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The Impact of E-Logistics Service Quality on Customer Satisfaction, Trust Building, and Customer loyalty Among E-Shoppers in Palestine

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Abstract. E-commerce has grown significantly in the past few years and has significantly affected the retail industry worldwide, including Palestine. Due to the improved Internet connectivity, high usage of smartphones, and the young population of Palestine, the e-commerce industry has rapidly developed. This research examines the relationship between customer-perceived value, satisfaction, trust, and loyalty concerning Palestinian e-shoppers in the context of local e-commerce platforms. The quantitative data were collected using a structured survey of (278) online shoppers and analyzed using SEM to test the proposed model. The results show that perceived value does not directly affect customer loyalty; the relationship is mediated by customer satisfaction and trust. In detail, a perceived value improves customer satisfaction and trust, both antecedents of loyalty. The satisfaction and trust of the customers are not just important; they are the foundation of their loyalty. These findings suggest that e-commerce platforms in Palestine need to embrace a comprehensive approach that aims to achieve a high level of customer-perceived value, satisfaction, and trust. By focusing on these aspects, online retailers can successfully build and sustain customer loyalty, thus guaranteeing continued growth and market leadership in the growing Palestinian e-commerce industry. This research provides theoretical implications for consumer behaviors in emerging markets and managerial implications for e-commerce firms that seek to enhance customer retention strategies.

Keywords: Customer Loyalty, Customer Perceived Value, Customer Satisfaction, E-commerce, Palestine, Trust.

1. INTRODUCTION

The rapid growth of e-commerce globally has revolutionized the way consumers shop, placing significant emphasis on the importance of logistics services in the online retail environment. Efficient e-logistics, defined as the management of logistics in an online context, is critical for ensuring that customers receive their products accurately and on time. In e-commerce, logistics service quality (LSQ) significantly influences customer satisfaction, trust, and ultimately, customer loyalty. However, in regions like Palestine, where political, infrastructural, and economic challenges persist, the role of e-logistics becomes even more pronounced. The Palestinian e-commerce sector has been steadily growing, driven by increased internet penetration and a rising demand for online shopping. Yet, logistical difficulties, including inconsistent delivery times and limited infrastructure, create significant barriers for online retailers aiming to build trust and retain loyal customers.

In the context of Palestine, logistics service quality is not only a matter of operational efficiency but also a key factor in fostering trust in online retailers. Trust plays a pivotal role in e-commerce, especially in regions where consumers may already be skeptical of service reliability due to external challenges. The uncertainty regarding delivery timeliness, product conditions, and the handling of order discrepancies can severely impact customer trust, which is essential for fostering long-term customer loyalty. This study is motivated by the critical need to understand how LSQ affects trust and loyalty in the Palestinian e-commerce landscape. By examining these dynamics, this research aims to provide insights that can help online retailers in Palestine optimize their logistics operations, build trust, and enhance customer loyalty.

Trust in e-commerce is shaped by the reliability and efficiency of the logistics services provided. Customers place their trust in online platforms with the expectation that their orders will be delivered accurately, in good condition, and within the promised timeframes. When these expectations are met or exceeded, trust is reinforced, encouraging repeat business and fostering loyalty. However, in Palestine, where logistics can be unpredictable due to infrastructural limitations, the challenge of building and maintaining this trust is heightened. As a result, this study seeks to explore the relationship between LSQ, trust, and customer loyalty among e-shoppers in Palestine, highlighting the unique logistical challenges faced by the region and how they influence consumer behavior.

The primary aim of this study is to investigate the impact of e-logistics service quality on trust building and customer loyalty among e-shoppers in Palestine. To achieve this, the following research questions are addressed:

1. How do the key dimensions of logistics service quality, including timeliness, order condition, order accuracy, and order discrepancy handling, influence trust among e-shoppers in Palestine?
2. How do these dimensions of logistics service quality directly impact customer loyalty in the Palestinian e-commerce market?
3. What role does trust play as a mediator between logistics service quality and customer loyalty among e-shoppers in Palestine?

The specific objectives of this research are:

1. To evaluate the effect of timeliness, order condition, order accuracy, and order discrepancy handling on customer trust.

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2. To assess the direct impact of these logistics service quality dimensions on customer loyalty.
3. To analyze the mediating role of trust between logistics service quality and customer loyalty.
4. To provide strategic insights for Palestinian e-commerce businesses on how to enhance logistics services to build trust and improve customer retention.

