers. Uncertainty or a lack of trust affects online purchasing decisions, depending on the degree of incomplete information about products and services. Therefore, uncertainty is an integral factor for understanding trust and an obstacle to e-commerce (Tam et al., 2020, p. 442).

Consumers who are less concerned about security, privacy, or fraud repurchase products and services from e-commerce websites that they are satisfied with. Online platforms can't function without a solid system for managing user trust. E-commerce service providers gain a lot of money from loyal customers. We need to study client loyalty in order to have a better sense of how likely they are to use e-services. Long-term e-commerce relationships are built on trust (Sharma and Lijuan, 2015, p. 474).

2. Literature Review

Customer expectations have a direct impact on service quality. Providing excellent service is critical to customer satisfaction. Customers who are satisfied with the level of service provided by a company are more likely to remain loyal to that company (Meidutė-Kavaliauskienė et al., 2014: 332).

Satisfaction and loyalty to a brand can be influenced by the quality of the service provided. Customers who are satisfied with the quality of their service are more likely to recommend the company to others. Customer happiness is directly related to the quality of the service you provide. Customer loyalty begins with a happy customer (Al-Momani & d Mohd Noor, 2009, p.56).

The higher the quality of e-services, the higher the customer satisfaction. Consumers who view e-service quality in a more positive light have more positive attitudes toward websites (Carlson & O’Cass, 2010).

Oftentimes, customers are disappointed because they hate to find that the products or services they have shopped for on e-commerce websites are quite different from what they actually receive. Moreover, they end up waiting more than promised delivery time. Managers need to take measures to solve these problems. Privacy is an important factor in online shopping. Customers shop as long as they are convinced that it is safe to share personal information. Otherwise, they never do online shopping. Therefore, managers must make their websites safe and secure and prevent fraudulent transactions. In addition, e-service quality positively affects perceived value, which results in customer loyalty. Companies that offer quality products and services on their websites will likely have loyal customers (Ghosh, 2018, p.441).

Website design affects consumers’ feelings and perceptions regarding website content (Ha & Im, 2012). If online companies are interested in improving consumers’ cognitive assessment of website content and satisfaction, they must develop websites that arouse pleasure rather than stimulation. This is even more important for online companies that sell experience goods because those consumers are after a hedonic experience while shopping. In addition, perceived information quality has a more significant effect on satisfaction and WoM for experience goods than for search goods because it is hard to compare and evaluate the qualities of experience goods. Online retailers are also advised to provide quick links on their websites to social networking sites, such as Facebook, Twitter, and YouTube.

Customers who trust websites are more likely to purchase goods online. Moreover, customers with a good purchasing experience from a website are more likely to repurchase goods from the same website (Rita et al., 2019, p.8).

Liu et al. (2001) administered a questionnaire to 1.000 electronic website administrators and conducted experiments on 68 students to define consumer responses to the design quality of websites. They reported two results. First, well-designed websites guide customers. Second, customers positively favor well-designed websites and their products and services.

According to the findings of Aladwani (2006), only the technical component of website quality influenced the purchase behavior of customers in either a direct or indirect manner through their perceptions toward websites. He came to the conclusion that the quality of the specific content and the quality of the appearance had a greater effect on the attitudes that customers had toward websites than the quality of the technical information and the quality of the overall content.

According to Lee and Lin (2005), website design, reliability, responsiveness, and trust were all factors that impacted overall service quality and consumer satisfaction. However, they found no correlation between customisation and customer pleasure.

Li et al. (2009) studied online travel companies’ customers who had made online reservations before. They asked participants to rate the dimensions of travel service quality. They reported different effects on customers’ perceptions of e-service quality. They found that ease of use and trust strongly impacted customers’ e-service quality. In addition, surprisingly, privacy had no significant impact on customers’ perception of e-service quality.

Carlson and O’Cass (2010) determined that consumers who positively evaluated the service quality of content-oriented professional sports websites had higher satisfaction, more positive attitudes toward those websites, and more positive behavioral intentions.

Yalçın and Baş (2012) focused on deal websites to investigate customer satisfaction. They found that some consumers were dissatisfied with e-commerce websites for two reasons. First, websites do not provide sufficient information about their goods or services. Second, the goods and services they sell are not of high quality.

