

INFLUENCE OF ONLINE REVIEWS ON CUSTOMER SATISFACTION IN E-COMMERCE LOGISTICS FIRM: EVIDENCE FROM TEMU NIGERIA

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Abstract

The e-logistics industry is faced with increasing competition, and as a result, the companies in this industry are creating an online presence for sales maximization. By consulting social media and review websites, customers have more alternatives to consider during choice-making decisions. This study develops a multifaceted model to recognize the influence of service quality and e-word of mouth on customer satisfaction and the impact of customer satisfaction on word of mouth. Data were gathered from one hundred and fifty (150) customers of TEMU in Nigeria through a non-probability sampling technique. The participants were customers who have patronized TEMU and provided feedback on the products purchased. Structural Equation Modeling (SEM) was employed to analyze the collected data and test the proposed hypotheses. The findings indicate that service quality dimensions and e-WOM have positive effects on customer satisfaction. Furthermore, this study reinforces that customer satisfaction has a positive influence on customers' WOM intentions. It was recommended in the study that the management of TEMU Nigeria should either integrate transportation (for last-mile delivery) into their service or list out available couriers on the delivery page for customers to select to enhance timely delivery of ordered products. The organization should explore the benefits of service quality factors and social media channels to meet and exceed customers' expectations in order to bolster the quality

of services and boost customer satisfaction, attract new customers, and retain existing customers.

Keywords: Customer satisfaction, E-word of mouth, Online reviews, Service quality, Word of mouth

1. Introduction

The e-commerce industry has experienced rapid growth in recent years, providing consumers with increased access to goods and services at more convenient times and locations. It has played a significant role in transforming the way businesses operate and consumers shop (Zhang *et al.*, 2020). The growth of this industry has created jobs across various sectors, such as software development, logistics, digital marketing, and customer service (Asadi & Hemadi, 2018). These opportunities enabled businesses to reach a global customer base, providing them with access to markets that were previously inaccessible. E-commerce can be more environmentally sustainable than traditional retail, as it reduces the need for physical stores and can lead to more efficient delivery and transportation systems (Kunesova & Micik, 2015).

The industry has contributed to the growth of the global economy, creating new opportunities for businesses and generating revenue for governments through taxes and other fees. The growth of e-commerce has brought numerous benefits to all stakeholders, including consumers, businesses, and the government (Moiseev *et al.*, 2023). The growth of the e-commerce industry does not come without its benefits; it also presents many challenges (Risberg, 2023). One of the most significant benefits of the e-commerce industry is the increased convenience it offers consumers (Choshin & Ghaffari, 2017; Mich, Franch, & Gaio, 2003). Additionally, it can also provide consumers with a wider selection of goods (Barnes & Vidgen, 2002; Antoniou & Batten, 2011; Ifinedo, 2011; Agarwal *et al.*, 2017; Alarifi, Alsaleh & Alomar, 2017; Asadi & Hemadi, 2018; Ehikioya & Guillemot, 2020).

This study is centered on TEMU, which is an electronic commerce (e-commerce) company that was founded in July 2022 and fully launched in September 2022. It is essential to note that the goal of the company as an e-commerce company cannot be fully realized not until the ordered products are timely delivered to the door-step of the customer; not just that the goods are delivered to the door-step of the customers but the exact ordered product must be delivered to the door-step of the customer at the right time, and in the right condition. With emphasis on time and space utility, the introduction of logistics comes into play. Hence, integrating e-commerce with the process of managing ordering, warehousing, and transportation of the ordered products is referred to as e-commerce logistics or electronic logistics (e-logistics). Since TEMU engages in some of the components of logistics, this study will not only identify TEMU as an e-commerce company, but also as an e-commerce logistics company or e-logistics company.

Research Problem

With the increasing number of e-logistics companies, customers' purchasing decisions of e-logistics firms remain critical and challenging. This highlights the significance of customer relationships with existing customers to provide them with the available options. Hence, this study focuses on the quality level of e-commerce logistics firms, as this relates to customer satisfaction and the impact of customer satisfaction on customers' WOM intentions.

Customers consider the quality of services they received from their current e-logistics, and compare it with other similar e-logistics. In fact, these factors can play a major role in deciding whether to patronize the current e-logistics company or move to another one. Moreover, the level of customer satisfaction plays a vital role in disseminating positive or negative experiences with prospective customers.

In the past few years, the market has witnessed the expansion of online social networks and their growth as one of the leading marketing forces. With over a billion users interacting online, such as Facebook, Twitter, and TikTok, the importance of these media platforms has evolved to create connections with customers globally as well as influence their communication habits (Mahmood & Sismeiro, 2017).

Nowadays, people tend to compare their required goods and services in a network-like manner and consider any available resources, particularly online materials such as rating websites, to formulate an opinion and determine a final selection without the restriction of time and place (Lacka, Chan & Yip, 2014; Zerbini *et al.*, 2022). Based on the importance of the service, consumers are more conscious in their attempt to mitigate their risk and arrive at a wise option rather than lose time or money (Torkzadeh & Dhillon, 2002). Word of mouth and electronic word of mouth have become the main channels to transfer and share information among customers with the view of learning and gaining more knowledge about products or services (Erkan & Evans, 2016; Konuk, 2019).