This research is crucial for several reasons. First, it addresses a significant gap in the literature regarding the role of e-logistics service quality in influencing trust and loyalty in underdeveloped e-commerce markets like Palestine. Most existing studies on LSQ, trust, and loyalty are concentrated in more developed markets where logistical infrastructures are more robust. The unique challenges in Palestine, such as political instability, restricted movement of goods, and limited logistical infrastructure, create a different set of dynamics that require deeper exploration. This study contributes to the body of knowledge by focusing on these regional challenges and offering insights that are specifically relevant to Palestinian e-shoppers and businesses.

Second, the research provides practical implications for e-commerce businesses in Palestine. By understanding the impact of logistics service quality on trust and loyalty, online retailers can identify areas where they need to improve their operations. This is particularly important for building a competitive advantage in a market where logistical reliability is a key concern for consumers. The findings of this study can help e-commerce platforms in Palestine enhance their service quality, thereby improving customer satisfaction and retention rates. Additionally, the study's focus on trust as a mediator offers a nuanced understanding of how logistics services indirectly influence customer loyalty, providing businesses with actionable strategies for building stronger relationships with their customers.

Finally, this research contributes to the broader field of e-commerce by offering empirical evidence on how logistics service quality, trust, and loyalty interact in a region with significant logistical challenges. It expands the understanding of these relationships in contexts where logistical issues are more prominent, offering insights that can be applied to other developing markets facing similar challenges. By doing so, the study offers valuable contributions to the global discourse on e-logistics and customer relationship management in e-commerce.

2. LITERATURE REVIEW

2.1. Evolution of E-Logistics Service Quality

The concept of e-logistics refers to the digitalized process of managing logistics within the framework of e-commerce (Bowersox et al., 2002). Over time, the understanding and expectations of e-logistics service quality (LSQ) have evolved, encompassing several dimensions such as order accuracy, order condition, timeliness, and order discrepancy handling. According to Mentzer et al. (2001), LSQ is a multidimensional construct that plays a crucial role in shaping consumer perceptions of online retailers and their services.

The growing emphasis on LSQ is driven by the rise of digital marketplaces and the increasing need for reliability in delivery services. As noted by Collier & Bienstock (2006), consumers now expect error-free deliveries, with options for personalization and flexibility in shipping. These expectations have further expanded with the advent of technologies that allow real-time tracking and automated updates (Kawa, 2020). In this context, LSQ has become not only a factor of operational efficiency but a strategic asset for online retailers (Fernandes et al., 2018).

2.1.1. Timeliness (TM)

Timeliness in e-logistics refers to the accuracy of delivering products according to promised schedules. Ellitan (2023) describes timeliness as the period between placing and receiving an order, emphasizing that if deliveries meet customers' time expectations, satisfaction remains high. Similarly, Saura et al. (2008) assert that the timeliness of deliveries is positively correlated with customer satisfaction, showing its critical influence on the perceived quality of logistics services.

Further research by Mentzer et al. (2001) highlights that timeliness is heavily dependent on the efficiency of transportation systems. In the e-commerce sector, delivering products on time not only impacts customer satisfaction but also affects loyalty. Customers are more likely to return to an online retailer that consistently delivers within the expected timeframe (Sutawidjaya & Yulianti, 2010). Therefore, ensuring the reliability and promptness of delivery is essential for maintaining a positive customer experience.

2.1.2. Order Condition (OC)

Order condition refers to the state in which goods are received by the customer, without any damage or defect. Hafez (2021) defines order condition as the retailer's ability to ensure that products arrive undamaged, reflecting how well the items were handled during transportation. Revindran et al. (2020) found that there is a significant positive relationship between order condition and customer satisfaction.

Maintaining the integrity of orders is crucial because damaged goods lead to customer dissatisfaction, increased returns, and order cancellations (Akıl, 2022). The condition of delivered items is directly linked to the customer's perception of service quality. Mentzer et al. (2001) and Stank et al. (2003) emphasize that safe handling and proper packaging during transportation are essential factors in ensuring that products reach customers in optimal condition. Companies must proactively address factors that could lead to damaged goods,

such as using specialized packaging for fragile items (Zlatkovic, 2013). Inadequate order conditions not only affect customer satisfaction but also have a direct impact on loyalty and brand perception (Sutrisno et al., 2019).