Gök and Perçin (2016) evaluated e-commerce websites regarding e-service quality. They reported that consumers were satisfied with the e-service quality of e-commerce websites that kept their credit card information safe, indicating that customers attach great importance to security in e-services.

Yen (2014) performed a survey of college students to find out how satisfied they were with online shopping. Transactional consumers were more likely to report high levels of quality satisfaction, while relational customers were more likely to report high levels of satisfaction with the quality of information and services they

received. In addition, he found that quality satisfaction among transactional and relationship customers differed in proportion to the degree to which customers felt in control and delighted.

Morganti et al. (2014) found that delivery services were a great concern for online shoppers in the European Union. Availability and distribution channels are critical to customers. Fast delivery is very important to customers because they can touch and feel the products in brick-and-mortar stores but cannot do the same when shopping online. Therefore, they become increasingly curious as they wait for the products they buy online. However, they tend to develop negative attitudes toward online stores in case of late delivery. Accessible distribution channels also affect customers' feelings and thoughts. For example, consumers living in rural areas may have difficulty accessing products and services. Therefore, it is critical for those consumers to work with companies with wide distribution channels.

Karadeniz and Işık (2014) determined that logistics service quality dimensions (timeliness, order quality, information quality, and responsiveness) significantly affected customer satisfaction. They also reported that timeliness and order quality had a more significant effect on customer satisfaction than information quality and responsiveness.

Research by Al-Debei and colleagues (2015) indicated that consumers' attitudes about online buying were influenced by trust and perceived benefits. Consumers' opinions regarding online purchasing are influenced by trust and perceived benefits, according to the researchers. They found that higher levels of perceived web quality correlated with greater trust in an online buying website. " Perceived web quality was found to be a strong predictor of trust and to have a favorable and significant impact on how users saw the benefits of a website. Finally, they discovered that 28% of the variance in online buying attitudes was due to differences in how people evaluated the benefits and trusted the sellers.

Lin et al. (2016) found that e-service quality and logistics service quality were strongly associated with customer satisfaction. They also reported that customer satisfaction was positively related to customer loyalty for both e-services and logistics services, but that logistics services and customer satisfaction did not directly affect customer loyalty.

In an online buying context, Düger and Kahraman (2017) looked at the impact of consumer happiness and post-purchase intention on service quality and perceived value. Consumers' post-purchase intentions were found to be positively influenced by the quality, perceived value, and contentment with their e-services.

Sevim (2018) conducted research on consumers shopping on hepsiburada.com. She found that e-service quality positively affected both perceived e-trust and perceived e-customer satisfaction. She also reported that perceived satisfaction and e-trust were the predictors of e-service quality.

Demirdöğmez et al. (2018) focused on e-commerce users to investigate the effect of perceived e-service quality on their satisfaction. They found that e-service quality significantly affected customer satisfaction. E-service quality explained 30 percent of customer satisfaction.

Faiz (2018) investigated the effect of online shopping service quality on e-satisfaction and e-loyalty. He determined that e-service quality had a positive impact on e-satisfaction and e-loyalty. Khan et al. (2019) also found that e-service quality significantly affected e-customer satisfaction and loyalty.

Tzavlopoulos et al. (2019) reported that quality was positively correlated with overall perceived value, satisfaction, and loyalty and negatively correlated with perceived risk. The individual dimensions of quality (ease of use, design, responsiveness, and security) increased perceived value levels, while ease of use, responsiveness, and customization increased overall consumer satisfaction. Overall, they found that higher quality increased satisfaction and perceived value, reduced the perceived risk, and positively affected the adoption of desired consumer behaviors observed in customer loyalty.

Chiu and Chou (2019) found that perceived brand leadership factors (quality, value, innovativeness, and popularity) positively affected satisfaction, which, in turn, significantly affected repurchase intention. They also reported that value and popularity positively affected repurchase intention. Quality affected male consumers' satisfaction more than female consumers, while popularity affected female consumers' satisfaction more than male consumers. Quality affected the satisfaction of consumers over 40 years of age more than younger consumers. However, innovativeness impacted young consumers' satisfaction and repurchase intention more than those over 40.

Luo et al. (2020) determined that e-commerce service quality (system quality, security, product diversity, and service support) and community quality positively and directly affected users' perceived trust, resulting in increased transaction intentions.