Online environments have expanded the reach of consumer viewpoints efficiently and expediently beyond their friends and families. Thus, consumers are able to disseminate their opinions and knowledge about any product and service and influence other consumers' purchasing decisions globally (Wang & Zhang, 2023; Choshin & Ghaffari, 2017; Cabosky, 2016; Mich, Franch & Gaio, 2003). Social media has transformed users from passive to active consumers who generate content about products, services, and consumption experiences, thus having a profound influence on their behaviors (Rosario & Raimundo, 2021; Little child, 2020; Duan & Dholakia, 2017; Pires, Stanton & Salavrakos, 2010).

Quality plays a pivotal role in the selection of any service, and corporations in all industries strive to create a sustainable customer value proposition for their products and services. Service quality refers to a customer's comparison of service expectations as it relates to a company's performance. Service quality is one of the most important dimensions when companies try to evaluate customer relationships and the level of customer satisfaction (Bueno & Gallego, 2021). The authors of this study consider the importance of service quality constituents in a service quality

model in choosing a specific service, with a view to gaining knowledge about quality factors that impact e-logistics selection.

This study is an attempt to fill the gap in the area of customer satisfaction by considering the impact of social media and e-WOM and service quality on customer satisfaction, in addition to the relationship between customer satisfaction and WOM. The main purpose of this study is to explore the relationship between service quality and customer satisfaction, and how it results in more customers through WOM using TEMU Nigeria as a case study.

2. Literature Review

Electronic Commerce Logistics or Electronic Logistics

Electronic commerce logistics (E-commerce logistics) or electronic logistics (E-logistics) is a process whereby consumers visit web stores from the comfort of their homes using Personal Computers or internet-enabled mobile devices to order products (goods or services) from a seller over the Internet, and the ordered products are delivered to their doorstep (Adeniran, Olorunfemi & Akanmu, 2025). It is quite different from electronic commerce (e-commerce) because e-commerce is limited to the transaction of goods and services over an electronic network (Adeniran, Olorunfemi & Akanmu, 2025) without transportation to the door-step of the customer. E-commerce logistics is usually viewed as an online marketplace of any kind of business, such as banking, webshops and services sold online and ordered items are delivered to the door-step of the customer. It is built on technologies like online transaction processing, supply chain management, automated data collection system, electronic funds transfer, inventory management systems, and internet marketing.

Examples of e-commerce logistics firms in Nigeria are Jumia Nigeria, Konga, PayPorte, Slot.ng, Kara, Printivo Store, Jiji Nigeria, Obiweze, Terminal Africa, DoLessons, TradeDepot, Kobo360, Buypower, Topship, DayDone, Remedial Health, Temu Nigeria, and many more. According to (Cihan, 2024), Nigeria is the 52nd largest market for e-commerce with a predicted revenue of USD 2,684.6 million by 2024, placing it ahead of Egypt. Revenue is expected to show a compound annual growth rate (CAGR 2024-2028) of 12.8%, positioning it in a projected market volume of USD 4,339.5 million by 2028. With an expected increase of 60.5% in 2024, the Nigerian e-commerce market contributed to a worldwide growth rate of 10.4% in 2024. For instance in Nigeria, global e-commerce sales are expected to increase over the next years (Cihan, 2024).

Internet Usage and Social Media

Internet and social media usage is booming, which is among the major factors that enhance e-commerce logistics are the availability of the internet and internet-enabled devices. There are more than 5 billion unique mobile device users in the

world today (more than 4.5 billion internet users and 3.8 billion social media users), which is a 9% increase since 2019 (Global Digital Report, 2020).

With the availability of the Internet and internet-enabled devices, internet user penetration in Nigeria saw a slight increase between the years 2018 and 2022 from about 26% to 38%, respectively (Doris, 2023). In 2020, the number of online shoppers in Nigeria was about 76.7 million from a total population of about 206 million, and the internet penetration is about 46% (Doris, 2022). Recent statistics exhibit growth in the ways that businesses and consumers are using social media. More than 63% of customers expect companies to offer customer service through their social media platforms, and 90% of social media users have connected with a brand or business through their chosen platform. Consumers who have had a positive experience with a brand on social media are likely to recommend the brand to their friends and family. Small-to-medium-sized businesses (71%) use social media to market themselves (Owen, 2020); hence, social media is considered effective for their businesses (Kaiser *et al.*, 2019).

WOM and E-WOM

WOM communication refers to person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization, or a service. Previous research unveiled the positive association between WOM referrals and new customer acquisition. Thus, spreading positive WOM enables businesses to develop their market share along with enhancing brand awareness (Konuk, 2019). WOM is not always positive; sometimes, it is emotionally loaded and has negative outcomes leading to product harm crises, warnings, or rumors about products or services (Duan & Dholakia, 2017). Compared to positive WOM, negative WOM may have greater impact and eventually sabotage companies (Liu & Lopez, 2014). WOM influences consumer purchasing behavior (Essien & Etuk, 2025). Families are more encouraged to patronize online stores if some members have positive experience over time (Akinloye, 2024a; Akinloye, 2024b; Akinloye, 2025). Prior research uncovered that one dissatisfied customer tells nine other people about the experiences that resulted in the dissatisfaction. However, satisfied customers release their story to an average of five other people. This is especially important in the service sector (Jham, 2018).

E-WOM influences consumer buying behavior through the online exchange of customers' opinions and experiences about products and services using social media (Bueno & Gallego, 2021). By facilitating e-WOM, social media has significantly changed the balance of marketing communication from companies to consumers to consumers-to-consumers (Kaiser *et al.*, 2019), (Liu & Lopez, 2014). Social media consumer-to-consumer exchange is a relatively new type of online WOM. This kind of information sharing has transformed the way people share their thoughts and opinions about any subject, including choosing bank services, restaurants, hotels, and health services and selecting a physician or a professor (Bueno & Gallego, 2021; Park, Shin & Ju, 2019). E-WOM can take many forms; the most important one being online reviews. E-WOM appears to be particularly significant for products and services involving an experiential aspect (Essien & Etuk,

2025). These are goods or services whose quality cannot be evaluated easily prior to consumption (Loureiro & Kaufmann, 2020).