2.1.3. Order Accuracy (OA)

Order accuracy involves delivering the correct product in the right quantity as per the customer's order. Mentzer et al. (2001) describe order accuracy as a critical dimension of logistics service quality, affecting the overall customer experience. Consumers expect their orders to match their initial purchase details without any mistakes or substitutions (Akıl, 2022).

Inaccurate deliveries, such as wrong products or incorrect quantities, can lead to customer dissatisfaction and product returns (Xing et al., 2011). According to Politis et al. (2014), order accuracy is an essential indicator of performance for logistics providers and significantly impacts customer trust. In regions where logistical challenges are prevalent, like Palestine, ensuring accurate orders becomes even more critical to maintaining consumer confidence in e-commerce platforms. Jang et al. (2014) highlight the importance of logistics providers understanding and accurately fulfilling the service requested by customers to uphold service quality.

2.1.4. Order Discrepancy Handling (ODH)

Order discrepancy handling refers to how effectively a company manages problems that arise during the order fulfillment process, such as incorrect or damaged items. Ellitan (2023) explains that efficient handling of discrepancies is essential to maintaining customer trust, especially when issues arise after an order is received. The quality of a company's reverse logistics operations, such as managing returns and product exchanges, plays a critical role in enhancing customer satisfaction (Rajendran et al., 2018).

Mentzer et al. (2001) describe order discrepancy handling as the firm's ability to resolve inconsistencies in the fulfillment process and manage returns effectively. Efficient return management not only helps to improve customer perceptions of service quality but also reduces the negative impact of product returns on overall sales (Chen et al., 2017). In e-commerce, where product returns are often inevitable, particularly in categories like clothing, a clear return policy and hassle-free process are vital for sustaining customer loyalty (Zhang et al., 2015). Research by Gaudenzi et al. (2021) supports the notion that there is a positive relationship between order discrepancy handling and customer satisfaction, reinforcing its importance in overall service quality evaluation.

The quality of e-logistics services, reflected in dimensions such as timeliness, order condition, order accuracy, and order discrepancy handling, is crucial for shaping customer satisfaction and loyalty in e-commerce. Timeliness and order accuracy directly impact the perceived reliability of an online retailer, while order condition and discrepancy handling address the integrity of delivered products and how well problems are resolved. For e-commerce retailers, particularly in markets like Palestine, focusing on improving these LSQ dimensions is essential for building customer trust and fostering long-term loyalty.

2.2. Trust in Online Retail Platforms

Trust in e-commerce is a fundamental determinant of consumer behavior, playing a crucial role in shaping customers' decisions to engage with online retailers. Defined as the consumer's belief in the e-retailer's reliability, fairness, and competence, especially under conditions of risk and uncertainty, trust mitigates the inherent risks of online shopping (J. Chen & Dibb, 2010). It reflects a customer's confidence that the retailer will deliver on promises made, provide secure transactions, and protect personal information. According to Gefen et al. (2003), trust is particularly important in the context of e-commerce because the virtual nature of online transactions removes the tangible assurances customers traditionally rely on in physical stores. Trust encompasses several key dimensions: credibility, privacy, security, and intentionality, each contributing to the overall trustworthiness of an e-retailer.

Credibility, as Kassim & Asiah Abdullah (2010) describe, is the belief that the e-retailer possesses the necessary expertise and reliability to fulfill its commitments, including delivering the correct products on time. Privacy and security are closely related, addressing customers' expectations that their personal and financial information will be safeguarded against unauthorized access (N. Chen & Yang, 2023). In a world of increasing cyber threats, e-retailers must ensure robust data protection measures to foster consumer trust. Furthermore, intentionality reflects the customer's perception that the retailer will act fairly and honorably, including transparent policies on returns and handling of complaints (Aslam et al., 2019). Together, these dimensions form the foundation of trust, reducing the perceived risks associated with online transactions.

Trust plays a pivotal role in influencing consumer loyalty within e-commerce. Miao et al. (2022) argue that trust acts as a risk-mitigation mechanism, reducing uncertainties and making customers more comfortable engaging in transactions. In e-commerce, where physical interaction with products is absent, trust effectively substitutes for the quality assurance that customers rely on in traditional shopping environments (Elwalda & Lu, 2016). Customers are less likely to engage in online purchases if they do not trust the platform, as the perceived risks—ranging from incorrect deliveries to misuse of personal information—are too great. Marriott et al. (2017) and Shilpa & Rathi (2020) emphasize that trust significantly influences consumer behavior, as customers will only transact with e-retailers they deem trustworthy.