Güven (2020) analyzed user complaints about three e-commerce companies (N11, Gittigidiyor, and Hepsiburada) during the COVID-19 pandemic. The complaints were analyzed based on subcodes under the main themes for each e-commerce site. As for the main theme of "customer service/live support," users mostly complained that they could not get hold of call center agents and that the call center agents could not resolve their complaints even if they could get hold of them. Users complained the least about the rude behavior of call center agents.

Han and Li (2021) reported that advanced corporate e-commerce mechanisms had direct and indirect positive effects on farmers' online shopping intentions. They found that adoption readiness and perceived risk partially mediated between farmers' online shopping intentions and advanced corporate e-commerce mechanisms. They also determined that adoption readiness played a more indirect mediating role than perceived risk.

E-commerce service quality consists of information quality, courier services, and privacy and security. The following are research hypotheses based on the theoretical framework and literature review:

- H1: Information quality significantly affects customer trust.
- H2: Privacy and security significantly affect customer trust.
- H3: Courier services significantly affect customer trust.
- H4: Information quality significantly affects customer trust.
- H5: Privacy and security significantly affect customer trust.
- H6: Courier services significantly affect repurchase intention.
- H7: Customer trust significantly affects repurchase intention.

3. Methods and Findings

Millions of people use e-commerce shopping services. People can now order products online, even from companies across the ocean. Service quality has become more critical than ever because companies generally sell products of the same price and quality. Therefore, customers do not only want to buy quality products at affordable prices, but they also expect high-quality services. Customers attach significant importance to the following criteria: (1) They want to access information quickly on e-commerce websites, (2) they want the information to be accurate, (3) they want the websites to meet their specific needs and protect their personal information, (4) the websites should take security measures to prevent cyber-attacks, (6) the websites should offer shipping options, (7) companies should deliver products on time and intact. Customers are more likely to trust and buy from the e-commerce companies that meet those criteria.

This study investigated the effect of e-commerce service quality (information quality, courier services, and privacy and security) on customer trust and repurchase intention. The study also looked into the effect of customer trust on repurchase intention.

Data were collected using a survey, which consisted of two parts. The first part consisted of items on sociodemographic characteristics. The second part consisted of items on e-commerce service quality rated on a five-point Likert-type scale (“0=Strongly disagree” to “5=Strongly agree”). The data were collected online due to the COVID-19 pandemic. Therefore, the sample consisted mostly of social media users.

The dimensions of “information quality” and “privacy and security” were derived from Wen et al. (2014). Customer trust was analyzed using the scale developed by Rita et al. (2019). Repurchase intention was analyzed using the scale developed by Aydın & Mermertaş (2020). Courier services were analyzed using a scale based on a literature review conducted by the researchers (Lopez-Nicolas & Molina-Castillo, 2008; Chen & Chang, 2012).

The study population consisted of all adults using online e-commerce websites in Turkey. The sample consisted of 612 e-commerce users recruited using convenience sampling.

3.1. Demographic Characteristics

Table 1 shows all participants' demographic characteristics.

Table 1: Demographic Characteristics

	Frequency	Percentage
Gender		
Woman	370	60.5
Man	242	39.5
Age (years)		
18-25	313	51.1
26-35	165	27.0
36-45	74	12.1
46-55	52	8.5
≥56	8	1.3
Education (degree)		
Primary school	29	4.7
High school	115	18.8
Associate	102	16.7
Bachelor's	314	51.3
Master's	52	8.5

Occupation		
Private sector	92	15.0
Public sector	126	20.6
Self-employment (pharmacist, lawyer, etc.)	28	4.6
Artisan/company owner/merchant	21	3.4
Student	233	38.1
Housewife	51	8.3
Retired	17	2.8
Unemployed	44	7.2
Frequency of Visiting E-commerce Websites		
Once a day	56	9.2
Several times a day	160	26.1
Several times a week	125	20.4
Once every two weeks	56	9.2
Once a month	66	10.8
Once every six months	10	1.6
When I need something	139	22.7
Number of Purchases in the Last Six Months		
1-3 times	234	38.2
4-6 times	140	22.9
>6 times	179	29.2
Never	59	9.6
Total	612	100.0