Online Reviews and Consumer Satisfaction

Today, online reviews are among the most influential sources of information for consumers when forming a purchase decision and present substantial benefits to them. Most importantly, they enable geographically scattered consumers to share independent points of view on products and services, helping them to reach informed purchase decisions. Furthermore, online reviews also maintain pivotal value creation potential for businesses. As a source of product and service development, companies can use online reviews to enhance revenue and foster long-term relationships, thus also playing a momentous role in the marketing efforts of companies (Thomas, Wirtz & Weyerer, 2019).

In terms of social media and consumer satisfaction, consumers are now active in posting comments or product reviews on major social media and websites, such as TripAdvisor, Twitter, and RateMyProfessor. This is a form of crowdsourcing. Through rating websites and social media, individuals are more likely to submit online ratings when they are either not satisfied or very satisfied. Positive ratings enhance posting rate, whereas negative ratings diminish posting. In addition, less-frequent posters are more positive, while more-active posters are more negative and unveil distinction behavior (Loureiro & Kaufmann, 2020). Such reviews can be of various types, such as personalized reviews or reviews from experts, as well as descriptive reviews or ratings from 1 to 5.

According to the correlation between positive and negative reviews and their effects on sales volume, companies can adjust their approach to draw the most benefits from consumer involvement (Moriuchi, 2018). A study on the influence of online reviews on consumer retentions revealed that online reviews have a strong impact on customer satisfaction and retention for businesses. Online reviews disclose additional information about products and services, and in this case, they can adjust current and potential customers' pre-purchase valuations of products and services in order to help them make better purchasing decisions. Therefore, there is a high potential of reducing customer retention and satisfaction (Maslowska, Malthouse & Bernritter, 2016; Sun *et al.*, 2020).

Service Quality and Customer Satisfaction

Service quality is a perceived judgment resulting from an assessment process where customers compare their expectations with the service they perceive to have obtained (Nunkoo *et al.*, 2019; Roy *et al.*, 2018). Excellent service paves the way toward a satisfied and loyal customer who is willing to recommend other customers (Jham, 2018; Gogoi, 2021). Consumer satisfaction is achieved when the performance of the product or service meets or surpasses a customer's expectations. Satisfaction is a post-purchase state of the consumer's mind that mirrors how much the consumer likes or dislikes the service after experiencing it (Nunkoo *et al.*, 2019; Cheng *et al.*, 2019).

Subsequently, knowledge about how customer satisfaction is developed and can be utilized by e-logistics companies to improve strategies that make them more attractive to prospective customers (Adeniran, Njoku & Stephens, 2023; Weerasinghe & Fernando, 2018). Customer satisfaction is commonly included as one of the primary missions of e-logistics firms. They perceived and defined satisfaction in various ways in the services and consumer marketing literature. For example, satisfaction can be defined as an individual attitude and as the perception of the difference between expectations and perceived service consumption (Kotler & Keller, 2016; Mestrović, & Zugic, 2018).

Service Quality Model

In today's highly competitive environment, service quality plays a substantial role in the prosperity of any organization. A conceptual model of service by Parasuraman, Zeithaml, and Berry (1985) was introduced in 1985 and quickly became a popular tool to measure the level of service quality (Adeniran, Njoku & Stephens, 2023; Gogoi, 2021; Abu-Salim *et al.*, 2019). SERVQUAL is applicable to many industries and areas, such as the financial, production, education, and food sectors. This comprehensive model comprises five dimensions: tangibility (physical appearances), reliability, assurance, empathy, and responsiveness. Customer satisfaction is a critical factor that impacts on many industries directly or indirectly, such as logistics, e-logistics, airline, airport, public transport, education, food and pharmaceutical industries. Customers aim to identify and select e-logistics firms that is capable of meeting their needs and delivering exactly ordered goods in a right condition and in the right place (Adeniran, Olorunfemi & Akanmu, 2025).

SERVQUAL as a multidimensional research instrument includes the five following subsets:

- 1) Tangibility: The appearance of physical facilities, equipment, personnel, and communication materials.
- 2) Reliability: The ability to conduct the promised service dependably and precisely.
- 3) Assurance: The knowledge and courtesy of all employees and their abilities to convey trust and confidence.
- 4) Empathy: The arrangement of caring, customization, and attention to the customer.
- 5) Responsiveness: The tendency to help customers and to provide swift and timely service (Gogoi, 2021; Adeniran, Njoku & Stephens, 2023; Abu-Salim *et al.*, 2019).

Nowadays, WOM and e-WOM play major roles in distributing comments and information swiftly and in influencing potential users of various products and services. The findings of a study on customer satisfaction found that reliability, tangibility, and responsiveness have significant impacts on WOM (Ren & Desmond,

2016). Based on other research, post-purchase service, service quality, and satisfaction have a significantly positive impact on WOM (Giao, 2018; Hsu, 2018). The results of a study regarding the relationship between e-WOM and customer satisfaction indicated that the exposure to positive (or negative) e-WOM prior to purchase enhances (or diminishes) consumer satisfaction. The impact of e-WOM is stronger when consumers are less motivated to process information with effort. These findings are compatible with the anchoring effect, where consumers excessively count on an initial anchor (e-WOM) to simplify the decision-making process due to the reluctance to process information cognitively (Kuo & Nakhata, 2019). The outcomes of another study with respect to the impact of e-WOM on customer satisfaction found that e-WOM, website quality, and product satisfaction are positively associated with customer satisfaction, as well as their repurchase intention (Tandon *et al.*, 2020).