The relationship between trust and customer loyalty is well-established. Trust leads to higher levels of customer satisfaction, which in turn fosters loyalty and repeat business. Kassim & Abdullah (2010) found that trust positively influences relationship commitment, with consumers who trust an e-retailer more likely to become loyal, returning customers. Ginting et al. (2023) further highlight that trust reduces the costs associated with acquiring new customers, as trusted e-retailers benefit from repeat business and positive word-of-mouth referrals. Trust is particularly crucial in the highly competitive online marketplace, where customer retention is key to long-term success. Soyeun et al. (2020) and Kalia et al. (2021) suggest that customers who trust service providers are more likely to remain loyal and commit to future transactions, strengthening the retailer-customer relationship over time.

Moreover, trust can act as a significant differentiator in e-commerce. Rita et al. (2019) noted that trust is often the deciding factor for customers when choosing between multiple online platforms, especially in competitive markets. The establishment of a trust-based relationship enhances the customer's willingness to engage in long-term interactions with the e-retailer, ultimately contributing to the company's profitability and sustainability. Failure to uphold trust, however, can result in immediate customer churn, as Nowicka (2018) indicates that a breach of trust can cause lasting damage to customer relationships and brand reputation. This underscores the importance of e-retailers consistently maintaining and enhancing trust to ensure customer retention.

Trust is a cornerstone of e-commerce success, deeply influencing customer engagement, satisfaction, and loyalty. E-retailers must continuously build and safeguard trust by ensuring credibility, protecting customer data, and demonstrating fair and ethical business practices. In the highly competitive digital marketplace, trust is not only vital for attracting and retaining customers but also serves as a strategic advantage that fosters long-term business growth and profitability.

2.3. Customer Loyalty

Customer loyalty (CL) in e-commerce is recognized as a critical factor contributing to the sustained success and profitability of businesses. Defined as the desire or tendency of customers to consistently make repeat purchases from a company over a long period, loyalty is central to retaining customers and generating long-term benefits (Venkatakrishnan et al., 2022). Loyalty is widely seen as a direct outcome of customer satisfaction, where satisfied customers are more likely to engage in repeated transactions and recommend the retailer to others, thus reinforcing their commitment to the brand (Bi, 2019). According to Kalia et al. (2021), customer loyalty can be explained as the result of positive experiences with the company, which fosters a continuous preference for its products or services.

The importance of customer loyalty extends beyond the transactional aspect; it is closely linked to an organization's growth and survival. As Wattoo & Iqbal (2022) highlight, loyalty is a key driver of profitability, ensuring that businesses can achieve sustainable growth by minimizing customer churn and maximizing repeat purchases. Loyal customers are also less susceptible to negative information about a brand and are more likely to defend it, even in competitive environments (Donio et al., 2006).

The connection between customer satisfaction and loyalty has been extensively studied, with researchers consistently finding that satisfied customers are more likely to exhibit loyalty behaviors. Studies such as those by Zhang et al. (2017) and Waari (2019) argue that satisfaction plays a pivotal role in motivating customer loyalty, which can manifest in the form of positive reviews, repeat purchases, or recommendations to others. In online retail, satisfaction is particularly influential, as it directly impacts loyalty by fostering trust and encouraging continued engagement with the retailer. Martin et al. (2015) and Rose et al. (2012) also found that online customer satisfaction positively correlates with online customer loyalty, emphasizing the significance of a positive online shopping experience.

Customer loyalty is not solely about repeat purchasing behavior; it also involves an attitudinal commitment to the brand. Jacoby and Chestnut (1978) argued that true loyalty encompasses both behavioral and attitudinal dimensions. This means that loyalty is not just about repeat transactions but also about customers' emotional attachment to the brand, their commitment to maintaining a relationship with the retailer, and their willingness to advocate for the brand (Donio et al., 2006). This attitudinal commitment is often reflected in customers' positive beliefs and feelings about the brand, as well as their likelihood to recommend it to others.

In the context of e-commerce, trust plays a significant mediating role in strengthening the relationship between customer satisfaction and loyalty. Studies by Dabbous et al. (2020) and Qalati et al. (2021) found that trust enhances consumer engagement, brand awareness, and purchase intent, which are all essential to fostering loyalty. Trust is particularly crucial in online environments, where customers may be more hesitant to engage without the assurances of security and reliability (Bylok, 2022). The importance of trust is further underscored by the finding that a lack of trust can discourage customers from participating in online transactions or engaging with the retailer (Zafar et al., 2021).