Three hundred and seventy participants were women. Two hundred and forty-two participants were men. Three hundred and thirteen participants were 18 to 25 years of age. One hundred and sixty-five participants were 26 to 35 years of age. Seventy-four participants were 36 to 45 years of age. Fifty-two participants were 46 to 55 years of age. Eight participants were older than 55. Three hundred and fourteen participants had bachelor’s degrees. One hundred and fifteen participants had high school degrees. One hundred and two participants had associate degrees. Fifty-two participants had master’s degrees. Twenty-nine participants had primary school degrees. Two hundred and thirty-three participants were students. One hundred and twenty-six participants worked in the public sector. Ninety-two participants worked in the private sector. Fifty-one participants were housewives. Forty-four participants were unemployed. Twenty-eight participants were self-employed. Twenty-one participants were merchants. Seventeen participants were retired. One hundred and sixty participants visited e-commerce websites several times a day. One hundred and thirty-nine participants visited e-commerce websites when they needed something. One hundred and twenty-five participants visited e-commerce websites several times a week. Sixty-six participants visited e-commerce websites once a month. Fifty-six participants visited e-commerce websites once a day. Fifty-six participants visited e-commerce websites once every two weeks. Ten participants visited e-commerce websites once every six months. Two hundred and thirty-four participants made purchases on e-commerce websites 1-3 times in the last six months. One hundred and seventy-nine participants made purchases on e-commerce websites more than six times in the last six months. One hundred and forty participants made purchases on e-commerce websites 4 to 6 times in the last six months. Fifty-nine participants had never made purchases on e-commerce websites in the last six months.

3.2. Construct Validity and Reliability

The construct validity and reliability of the scales were established using exploratory factor analysis (EFA), confirmatory factor analysis (CFA), average variance explained (AVE), component reliability (CR), reliability analysis, and normality testing. Table 2 shows the EFA results of the e-commerce service quality scale.

Table 2: E-Commerce Service Quality Scale Exploratory Factor Analysis

Items	Information quality	Privacy and security	Courier services
IQ1	.744		
IQ2	.804		
IQ3	.671		
IQ4	.789		
IQ5	.699		
IQ6	.613		
PS1		.763	
PS2		.795	

PS3	.774	
PS4	.779	
PS6	.536	
CS1		.681
CS2		.756
CS3		.710
CS4		.791
CS5		.706
CS6		.719
CS7		.622

Kaiser-Meyer-Olkin (KMO) Test: .942 Chi-Square: 6.669.252 df:153 sig.:.000 Total variance explained: 65.098%

The Kaiser-Meyer-Olkin (KMO) was 0.942 > 0.60, for which Bartlett’s test of sphericity was significant (sig.<0.05), indicating sampling adequacy for factor analysis. The scale explained 65.098 percent of the total variance. The EFA results showed that the e-commerce service quality scale had three factors: information quality, privacy and security, and courier services. Information quality had factor loadings of 0.613 to 0.804. Privacy and security had factor loadings of 0.536 to 0.795. Courier services had factor loadings of 0.622 to 0.791. All items had factor loadings greater than 0.50. One item (PS5) was removed from the scale because it had a very low factor loading.

Table 3 shows the EFA results of the customer trust scale.

Table 3: Customer Trust Scale Exploratory Factor Analysis

Items	Factor Loading
CT1	.767
CT2	.828
CT3	.780
CT4	.828
CT5	.821
CT6	.832

KMO:.899 Chi Square: 1.927.107 df:15 sig.:.000 Total variance explained: % 65.559

The Kaiser-Meyer-Olkin (KMO) was 0.899 > 0.60, for which Bartlett’s test of sphericity was significant (sig.<0.05), indicating sampling adequacy for factor analysis. The scale explained 65.559 percent of the total variance. The EFA results showed that the customer trust scale had factor loadings of 0.767 to 0.832. All items had factor loadings greater than 0.50.

Table 4 shows the EFA results of the repurchase intention scale.