Empirical Review

E-commerce industry has significantly contributed to the economic development of many countries including Nigeria. Despite the benefits, there are issues facing the industry. The most significant issues are the risk of identity theft, payment fraud, and other types of cybercrime (Antoniou & Batten, 2011; Alshibly & Chiong, 2015) and e-commerce platforms are vulnerable to cyber-attacks, leading to data breaches and loss of customer trust. This can be particularly problematic for consumers who are not familiar with the risks associated with online shopping, or they might not take the necessary precautions to protect themselves online (Choshin & Ghaffari, 2017; Rosário & Raimundo, 2021).

The industry has also put pressure on transportation systems and infrastructure which enhances delivery, as the growth in online sales has led to a surge in demand for delivery services (Zhang, Jia & You, 2023; Barker & Zabinsky, 2008). This can result in delays and other issues that can negatively impact the customer experience. The lack of physical interaction with products in e-commerce can also present challenges, particularly with regards to customer satisfaction (Kunesova & Micik, 2015; Chou, Chen & Lin, 2015). Consumers may have difficulty assessing product quality, and may encounter challenges in returns and refunds (Zhang, Jia & You, 2023; Colla & Lapoule, 2012). This can lead to negative customer experiences, which can harm the reputation of e-commerce companies and discourage repeat business (Gupta *et al.*, 2015; Zerbini *et al.*, 2022).

There are To address these issues, Rao, Metts and Mora Monge (2003) examined a stage model and implications of electronic commerce development in small and medium sized enterprises; Gupta, Gupta and Dhir (2020) examined an e-commerce website based chatbot; Zhang *et al.* (2020) conducted a study on evolving strategies of e-commerce and express delivery enterprises with public supervision; Risberg (2023) conducted a systematic literature review on e-commerce logistics towards an e-commerce and omni-channel decision framework. All these studies found that customer satisfaction of e-commerce business are influenced by high-quality customer service, attractive promotions and discounts, and easy and

efficient returns and refund processes, and all these factors influence customers' decision for positive online reviews.

Regarding payment, Ifinedo (2011) investigated Internet/e-business technologies acceptance in Canada's SMEs; Kunesova and Micik (2015) developed B2C e-commerce in Czech Republic after 1990; and Liu *et al.* (2021) explored the adoption and impact of e-commerce in rural China. Edim *et al.* (2025) conducted a study on the roles of digital transformation on SMEs performance in Nigeria, thereby considering some e-logistics companies. The studies found that customer satisfaction and positive review are influenced by the implementation of secure payment systems using encryption to protect sensitive information and partnering with trusted security. In the same vein, Omigbodun *et al.* (2026) explore AI-powered workflow automation in small businesses as it is known in transforming the operational landscape for small and medium-sized enterprises (SMEs) including e-logistics, offering notable improvements in productivity, cost efficiency, and competitive edge.

This will help mitigate the risks associated with online shopping. It is expedient to note that all these studies were conducted outside Nigeria and the recommendations cannot be suitable for Nigeria because of its peculiarity in terms of social, economic, and environmental differences. Hence, the need to examine the influence of online reviews on customer satisfaction in e-commerce logistics firm in Nigeria.

Hypotheses

Seven hypotheses were proposed as follows:

- H₁.** *Customer satisfaction will be positively impacted by tangibility.*
- H₂.** *Customer satisfaction will be positively impacted by reliability.*
- H₃.** *Customer satisfaction will be positively impacted by assurance.*
- H₄.** *Customer satisfaction will be positively impacted by empathy.*
- H₅.** *Customer satisfaction will be positively impacted by responsiveness.*
- H₆.** *Customer satisfaction will be positively impacted by E-WOM.*
- H₇.** *WOM intentions will be positively impacted by Customer satisfaction.*

Conceptual Research Model

Informed by the existing literature and studies on the relationship between different dimensions of service quality and customer satisfaction and its impact on WOM, this study developed a conceptual research model (Figure 1) based on service quality elements, WOM, e-WOM, and customer satisfaction.

The study employed the five aspects of the service quality model and e-WOM, their impact on customer satisfaction, and the relationship between WOM and customer satisfaction by considering previous studies (Adeniran, Njoku & Stephens, 2023; Ren & Desmond, 2016). In addition, this study expands on the existing literature to achieve its research objectives and to develop a conceptual research model.

PLS-SEM

The variance-structural equations model is a thorough statistical approach to examine hypotheses about the relationships between the observed and latent variables. This method can be applied for complex models and small samples without normality requirements. The SmartPLS technique was used to develop the required model and test how variables fit the model (Hair *et al.*, 2017; Hair *et al.*, 2019). This study utilized PLS-SEM and SPSS to test model fitness and examine the hypotheses.

