

***The role of digital after-sales support in addressing delivery issues in e-commerce:
A case study of the Apple online store in Portugal***

دور المرافقة الرقمية لما بعد البيع في معالجة مشكلات التوصيل في التجارة الإلكترونية "دراسة حالة متجر آبل الإلكتروني في البرتغال"

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Received: 21/04/2026;

Accepted : 24/06/2026;

Published: 30/06/2026;

Abstract:

This study aims to analyze the role of post-purchase digital customer support in addressing delivery-related issues in e-commerce, through a case study of the Apple Online Store. It adopts an analytical case study approach, relying on data collected from interviews conducted with store management via remote communication technologies. The findings indicate that digital customer support serves as an effective mechanism for mitigating the impacts of delivery problems, through the use of the store's digital management platform, intensified digital communication, and the provision of proactive solutions.

These efforts positively influence customer satisfaction and perceived value. The study concludes that addressing delivery issues depends not only on logistical efficiency, but also on the quality of digital support accompanying all post-purchase delivery stages

Keywords: Digital Customer Support; Post-Purchase Experience; Delivery Problems; E-commerce; Apple Online Store

Jel Classification Codes : M15, M31, L81

1. Introduction

E-commerce has experienced rapid growth over the past decade, driven by technological advancements and shifts in consumer behavior. However, this expansion has been accompanied by operational challenges, most notably delivery-related issues such as delays, inadequate tracking, and delivery errors, which represent major sources of customer dissatisfaction (Hübner, 2016).

Online stores enable internet users to rely on digital and mobile technologies to search for products or services. Consumers are more likely to complete electronic transactions and make purchases when they perceive that the quality of the online store's services can meet their expectations (Camilleri, 2022).

In this context, the focus is no longer limited to improving logistical performance alone but has extended to the post-purchase stage, particularly the role of digital customer support in managing problems and mitigating their effects. Apple Inc. stands out as an advanced model in this area, adopting an integrated approach that combines logistical systems with continuous digital support.

Research Problem

The growth of e-commerce has provided numerous advantages to customers, enabling them to shop conveniently from their homes. Nevertheless, this mode of shopping is not without challenges, as customers frequently encounter delivery-related issues that hinder their online purchasing experience. These issues range from delayed, failed, or non-received deliveries to damaged or lost parcels, often resulting in frustration and dissatisfaction. Furthermore, limited tracking accuracy and inadequate customer service tend to exacerbate these problems, increasing customers' sense of uncertainty. In addition, inconsistent delivery experiences and the complexities of international shipping represent further obstacles. Therefore, addressing delivery-related problems has become a critical priority for e-commerce platforms to ensure a smooth and satisfactory shopping experience.

Despite the strong reputation and solid logistical performance of the **Apple Online Store**, it is not immune to delivery challenges. The store periodically receives complaints concerning product delivery and conformity with customer orders.

This problem can thus be formulated into the following research question:

How does post-purchase digital customer support contribute to resolving delivery problems in the Apple Online Store?

Study Objectives and Significance

Study Objectives

This study aims to examine the role of post-purchase digital customer support in addressing delivery problems in the Apple Online Store. This objective is based on the premise that post-purchase digital support enables customers to safeguard their rights in the event of errors attributable to either the parent company or the delivery provider. From another perspective, such support contributes to strengthening customer loyalty to the brand.

Study Significance

Online shopping has become a critically important component of modern commerce. Its significance lies in the substantial benefits it offers to both consumers and businesses. Accessibility and availability represent key advantages, enabling customers to browse products and complete purchases without leaving their homes, thereby saving time and effort. This convenience also allows customers to access a wide variety of products from around the world, transcending geographical boundaries.

From a business perspective, reducing reliance on traditional brick-and-mortar stores—and the associated decrease in operational costs—creates a significant competitive advantage, particularly for small and medium-sized enterprises. The level playing field provided by digital

platforms enables firms of all sizes to compete more equitably, while reaching global customer bases and expanding market coverage. Moreover, e-commerce facilitates targeted marketing and personalized offers, which enhance consumer engagement and contribute to revenue growth.

Research Methodology

The research design adopted in this study is based on the descriptive approach, as the study focuses on identifying the characteristics of a specific phenomenon or target group. The management of the Apple Online Store in Portugal was selected as the case study due to Apple's global leadership in e-commerce, the integration of its digital ecosystem, and its strong emphasis on the post-purchase customer experience.

To enhance the study's academic rigor, semi-structured interviews were conducted using remote communication tools with store management. Following the completion of the interviews, the data were analyzed qualitatively through content analysis derived from the interview responses.