Table 4: Repurchase Intention Scale Exploratory Factor Analysis

Items	Factor loading
RI1	.869
RI2	.883
RI3	.878
RI4	.843

KMO:.827 Chi Square: 1.386.085 df:6 sig.:.000 Total variance explained: % 75.395

The Kaiser-Meyer-Olkin (KMO) was 0.837 > 0.60, for which Bartlett’s test of sphericity was significant (sig.<0.05), indicating sampling adequacy for factor analysis. The scale explained 75.395 percent of the total variance. The EFA results showed that the repurchase intention scale had factor loadings of 0.843 to 0.883.

Confirmatory factor analysis was performed after the EFA. Table 5 shows the CFA goodness of fit values.

Table 5: Confirmatory Factor Analysis Goodness of Fit Values

Variable	χ^2	df	χ^2/df	GFI	CFI	TLI	NFI	RMSEA
Criterion			≤5	≥.85	≥.90	≥.90	≥.90	≤.08
E-commerce service quality	506.446	132	3.837	0.913	0.943	0.934	0.925	0.068
Customer trust	20.877	8	2.61	0.989	0.993	0.987	0.989	0.051
Repurchase intention	0.452	1	0.452	1.000	1.000	1.000	1.000	0.000

χ^2 : Chi-Square; df: degrees of freedom; χ^2/df : Chi-Square/ degrees of freedom; GFI: Goodness of Fit Index; CFI: Comparative Fit Index TLI: Tucker-Lewis index; NFI: Normed Fit Index; RMSEA: Root Mean Square Error of Approximation

The confirmatory factor analysis showed that the scales had acceptable goodness of fit values.

Reliability and component validity tests were conducted based on the EFA and CFA. Table 6 shows the results.

Table 6: Validity and Reliability

Variable	AVE	CR	Cronbach's Alpha	Number of Items
Information quality	0.606	0.902	0.901	6
Privacy and security	0.630	0.894	0.892	5
Courier services	0.511	0.878	0.875	7
Customer trust	0.579	0.891	0.894	6
Repurchase intention	0.662	0.887	0.891	4

The scales had an AVE of > 0.50 and a CR of > 0.70, indicating component validity. All scales had a Cronbach's alpha greater than 0.70, indicating reliability.

Correlation analysis and normality testing were performed. Table 7 shows the results.

Table 7: Correlation Analysis and Normality Testing

	Information quality	Privacy and security	Courier services	Customer trust	Repurchase intention	Skewness	Kurtosis
Information quality	1					-1.127	1.333
Privacy and security	.722**	1				-.892	1.377
Courier services	.576**	.541**	1			-1.020	1.189
Customer trust	.714**	.656**	.781**	1		-.932	1.899
Repurchase intention	.678**	.641**	.756**	.800**	1	-1.014	1.916

The analysis showed a significant correlation between the variables at a significance level of 0.01 (99% confidence level).

The scale had a skewness and kurtosis between -2 and +2, indicating normal distribution.

3.3. Structural Equation Model

A structural equation model was developed to test the research model. Figure 1 shows the research model.