Customer loyalty is, therefore, a complex and multidimensional construct, influenced by factors such as satisfaction, trust, and the quality of interactions between customers and the retailer. As Mansouri et al. (2022) suggest, understanding the factors that drive customer loyalty can provide businesses with valuable insights into

achieving long-term profitability and sustaining a competitive advantage in the marketplace.

2.4. Palestinian Online Retail Context

The landscape of online retail platforms in Palestine reflects a complex tapestry of technological adoption, cultural influences, and emergent business models shaped by both global trends and local conditions. Within this milieu, researchers have probed into the various factors that drive the effectiveness and uptake of e-commerce in a Palestinian context.

(Abdalnasser N. N. Daana & Rawya Nazmi Da'na, 2023) offer an in-depth look at consumer behavior in Palestine, especially among students, in relation to online shopping. Their study foregrounds brand recognition, web-interface design, and consumer demographics as pivotal elements shaping online shopping behaviors. They find that while brand recognition and web design significantly influence consumer behavior, factors such as gender and income do not.

(Abumandil et al., 2021) focuses on the adoption of B2B e-commerce among Palestinian companies during the COVID-19 pandemic. The study examines how technical, organizational, and environmental factors influence e-commerce adoption, with a particular emphasis on trust as a moderating variable. This research illuminates the intricacies of B2B e-commerce, where relationship quality and the role of trust are paramount in digital transactions during uncertain times.

(Rabayah et al., 2022) delve into the cultural nuances that impact e-commerce adoption in Palestine, suggesting that understanding local cultural factors is crucial for online retail platforms to gain traction. Their work suggests that aligning e-commerce strategies with the cultural context is essential for meaningful engagement with Palestinian consumers.

Moreover, the legal and infrastructural aspects of e-commerce are tackled by (Hasan & Zulhuda, 2015), who underscores the challenges of cloud computing within the Palestinian e-commerce sector. These challenges revolve around legal issues, data security, and the requisite harmonization of laws to facilitate a robust e-commerce infrastructure.

(Herzallah & Mukhtar, 2015) investigate how internal organizational factors influence e-commerce adoption among Palestinian SMEs, which is critical in a burgeoning digital economy. Their findings highlight the need for building adequate technological capabilities and fostering digital literacy within organizations to harness the full potential of online retail platforms.

The literature thus paints a picture of an evolving online retail sector in Palestine, marked by unique challenges and opportunities. Studies indicate a pressing need for infrastructure development, legal reforms, and an understanding of cultural dynamics to leverage the benefits of online retail platforms fully. In synthesizing these insights, it becomes clear that for Palestinian online retail platforms to thrive, they must navigate a path that is responsive to both global e-commerce trends and the nuanced demands of the local Palestinian market.

3. CONCLUSION OF THE LITERATURE REVIEW

The relationship between logistics service quality (LSQ), trust, and customer loyalty is crucial to the success of e-commerce platforms, especially in regions like Palestine where logistical challenges can be significant. LSQ encompasses the accuracy, timeliness, and condition of deliveries, all of which directly impact customer satisfaction. In e-commerce, where consumers heavily depend on the efficiency of logistics to receive their purchases, high LSQ fosters customer trust by ensuring that orders are handled reliably and professionally. Previous research demonstrates that consistent, high-quality logistics services significantly enhance customer satisfaction, which in turn builds trust and encourages repeat purchases (Mentzer et al., 2001; Cao & Li, 2015). In Palestine, where the logistics infrastructure faces unique obstacles due to political, economic, and geographical constraints, understanding LSQ's role in building trust and loyalty is vital for e-commerce growth.

Trust serves as a key intermediary between LSQ and customer loyalty in e-commerce settings. In markets like Palestine, where uncertainties surrounding delivery reliability and product condition are prevalent, trust becomes even more critical. Consumers who develop trust in an e-commerce platform are more likely to overlook occasional disruptions and continue their engagement with the platform. Trust is often cultivated through positive, consistent LSQ experiences, such as timely deliveries, accurate orders, and effective management of discrepancies. Over time, this trust transforms into loyalty, encouraging customers to make repeat purchases and recommend the platform to others. Research shows that trust is often a stronger predictor of loyalty than satisfaction alone, particularly in high-risk environments such as online shopping (Boateng, 2018; Boonlertvanich, 2019).