Structure of the Study

To address the research question and achieve the study objectives, the paper was structured into four main sections. The study begins with a comprehensive introduction, followed by the theoretical literature related to the study variables. It then examines digital communication channels with customers in the post-purchase stage. Subsequently, the contribution of digital customer support in addressing delivery-related problems at the Apple Online Store is presented. Finally, the interview findings are discussed.

2. Theoretical Literature

2.1 Literature on Post-Purchase Services

Modern marketing philosophy emphasizes managing customer relationships, ensuring satisfaction, and fostering loyalty (Ahmed, 2016). The concept of digital post-purchase support refers to a set of digital interactions and services provided by the firm to customers after completing a purchase. These services include digital tracking, technical support, and proactive communication, aimed at addressing potential issues encountered in online shopping, such as long shipping times, damaged or non-compliant products, fraud-related problems, ineffective complaint systems, technical difficulties, shortcomings in customer service, and legal aspects (Simona, 2017).

Digital post-purchase support is considered a critical element in enhancing the customer experience and reducing the uncertainty associated with online purchases, thereby contributing to higher customer satisfaction and increased brand loyalty.

Several studies have focused on post-purchase services, considering them strategic activities that play a crucial role in enhancing a firm's competitiveness and maintaining customer loyalty. Among these, the study by (Pandey 2024) aimed to examine customer satisfaction with post-purchase services and the key elements contributing to a positive customer experience. The study revealed that managing post-purchase services presents a complex challenge for companies. Effective management requires addressing issues related to communication, operational efficiency, accessibility, and feedback mechanisms. By adopting comprehensive strategies in these areas, firms can establish a customer-centric service culture, which strengthens loyalty and encourages repeat interactions.

The study by (V. Nivethika 2015) aimed to evaluate the impact of post-purchase services on customer satisfaction with LG Electronics products in Sri Lanka. A conceptual model was also developed to link post-purchase services with customer satisfaction. The findings revealed a significant positive effect of post-purchase services on customer satisfaction with LG Electronics products in Sri Lanka, underscoring the critical role of these services in enhancing customer experience and brand loyalty.

(Ferraz 2023) analyzed the post-purchase stage in e-commerce, focusing on the characteristics

of this stage and the nature of the relationship between the merchant and the consumer in a direct, comprehensive, and integrated manner. One of the key contributions of this study is its pioneering description of post-purchase services in e-commerce from a global and holistic perspective, emphasizing the dynamics of the merchant-consumer relationship, herein referred to as customer post-purchase services.

The study by (Al-Houari 2020) aimed to explore the impact of post-purchase service dimensions on customer satisfaction through an exploratory study of a sample of Brandt customers in the commercial area of Mohammadia, Mascara, Algeria. Data were collected via a questionnaire and analyzed using SPSS v21, with structural equation modeling conducted in Amos v23 to test the study model. The findings indicated that post-purchase services have a direct effect on customer satisfaction with the Brandt brand. Specifically, satisfaction was not found to mediate the relationship between warranty and loyalty, whereas it served as a mediating variable between maintenance and repair, complaint handling, and customer loyalty.

Similarly, the study by (Andrianto Susilo 2020) evaluated customer satisfaction with post-purchase services for interior design clients in Jakarta. The results showed that 6 out of 20 service attributes were considered unsatisfactory, while the remaining attributes were rated as moderately or sufficiently satisfactory by clients.

The study by (Thi Phuong 2025) examined the impact of post-purchase service experiences on customer satisfaction and how customer satisfaction affects retention among online shoppers in Binh Duong Province, Vietnam. The findings revealed that effective return processes, prompt support, and proactive problem-solving play a critical role in enhancing customer loyalty. Furthermore, positive post-purchase experiences were shown to result in higher customer satisfaction and increase the likelihood of repeat purchases, highlighting the post-purchase stage as a key factor in e-commerce success.

2.2 Literature on Delivery Problems in E-Commerce

Problems encountered by customers during the e-commerce purchasing process—including sales, delivery, installation, warranty, and return services—directly influence their perceptions of both the manufacturing and selling company.

Delivery problems are defined as deviations between the expected and actual service during the delivery process, such as delays or lost shipments. According to S. (Periyasamy et al. 2023), the main delivery-related issues in e-commerce include failed or lost deliveries, damaged or missing parcels, inaccurate tracking information, ineffective customer support, inconsistent delivery experiences, delivery delays, and international shipping challenges.

Several studies have addressed general challenges in e-commerce. Among them, the study by (Attallah 2020) aimed to identify the main barriers to e-commerce in Algeria. The study sample consisted of 125 participants, and data were analyzed using factor analysis. The findings indicated that the primary barriers to e-commerce in Algeria include the absence of product-related guarantees, difficulties in navigating company websites, inadequate infrastructure, and low levels of trust in e-commerce.