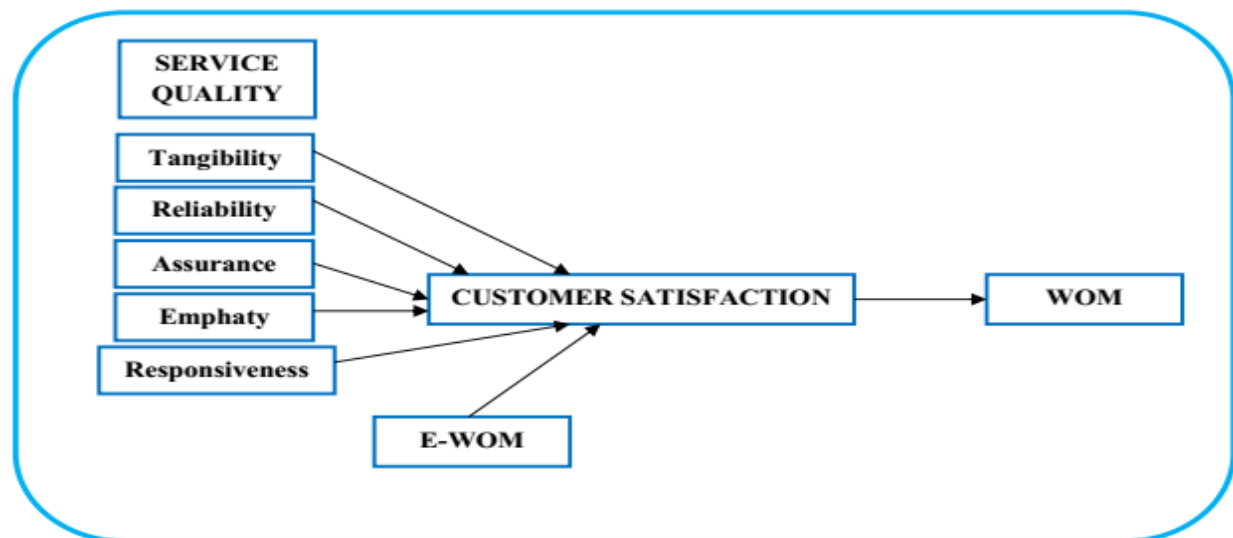


Figure 1: Conceptual model

3. Methodology / Materials and Methods

Historical Overview of TEMU

TEMU is owned and operated by PDD Holdings, a multinational commerce group registered in the Cayman Islands with Dublin also listed as its principal office address (Lake, 2024; Murray, 2023; Maruf, 2023; Wakabayashi & Isaac, 2025). PDD Holdings also owns Pinduoduo, a popular online commerce platform in China (Financial Times, 2025; Yang, 2024). In the US, TEMU is under the ownership of Whaleco, Inc., a subsidiary of PDD Holdings registered in the states of Delaware and Massachusetts (Megan, 2025). The company offers heavily discounted consumer goods (Chow, 2022), mostly shipped to consumers directly from China

(Kharpal, 2022; Schulz, 2024). By April 2025, the platform had expanded its operations to more than 90 markets (Reuters, 2025).

The TEMU platform first went live in the United States in September 2022, and ran ads during the February 2023 Super Bowl (Essien, & Etuk, 2025). In March 2023, TEMU launched in Australia and New Zealand (Onwuaso, 2025). In the following month, TEMU launched in France, Germany, Italy, the Netherlands, Spain, and the UK (Hall, 2025) TEMU eventually expanded into the Latin American market (Conrad, 2022) On January 17, 2024, TEMU officially launched in South Africa, the 49th country that TEMU had entered since its launch (Liu, 2023). As of the same month, U.S. MAUs on the app reached more than 51 million (Zhou, 2024).

In February 2024, TEMU offered US\$15 million in giveaways in multiple Super Bowl ads that several congressmen had asked the CBS network not to run (Perez, 2023). As a result of the ads, the company saw a spike in searches for their name and traffic (Lawder, 2024; Schulz, 2024), reaching 100 million active users in the U.S., over 130 million app downloads globally, and approximately 420 million monthly website visits, as per Semrush (Ittimani, 2024). Research by Sensor Tower estimated that in the last quarter of 2023 TEMU users spent an average of 23 minutes a week on the app, compared with 18 minutes on Amazon and 22 minutes on eBay (Schulz, 2024).

As of March 2024, TEMU served approximately 30 million daily users in America (Ghosal, 2024). By August, the number of users of the TEMU app had reached 91% of that of Amazon (Rahman-Jones, 2023). As of December of the same year, TEMU.com saw nearly 700 million monthly visits (Keegan, 2023). In 2024, TEMU introduced the Local Seller Program, opening its marketplace to local sellers in numerous markets. This program enables sellers in these countries to list their products directly and fulfill domestic orders. Through this program, both small businesses and individual entrepreneurs in America can connect directly with millions of customers (Hall, 2025).

TEMU's appearance at the 2024 Super Bowl garnered significant exposure, which made it a household name for U.S. consumers (Conrad, 2022). In January 2025, International Post Corporation released the 2024 edition of the IPC Cross-Border E-Commerce Shopper Survey Report, which showed TEMU overtaking AliExpress as the second most used e-retailer for cross-border sales in the world (Liu, 2023). As of March 2025, TEMU was one of the most widely used online shopping websites in America (Zhou, 2024). In May, it entered into a partnership with the International Anti-Counterfeiting Coalition (Perez, 2023). In July, the company joined the International Trademark Association and became a member of the Anti-Counterfeiting Committee of the Association (Lawder, 2024).

In March 2024, TEMU launched its Local Seller Program in the United States. As of July 2025, the program was operational in the UK, France, Italy, Japan, Mexico (Gupta, 2025), and Australia, (Jacob & Bellman, 2024), among other countries. The program is designed to help local sellers reach more local consumers, bring more

locally relevant products to local shoppers, and improve the user experience (Yang, 2022).