Figure 1: Research Model

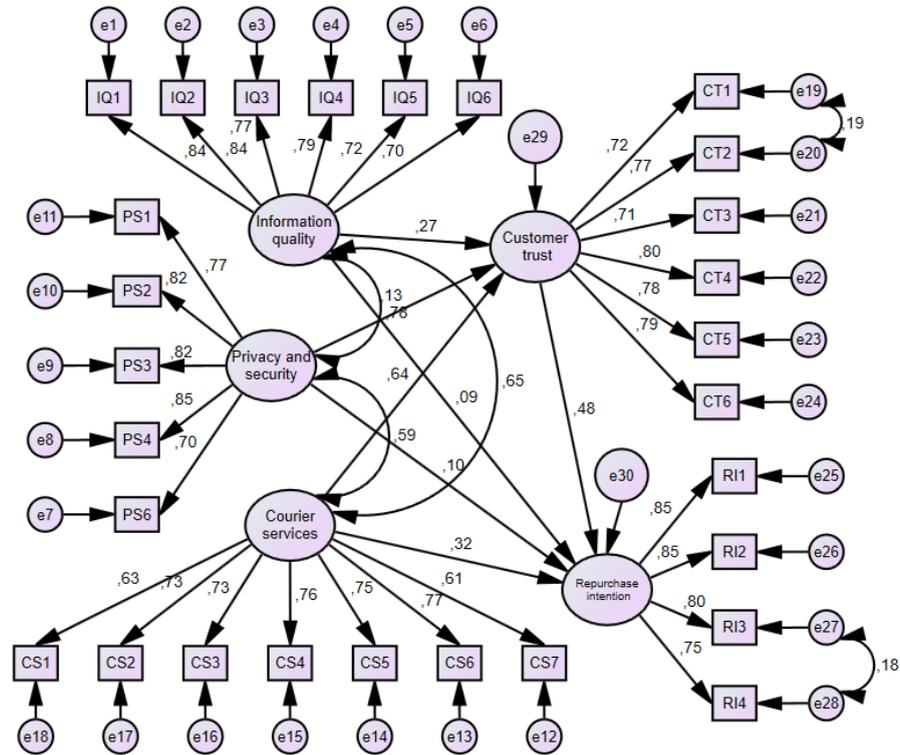


Table 8 shows the goodness of fit values for the structural equation model.

Table 8: Structural Equation Model Goodness of Fit Values

Variable	χ^2	df	χ^2/df	GFI	CFI	TLI	NFI	RMSEA
Criterion			≤ 5	$\geq .85$	$\geq .90$	$\geq .90$	$\geq .90$	$\leq .08$
Model	1.106.337	338	3.273	0.882	0.935	0.927	0.909	0.061

The analysis showed that the structural equation model satisfied the acceptable goodness-of-fit criteria. Table 9 shows the analysis results of the model.

Table 9: Model Analysis Results

Analysis Path	Standardized Estimation	Std. Error	Critical Rate	P (significance)
Customer trust <--- Information quality	0.27	0.039	5.439	***
Customer trust <--- Privacy and security	0.127	0.045	2.85	0.004
Customer trust <--- Courier services	0.638	0.052	11.847	***
Repurchase intention <--- Information quality	0.09	0.047	1.656	0.098
Repurchase intention <--- Privacy and security	0.103	0.051	2.265	0.024
Repurchase intention <--- Courier services	0.317	0.084	4.069	***
Repurchase intention <--- Customer trust	0.484	0.112	4.8	***

The structural equation model analysis showed that information quality, privacy and security, and courier services positively affected customer trust. Courier services affected customer trust more than information quality and privacy and security because it had a coefficient estimate value of 0.638, indicating that one unit increase in courier services led to a 0.638 increase in customer trust. The significant effect was at the 0.01 significance level because the significance level for these effects was $p < 0.01$. The results also showed that privacy and security, courier services, and customer trust positively affected repurchase intention. Customer trust affected repurchase intention more than privacy and security and courier services because it had a coefficient estimate value of 0.484, suggesting that one unit increase in customer trust led to a 0.484 increase in repurchase intention. The significant effect was at the 0.01 significance level because the significance level for these effects

was $p < 0.01$. Information quality did not affect repurchase intention at the significance levels of 0.01 and 0.05. This result indicated that privacy and security and courier services had a more significant effect on participants' repurchase intention than information quality.

The results confirmed H1, H2, H3, H5, H6, and H7 but rejected H4.

4. Conclusion

This study investigated the three dimensions (information quality, privacy and security, and courier services) of e-commerce service quality on customer trust and repurchase intention. The study also looked into the effect of customer trust on repurchase intention. Data were collected using a survey. The sample consisted of 612 e-commerce users from different cities in Turkey. The construct validity and reliability of the scales were established. First, a structural equation model was developed to test the research hypotheses. The structural equation model results showed that information quality, privacy and security, and courier services significantly affected customer trust. The results indicate that e-commerce companies should pay attention to information quality, privacy, system security, and logistics (courier services) to build customer trust.

The structural equation model results also showed that privacy and security, courier services, and customer trust significantly affected repurchase intention. The results indicate that e-commerce companies should pay attention to privacy and security and logistics to ensure that consumers use their websites to repurchase goods and services. In other words, e-commerce companies with higher privacy and security and better logistics are more likely to build customer trust, resulting in repurchase intention.

The Internet has become an integral part of our lives. E-commerce is one of the most groundbreaking outcomes in the Internet era. People have been using e-commerce sites to do business or shop since the second half of the 1990s. E-commerce is vital for small and medium-sized enterprises (SMEs) and big companies.