In the Palestinian e-commerce context, customer loyalty heavily relies on online retailers' ability to build and sustain trust through reliable logistics services. Given the challenges that can affect delivery accuracy and timeliness due to infrastructural and political barriers, LSQ directly influences the level of trust customers place in e-commerce platforms. For these platforms to succeed, they must ensure that their logistics services consistently meet customer expectations. Once trust is established, customers are more likely to exhibit loyalty behaviors, including repeat purchases, positive recommendations, and a reduced likelihood of switching to competitors. Studies in other regions, such as Boonlertvanich's (2019) work in Thailand's banking sector, highlight the strong link between LSQ, trust, and loyalty, suggesting that similar patterns could emerge in

Palestine, though with localized differences.

This research on the impact of e-logistics service quality on trust building and customer loyalty among e-shoppers in Palestine is essential for addressing the distinct challenges of the Palestinian market. By examining how LSQ contributes to trust and subsequently customer loyalty, this study seeks to provide valuable insights for local e-commerce businesses looking to strengthen their competitive advantage. Furthermore, the findings will offer strategies to enhance logistics operations, fostering greater consumer trust and loyalty, ultimately supporting the sustainable growth of e-commerce in Palestine despite the region's infrastructural and geopolitical complexities.

4. RESEARCH METHODOLOGY

This study adopts a quantitative approach, utilizing a structured questionnaire to collect data from the target population. This method is chosen to effectively address the research questions by providing a comprehensive understanding of the impact of e-logistics service quality on trust building and customer loyalty among e-shoppers in Palestine.

The structured questionnaire allows for the systematic collection of data, ensuring that responses can be quantified and analyzed statistically. This approach enables the researcher to draw reliable conclusions about the relationships between logistics service quality dimensions, trust, and customer loyalty in the context of Palestinian e-commerce. Through this method, the study aims to capture the perceptions and behaviors of e-shoppers, offering valuable insights into how LSQ influences trust and loyalty in this unique market.

4.1. Developing the Conceptual Model

The conceptual model of this study is developed to explore the relationships between e-logistics service quality (LSQ), trust (ET), and customer loyalty (CL) in the context of e-shoppers in Palestine. The model focuses on four dimensions of LSQ: timeliness (TM), order condition (OC), order accuracy (OA), and order discrepancy handling (ODH). Each of these dimensions is hypothesized to have a direct impact on both trust and customer loyalty. Moreover, the model suggests that trust acts as a mediator between LSQ and customer loyalty. This conceptual model will guide the research in examining how various aspects of logistics service quality influence the trust and loyalty of Palestinian e-shoppers.

4.2. The Study's Variables

The study investigates three key variables:

- Logistics Service Quality (LSQ): Comprising four dimensions—Timeliness (TM), Order Condition (OC), Order Accuracy (OA), and Order Discrepancy Handling (ODH).
- Trust (ET): The belief that e-commerce platforms will deliver on promises and protect consumers' interests.
- Customer Loyalty (CL): The likelihood of e-shoppers to continue purchasing from the same platform and recommend it to others.

4.3. Conceptual Model and Research Hypotheses

This study aims to build on existing research to gain a deeper understanding of the relationship between e-logistics service quality (LSQ), trust (ET), and customer loyalty (CL) in the context of e-shoppers in Palestine. The conceptual model provides a comprehensive view of how different dimensions of LSQ contribute to trust building, which in turn influences customer loyalty. The key dimensions of LSQ in this study include timeliness (TM), order condition (OC), order accuracy (OA), and order discrepancy handling (ODH), all of which are vital to the customer experience in e-commerce.

Central to the model is the role of LSQ, which is conceptualized as a strategic factor influencing trust and loyalty. This research examines how these LSQ dimensions directly affect trust and customer loyalty, which are essential for the long-term success of e-commerce platforms. Additionally, the model posits that trust mediates the relationship between LSQ and loyalty, adding a nuanced layer to understanding the dynamics between service quality and consumer behavior. The conceptual model serves as a theoretical framework for testing the hypotheses and understanding the interactions between logistics services, trust, and loyalty.

The conceptual model is shown in Figure (1) Based on a previous review of relevant literature.