On 17th October, 2022, TEMU emerged as the most-downloaded U.S. shopping app (Hadero, 2024). According to Sensor Tower, it was the most downloaded mobile app in any category in the U.S. between November 1 and December 14, 2022 (Liao, 2022). According to Similarweb, as of September 2024, it became the second most-visited online shopping site in the world (Jones, 2023). As of December of the same year, the number of monthly active users of TEMU's global smartphone app surpassed that of Amazon (Morley, 2023). In the year 2024, it was the most downloaded iPhone app in over 20 countries (Qu, 2023). The products on TEMU are available in over 600 categories (Herrera, 2024), such as clothing, jewelry, pet supplies, and home and garden, among others (Kharpal, 2022). Its products are sold at competitive prices (Zahn, 2024).

TEMU's business model has allowed it to become popular among consumers, but has also drawn concerns over data privacy, forced labor, intellectual property, and the low quality of its marketplace products. The company has been embroiled in legal disputes with Shein, a direct competitor. The rise of TEMU is one of Amazon's biggest challenges in years (Lu, 2025). According to Andrew Chow writing for Time, in 2022, TEMU customers experienced a rash of undelivered packages, product discrepancies due to false advertisements, and mysterious charges, as well as unresponsive customer service (Chow, 2022).

According to Sarah Perez, writing for TechCrunch in relation to TEMU's advertising campaigns, these ads appear to be working to boost TEMU's installs. But dig into the app's reviews, and you'll find similar complaints to Wish, including scammy listings, damaged and delayed deliveries, incorrect orders, and a lack of customer service (Keegan, 2023). In October 2022, the Boston branch of the Better Business Bureau opened a file on TEMU; by the end of 2022, they had received 31 complaints from customers regarding the website's service. In January 2024, the company has a BBB rating of C+, though the company is not BBB accredited (Chow, 2022). By December 2025, that rating was raised to B- (Keegan, 2023).

Research Design, Sampling, and Data Collection

The quantitative research method was used in this study because it employed closed-ended questions to generate numerical data for analysis among different variables (Yin, 2018; Adeniran *et al.*, 2024). The survey research design was employed because it is a quantitative method that allows researchers to gather structured data from e-logistics customers to gain deeper insight into their thoughts, behaviours, or experiences related to the topic (Shuttleworth, 2018; Adeniran & Tayo-Ladega, 2024). This research is a survey research, and the sampling technique is a purposive (non-probability) sampling. Purposive sampling was used to gather primary data from the customers of TEMU Nigeria. This was used to select participants based on specific, predefined criteria relevant to the research goal. The specific, predefined criteria relevant to the research goal are that the participants selected were those that have patronized TEMU Nigeria, and have

provided feedback on the products purchased. The sampling itself is an incidental sampling (convenience). This was used to select participants based on ease of access and prioritizing quick submission. The participants were identified on social media platform (Facebook) through the comment section on TEMU page, and privately sent the questionnaire link after getting their consent.

A survey was developed to assess how respondents approached and applied the quality of services toward their satisfaction and how it impacted their WOM. All questions pertaining to the above hypotheses were set up on a 5-point Likert-type scale (1 = entirely disagree to 5 = entirely agree). In addition, there were some categorical questions on demographic characteristics and other related questions. The survey was created, directed to the customers of TEMU Nigeria, and placed on the Google Form for approximately two months. It was expected that each survey would take a maximum of 10 minutes to complete. The study utilized a convenience sampling which is a non-probability sampling technique to generate the primary data from respondents. The sample population consisted of customers of TEMU in Nigeria. Excel, SPSS (Statistical Package for the Social Sciences), and SmartPLS (Partial Least Squares Structural Equation Modeling) were employed to treat the collected data and test the proposed hypotheses.

4. Results

The sample size of 150 respondents consisted of 60.67% females and 39.33% males, and 56% of them were single, which implies that TEMU is mostly patronized by unmarried females in Nigeria. About 40% of the respondents ranged in age between 25 and 40 years, and majority (about 70%) were holders of National Diploma (ND), Higher National Diploma (HND), Bachelor's or Master's degree which implies that they will be knowledgeable about electronic commerce logistics and will be able to shop online with little or no guide.

Regarding the repurchase, 18.67% of respondents were new customers that have recently patronized TEMU Nigeria, and the rest were existing customers that have patronized more than one time. Approximately 50% used social media to do online shopping at least once a month, whereas the rest used it sporadically. For instance, 31.3% of participants patronize TEMU Nigeria on weekly basis, 57.3% of participants TEMU Nigeria on monthly basis, and 10.7% of participants TEMU Nigeria on yearly basis.

Online reviews were important to respondents when choosing TEMU Nigeria (1 - 5, 1 = very important). WOM was their preferred method to choose TEMU Nigeria followed by the use of search engines. New customers indicated that their choice was particularly based on the Word of Mouth from existing customers followed by discounts available. Timely delivery of ordered goods was least rated, while the existing customers indicated that their choice was particularly based on discounts available and the delivery of the exact products that were ordered, while timely delivery of goods was least rated. The results revealed that respondents most

probably would recommend TEMU Nigeria to other customers, but the management of TEMU should look into the timely delivery of goods.

As for the survey itself and model fitness, the reliability and validity tests were performed with Cronbach's alpha and composite reliability (CR). All reliability analysis results are upwards of the recommended level (0.70), and also, the average variance extracted (AVE) results were above 0.5, thus making the survey statistically reliable to test the proposed hypotheses and confirm the good fit of the model (Hair *et al.*, 2017; Hair *et al.*, 2019; Adeniran, 2019; Adeniran, 2025).