E-commerce has become an essential concept due to advances in information technologies. Companies have turned to e-commerce to keep up with changing consumption patterns and expectations and gain a competitive advantage over their rivals. Every year, more and more companies use e-commerce, resulting in a wide variety of websites and online platforms where consumers can access and compare numerous products and services. E-commerce service quality has become a critical indicator because consumers are likelier to shop on websites with high service quality. Service quality has numerous dimensions. Consumers focus on many criteria to evaluate e-commerce websites. Some of those factors are design quality, achievement quality, system quality, and customer relations. Consumers are more likely to purchase the products and services from companies that satisfy those criteria. There is a positive correlation between e-service quality and customer satisfaction. Customer satisfaction can be defined as a measure of how happy customers are with the performance of companies after purchasing goods or services. Yalçın and Baş (2012) argue that customer dissatisfaction arises when companies provide little information about their goods or services or sell low-quality goods or services. Customer satisfaction results in customer loyalty, which provides companies with a competitive advantage.

Advances in Internet technology have paved the way for a paradigmatic change in commerce. Therefore, researchers have focused on the availability, efficiency, safety, and quality of e-commerce services. Companies that provide high-quality e-commerce services improve their price policies and transportation, supply, security, and communication skills to meet their customers' needs and make a profit. Services are commercial activities to meet people's needs and provide benefits. Quality is the totality of characteristics of a product or service that bears its ability to satisfy needs. Therefore, quality is one of the most important criteria for customer satisfaction.

Consumer behavior and expectations change over time. Some factors that consumers take into account when evaluating e-commerce websites are website design, technical features, transaction methods, entertainment, service quality, etc. However, we must analyze which factors determine customer satisfaction (Bozbay et al., 2016, p.36). Companies should keep up with developments in information systems in order to provide high-quality e-commerce services and meet customers' changing demands and needs. They should also have the technical and administrative infrastructure to compete internationally (Canpolat, 2001, p.47).

E-commerce companies should use new and unique methods to gain a competitive advantage (Wang et al., 2017, p.251). Therefore, they should focus on service quality and customer satisfaction. Service quality includes all stages from the start until the end of online shopping. The better a company manages this process, the more it guarantees customer satisfaction and loyalty. Companies have to ensure customer satisfaction in order to gain a competitive advantage and make a profit. Customer expectations change because technology offers new opportunities every day. Therefore, companies should improve themselves and keep their employees updated on the latest news and changes to meet their customers' ever-changing needs and expectations (Öztürk & Seyhan, 2005, p.181).

Our results show that privacy and security are critical factors that promote customer trust and repurchase intention among e-commerce users. Therefore, e-commerce companies should take the necessary measures to protect their customers' personal information. In other words, they should invest in cyber security because privacy and security are critical for customers.

Information quality also affects customer trust. Therefore, e-commerce companies should design their websites so that customers can easily access all kinds of information about products and services. They should categorize their products and services to allow customers to access them easily. For example, websites should include size, age, gender, and color information.

Our results show that courier services significantly impact both customer trust and repurchase intention. Courier services are critical for consumers because they expect timely and accurate delivery. E-commerce companies should also offer shipping options because some customers may have shipping preferences. Not all shipping companies in small towns work every day. Some shipping companies work one day a week in some small towns. Customers' purchase decisions also depend on the shipping policies and prices e-commerce companies offer. Customers sometimes blame e-commerce companies for the mistakes made by shipping companies. Hepsiburada and Trendyol established their own distribution networks due to excessive complaints.

Today, some companies use drones to deliver goods. Therefore, researchers should investigate what online shoppers think about drone delivery. They should also determine whether delivery by small autonomous vehicles is a viable option that promotes customers' satisfaction levels and perceptions of e-commerce service quality in terms of speed, quality, and trust.

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Araştırma ve Yayın Etiği Beyanı

Araştırmacılar verilerin toplanmasında, analizinde ve raporlaştırılmasında her türlü etik ilke ve kurala özen gösterdiklerini beyan ederler.

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Çıkar Beyanı: Bu çalışmada herhangi bir kurum, kuruluş, kişi ile mali çıkar çatışması yoktur.

Etik Kurul İzni: Çalışma için Kastamonu Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştırmalar Ve Yayın Etiği Kurulu'ndan etik izin alınmıştır.