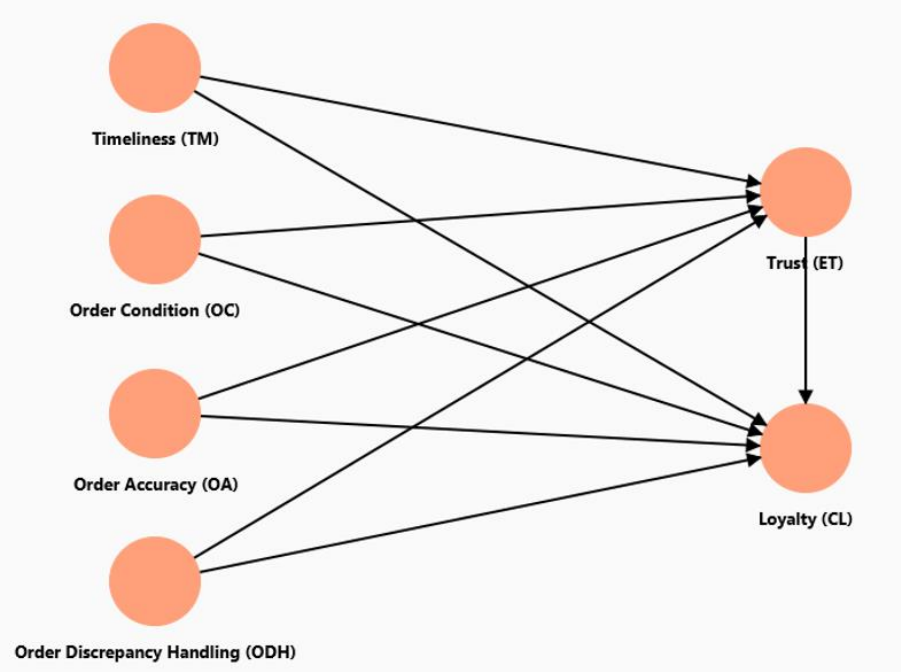


Figure 1: Research Model.

The proposed research model presents a detailed view of how e-logistics service quality impacts trust and loyalty among Palestinian e-shoppers. The model suggests that specific dimensions of LSQ—such as timeliness, order condition, order accuracy, and order discrepancy handling—directly influence trust (ET) and customer loyalty (CL). Trust, in turn, is hypothesized to positively influence customer loyalty. This relationship underscores the importance of LSQ as a crucial factor for building trust and fostering long-term customer loyalty.

The theoretical foundation of this study draws upon the Expectation-Confirmation Theory (ECT) and the Relationship Marketing Theory (RMT) to provide a comprehensive understanding of how logistics service quality (LSQ), trust, and customer loyalty interact in the context of e-commerce in Palestine. The ECT, as proposed by Oliver (1980), posits that customer satisfaction—and by extension, loyalty—arises when expectations are met or exceeded by the service provider. This theory is particularly relevant when examining LSQ dimensions such as timeliness, order accuracy, and order condition, as consumers have explicit expectations regarding delivery performance. When these expectations are fulfilled, they confirm the reliability of the e-commerce platform, fostering trust and increasing the likelihood of repeat purchases, which strengthens customer loyalty. Empirical studies by Mentzer et al. (2001) and Cao & Li (2015) support this notion by indicating that high levels of LSQ are critical to customer satisfaction and trust-building, which are precursors to loyalty in e-commerce.

In addition, Relationship Marketing Theory (RMT), developed by Berry (1983), emphasizes the importance of building long-term relationships with customers through trust, commitment, and the consistent delivery of superior service quality. The theory is grounded in the idea that loyalty is not simply a transactional outcome but is developed over time through positive, trust-based interactions. This study applies RMT to demonstrate how LSQ, through its various dimensions such as order discrepancy handling and order accuracy, acts as a mechanism for building and maintaining trust. Trust, in turn, plays a central role in driving customer loyalty, as demonstrated by previous research (Boonlertvanich, 2019; Boateng, 2018). The theoretical framework therefore supports the notion that enhancing LSQ is an essential strategy for developing trust and fostering long-term loyalty, especially in high-risk environments like online shopping in Palestine.

Theoretically founded and empirically supported, LSQ dimensions such as timeliness, order condition, and discrepancy handling, when effectively managed, serve as strategic resources that promote competitive advantage by cultivating trust and loyalty. These logistics services are not just operational necessities but also strategic assets, as they align with the core tenets of RMT and ECT by facilitating continuous positive customer experiences. In doing so, they help businesses differentiate themselves in a competitive e-commerce landscape. The interplay between LSQ, trust, and loyalty is further validated by studies in similar markets, which indicate that improvements in LSQ lead to increased customer retention and brand loyalty (Al-Adwan et al., 2020; Boonlertvanich, 2019). Consequently, this research contributes to a deeper theoretical understanding of how e-logistics services drive customer loyalty by leveraging trust as a key mediating factor.