Model Test

Variance inflation factor (VIF)

The VIF evaluates the intensity of multiple synergies in multiple regression analysis. In fact, this index indicates how much the changes in the estimated coefficients have been increased for coherence. As an empirical rule, the more this factor exceeds 5, the more the co-linear rate also increases (max. 5). The Table 1 shows that the multiple indices for the independent variables in the model are within acceptable values and confirms that there is no multiple coherence among the independent variables.

Table 1: Collinearity (VIF)

Variable	Standard Value of the Indicator	Indicator Value in the Desired Model	Summary of Multicollinearity
Customer Satisfaction	< 0.5	0.16	Not suspected
Tangibility	< 0.5	0.13	Not suspected
Reliability	< 0.5	0.18	Not suspected
Assurance	< 0.5	0.17	Not suspected
Empathy	< 0.5	0.21	Not suspected
Responsiveness	< 0.5	0.23	Not suspected
E-WOM	< 0.5	0.35	Not suspected
WOM	< 0.5	0.42	Not suspected

Source: Authors work (2026)

Model Fitness Indices

The basic question raised is whether this model is a suitable model. In order to answer this question, the average extraction variance, Cronbach's alpha, and composite reliability should be considered for goodness-of-fit (GOF) testing. Regarding the output of PLS and according to the results of the next three tables derived from the output of PLS, it can be concluded that the model is a suitable model for fitting indices. All of the fitness assessment indices of the model, along with their values in these tables, are presented and lead to fitness for the model. The following tables confirmed the validity and reliability of the survey to examine the proposed hypotheses. The Table 2 summarizes the results of AVE for each variable, and it confirms that each variable has a value above 0.5, which satisfies

the standard requirement. The Tables 3 and 4 show that each variable meets the standard requirement for Cronbach's Alpha, CR, and the reliability of the survey.

Table 2: Average variance extracted (AVE)

Variable	Standard Value of the Indicator	Indicator Value in the Desired Model	Conclusion
Customer Satisfaction	≥ 0.5	0.65	Good fit
Tangibility	≥ 0.5	0.63	Good fit
Reliability	≥ 0.5	0.60	Good fit
Assurance	≥ 0.5	0.63	Good fit
Empathy	≥ 0.5	0.62	Good fit
Responsiveness	≥ 0.5	0.62	Good fit
E-WOM	≥ 0.5	0.69	Good fit
WOM	≥ 0.5	0.72	Good fit

Source: Authors work (2026)

Table 3: Cronbach's alpha

Variable	Standard Value of the Indicator	Indicator Value in the Desired Model	Conclusion
Customer Satisfaction	≥ 0.7	0.79	Good fit
Tangibility	≥ 0.7	0.82	Good fit
Reliability	≥ 0.7	0.80	Good fit
Assurance	≥ 0.7	0.75	Good fit
Empathy	≥ 0.7	0.72	Good fit
Responsiveness	≥ 0.7	0.78	Good fit
E-WOM	≥ 0.7	0.79	Good fit
WOM	≥ 0.7	0.83	Good fit

Source: Authors work (2026)

Table 4: Composite reliability (CR)

Variable	Standard Value of the Indicator	Indicator Value in the Desired Model	Conclusion
Customer Satisfaction	≥ 0.7	0.81	Good fit
Tangibility	≥ 0.7	0.82	Good fit
Reliability	≥ 0.7	0.78	Good fit
Assurance	≥ 0.7	0.73	Good fit
Empathy	≥ 0.7	0.76	Good fit
Responsiveness	≥ 0.7	0.79	Good fit
E-WOM	≥ 0.7	0.80	Good fit
WOM	≥ 0.7	0.75	Good fit

Source: Authors work (2026)

Test of Hypotheses

The numerical values in Table 5 revealed that all hypotheses are confirmed since the results of T-Value are higher than 2. The acceptable value (95% c.l.) should be ≥ 1.96 to support the hypotheses. The Table 5 represents the coefficients and T-Value of each hypothesis. The results disclose that tangibility has more considerable impact on customer satisfaction in comparison with other dimensions of service quality. The Table 6 presents a combination of the results of the seven proposed hypotheses.

Table 5: The Impact of Variables

Hypothesis	Coefficient	T-Value
Tangibility	3.50	10.88
Reliability	1.44	6.16
Assurance	0.29	9.92
Empathy	0.70	5.94
Responsiveness	0.93	6.11
E-WOM	0.35	5.99
Customer Satisfaction → WOM	0.52	7.87

Source: Authors work (2026)

Table 6: Results of Hypotheses

Hypothesis	Result
H ₁ : Tangibility	Supported
H ₂ : Reliability	Supported
H ₃ : Assurance	Supported
H ₄ : Empathy	Supported
H ₅ : Responsiveness	Supported
H ₆ : E-WOM	Supported
H ₇ : Customer Satisfaction → WOM	Supported

Source: Authors work (2026)

5. Discussion

Service quality plays a pivotal role in the level of customer satisfaction and dissatisfaction. Moreover, social media, online reviews, and e-WOM impact customer purchasing decisions, customer satisfaction, and customer retention. People have access to abundant information through social media applications and can choose various products and services based on different opinions and reviews. Customer satisfaction is a critical aspect for businesses to enable them to achieve short-term and long-run growth and development. This factor can assist businesses in reaching more potential users or impede them from expansion, particularly with the considerable presence and advancement of social media.