Integrating these perspectives, we propose the development of the following hypotheses:

H_1: Timeliness (TM) positively impacts Trust (ET).

H_2: Order Condition (OC) positively impacts Trust (ET).

H_3: Order Accuracy (OA) positively impacts Trust (ET).

H_4: Order Discrepancy Handling (ODH) positively impacts Trust (ET).
H_5: Timeliness (TM) positively impacts Customer Loyalty (CL).
H_6: Order Condition (OC) positively impacts Customer Loyalty (CL).
H_7: Order Accuracy (OA) positively impacts Customer Loyalty (CL).
H_8: Order Discrepancy Handling (ODH) positively impacts Customer Loyalty (CL).
H_9: Trust (ET) positively impacts Customer Loyalty (CL).

This conceptual model seeks to bridge the gap in understanding how the quality of e-logistics services influences trust and loyalty among Palestinian e-shoppers. The logistical environment in Palestine is unique, with infrastructural and political challenges often complicating the timely and accurate delivery of goods. Therefore, understanding the impact of LSQ dimensions such as timeliness, order condition, and order accuracy on trust and customer loyalty is vital for local e-commerce businesses seeking to build strong relationships with their customers.

This research is especially pertinent as it focuses on trust, a key factor in customer loyalty, which is often more critical than satisfaction alone in high-risk environments like online shopping (Boateng, 2018). By exploring the mediating role of trust between LSQ and customer loyalty, the study offers valuable insights for improving customer retention strategies, ultimately supporting the growth and sustainability of e-commerce platforms in Palestine. Through this model, the study will provide empirical evidence on how enhancing logistics services can lead to greater consumer trust and long-term loyalty in an increasingly competitive e-commerce landscape.

4.4. Research Design

The research employs a quantitative approach, using structured questionnaires to gather data from e-shoppers in Palestine. This method allows for systematic data collection and statistical analysis, providing insights into the relationships between LSQ, trust, and customer loyalty. The structured nature of the questionnaire ensures that the data collected is consistent and can be quantitatively analyzed to test the research hypotheses.

4.5. Designing the Tool

The research tool is designed as a structured questionnaire divided into three sections:

1. Demographic Profile: Includes questions on gender, age, occupation, and education.
2. Online Shopping Behaviors: Captures data on the frequency of online purchases, types of products bought, and online shopping experience.
3. LSQ, Trust, and Loyalty: Measures respondents' perceptions of the timeliness, order condition, accuracy, discrepancy handling, trust, and loyalty.

The tool draws on established scales for LSQ (Akil & Ungan, 2022), Trust (Saoula et al., 2023), and Loyalty (Yum & Kim, 2024), ensuring validity and reliability.

4.6. Population, Sample, and Subjects

The population for this study consists of e-shoppers in Palestine who have made online purchases. The sample size is determined using a non-probability convenience sampling technique, targeting approximately 300 respondents. These individuals represent diverse demographic backgrounds, including different age groups, occupations, and levels of online shopping experience. The study aims to capture a comprehensive understanding of the impact of LSQ on trust and loyalty across a wide range of e-shoppers.

4.7. Data Collection

Data is collected through online questionnaires distributed via email, SMS and social media platforms. Respondents are asked to answer questions related to their online shopping behaviors, perceptions of logistics service quality, trust in online platforms, and their level of loyalty. The use of online distribution methods is particularly appropriate given the research focus on e-shoppers. The data collection period from September to November 2024.

4.8. Data Analysis

The data analysis will be conducted using statistical techniques, primarily Structural Equation Modeling (SEM), to test the relationships proposed in the conceptual model. Descriptive statistics used to summarize the demographic data and shopping behaviors of respondents. The hypotheses tested by analyzing the direct effects of LSQ dimensions on trust and customer loyalty, as well as the mediating role of trust. Statistical software such as SPSS and AMOS will be used to conduct the data analysis, ensuring robust and reliable results.

This research aims to provide valuable insights into how improvements in e-logistics service quality can enhance trust and customer loyalty among Palestinian e-shoppers, ultimately offering strategic recommendations for local e-commerce businesses to optimize their logistics services and foster stronger customer relationships.

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