This study designed a model to gauge the relationship between service quality factors (tangibility, reliability, assurance, empathy, and responsiveness), in addition to social media, e-WOM, and customers satisfaction. Then, the study assessed how

customer satisfaction impacts customers' WOM intentions. E-commerce logistics or e-logistics such as TEMU Nigeria can determine the importance of diverse service quality aspects and social media, and how customers, as the main target of the e-logistics system, select a particular firm within the circle. Moreover, TEMU Nigeria need to enhance customer satisfaction by improving service quality factors in order to have a positive impact on a customers' experience and thereby increase the possibility of them conveying their satisfaction with other potential customers.

The findings of this research reveal that all service quality dimensions (tangibility, reliability, assurance, empathy, and responsiveness) have a positive influence on customer satisfaction. As shown in Table 5, the findings reveal that tangibility and reliability have higher impacts on customer satisfaction than the other factors. This can assist decision makers to consider these significant factors regarding designing and ameliorating their products and services and how to deliver these to their customers in order to enhance customer satisfaction. These findings corroborate the previous related studies conducted by Adeniran, Njoku and Stephens (2023), Ali and Raza (2015), and Hussain, Nassar and Hussain (2015).

Social media and e-WOM have inevitable impacts in human daily living. This study examined the relationship between e-WOM and customer satisfaction, and the results showed that e-WOM has a positive impact on customer satisfaction. These results support previous related research conducted by Kuo and Nakhata (2019) and Tandon, Aakash and Aggarwal (2020). Customer satisfaction is an important factor to measure any business success and can function as a predictor element for future development and prosperity. The results of this study show that customer satisfaction has a positive impact on a customer's WOM intentions. Likewise, substantiating these research findings regarding the relationship between customer satisfaction and WOM are other studies conducted by Giao (2018), Hsu (2018), and Ren and Desmond (2016).

Implications

The advancement of social media has provided an enormous potential to transform electronic commerce logistics (e-commerce logistics) or electronic logistics (e-logistics) from a product-oriented environment to a social and customer-oriented one. Nowadays, social media plays a significant role in impacting our decisions and shaping the way people think, behave, and perform. Consumers express their thoughts and feelings about many products and services more openly and freely than before through social media and online platforms, such as Facebook and Instagram. Businesses can take advantage of this abundance of information to adjust their strategies and gain a competitive edge.

Enhanced customer satisfaction is a critical factor for organizations to be sustainable in the fierce competitive market and enable them to develop in the social media space (Bueno & Gallego, 2021; Kaiser *et al.*, 2019). The outcomes of this study contribute beneficial and applicable information for decision makers of TEMU Nigeria to recognize important factors that impact customer satisfaction and how such satisfaction can attract more and better prospective customers.

6. Conclusion

This study developed a model to determine the possibility of a relationship between different service quality aspects, as well as social media, e-WOM and customer satisfaction, and to identify the relationship between customer satisfaction and WOM. This study was conducted to identify how customer satisfaction was impacted by service quality and social media. This study focused on TEMU Nigeria with a view to pay more attention to prospective and existing customers using various channels and modes of contact, particularly social media and modern channels, and to improve on timely delivery of ordered products. This study provides valuable insights into the relationship between service quality factors, e-WOM, WOM, and customer satisfaction and how customer satisfaction could impact WOM and contribute to the recruitment of potential customers.

The findings showed that service quality attributes, namely tangibility, reliability, assurance, empathy, and responsiveness, have a positive impact on consumer satisfaction. This confirms that service quality dimensions play a major role in customer satisfaction. Moreover, the results revealed that social media and e-WOM impact customer satisfaction. This shows that customer satisfaction will be impacted by e-WOM and how social media and online reviews influence customer satisfaction. Furthermore, the findings of this research show that customer satisfaction has a positive impact on customer WOM intentions. It was recommended that TEMU Nigeria should integrate transportation service to enhance timely delivery of ordered products. These findings can assist decision makers to adjust their strategies based on the importance of customer satisfaction and how they should respond to customers' expectations and priorities to ensure their long-term success.

This study is an effort to fill the gap in this area by considering the impact of social media and e-WOM and service quality on customer satisfaction as well as the relationship between customer satisfaction and WOM. This can help e-logistics businesses and particularly TEMU Nigeria as the main case study of this research, to consider the different factors that impact consumer satisfaction and how they can increase satisfaction, diminish dissatisfaction, and ensure they can employ the best outcomes of WOM and e-WOM for enhancing consumer retention and satisfaction.

This study encountered some limitations that could influence the results. First of all, the model could potentially incorporate other dimensions, including behavioral factors. Another significant area is about result overgeneralization. Time constraints and access to a larger sample are to be noted. As the world of digital connection evolves exponentially, there will always be a need for additional studies examining new attitudes and perceptions at the theoretical level and, subsequently, at the practical and managerial levels for policy makers.

The sample of this study was relatively homogeneous, and, thus, it would be interesting for further research to stratify respondents into age brackets or

generational categories and see whether demographic traits play a role in customer satisfaction. Moreover, a comparison of a few e-logistics firms would be of interest to discern potential differences. Further research could consider how e-logistics marketers can manage customers' needs through employing various technological devices to customize their services and find out how different channels create different outcomes. Lastly, it would be worthwhile for future research to explore the effect of e-WOM on other variables, such as repurchase intention and consumer loyalty, which are also significant factors for improving consumer–business relationships.

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Conflicts of Interest

The authors declare no conflict of interest.

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Author Responsibility Statement

AOA: Conceptualization, Writing - original draft, Introduction, Method, Discussion, Conclusion, Editing; GO: Writing, Discussions; AAG: Discussions, Editing. The authors read and approved the final manuscript.