The study by (Rafea 2024) examined the impact of delivery services on the credibility of online sales. The findings indicated that improvements in various types of delivery services directly contribute to enhancing the credibility of e-commerce stores and increasing customer trust.

Additionally, the study by (Kasim 2022) examined post-purchase shopping experience issues for customers using digital platforms. The findings revealed that problems were particularly pronounced in specific areas, including distribution, product quality, return/exchange procedures, and overall service, including customer support.

(Tran 2025) focused on evaluating the key factors affecting customer experience in last-mile delivery services by developing and validating the Customer Delivery Experience in Last-Mile

Delivery (CDX-LMD) scale. The scale encompassed seven dimensions: delivery efficiency, parcel tracking, delivery smoothness, visual appeal, positive anticipation, convenience, and electronic payment. The study concluded that understanding the impact of these dimensions is crucial for companies seeking to improve their service delivery strategies, enhance customer satisfaction, and foster stronger customer loyalty in a highly competitive and rapidly evolving market.

2.3 Theoretical Literature on Apple

Researchers have examined the global electronics leader, Apple, from various perspectives, producing diverse studies related to its practices and strategies, including aspects concerning customer experience and digital integration. Among the most notable studies, Khetawat (2025) aimed to demonstrate that the future of retail does not lie in a survival-of-the-fittest competition between e-commerce and traditional models, but rather in their synergistic integration. The study highlighted that companies like Apple can combine the strengths of both models to enhance their competitive advantage and maintain market leadership.

The study by (Mohinulhaq & Jyoti 2025) explored Apple's strategic evolution, tracing its transformation from a personal computer manufacturer to a global leader in technology and innovation. The findings indicated that Apple's sustainable competitive advantage is rooted in its ability to align visionary leadership with operational efficiency, maintain an integrated ecosystem of products and services, and proactively respond to organizational, technological, and market changes.

(Wen 2024) examined the risks associated with Apple's global supply chain and strategies to address them, in the context of a highly efficient and complex supply system. The findings indicated that Apple operates one of the most advanced and effective supply chains in the world, with its success attributed to strategic integration and rigorous management practices. Nevertheless, Apple's global supply chain faces increasing challenges and threats due to uncertainty, such as logistical disruptions caused by health crises, rising energy costs from conflicts, potential supply interruptions, geopolitical disturbances, and the management of a highly volatile external environment.

3. Digital Post-Purchase Customer Communication Channels

Over the past decade, digital channels have become essential tools for companies of all types, enhancing continuous communication with customers and enabling proactive solutions to issues that may affect customer relationships, while fostering engagement and dialogue. Digital marketing experts note that numerous channels are available to reach customers across different regions; however, this study focuses on four main channels that contribute to strengthening post-purchase connections between the company and its customers.

3.1 Email Marketing

Email marketing is one of the most powerful digital marketing channels and forms part of marketing automation. It is a core element of inbound marketing or pull-based marketing (Al-Ghamdi, 2023), which relies on an attraction strategy, targeting customers directly through strong campaigns that encourage interaction and communication with the company for inquiries or product requests. Email marketing is also used to achieve personalization (Bagul, 2024), which is no longer optional but essential for brands seeking to enhance customer engagement, retention, and loyalty. AI-driven personalization enables companies to analyze consumer behavior in real time, provide dynamic recommendations, and automate marketing processes to improve efficiency. According to WebFX, a digital marketing consultancy, email marketing campaigns account for approximately 10% of all e-commerce transactions (Al-Halwani, 2024).

3.2 Smartphone Applications

Smartphones hold a prominent position in performing various daily activities, including post-purchase customer interactions. A study conducted by Alcatel-Lucent in Brazil, Japan, the United

Kingdom, and the United States found that smartphone users prefer self-service applications over traditional help points, reflecting their heavy reliance on mobile devices, which are always within reach. Smartphones are considered one of the most effective channels for engaging and interacting with customers (Kotler, 2018).

3.3 E-Commerce Platforms

Researchers note that e-commerce operations are incomplete without dedicated e-commerce platforms, which serve as retail intermediaries and as spaces that connect sellers and buyers online (Correia, 2020).

3.4 Social Media

Social media platforms play a significant role in enhancing communication among individuals and increasing companies' reach to their audiences, while facilitating content and information sharing. These platforms contribute to building trust, strengthening influence, and gaining better insights into customers. They enable companies to publish images and videos that enhance brand recall and allow customers to share content, potentially acting as brand ambassadors and increasing public trust. Additionally, social media provides companies with precise data and statistics regarding customer interactions with the brand online (Imbabi, 2020).

4. The Role of Digital Post-Purchase Customer Support in Addressing Delivery Issues at the Apple Online Store

4.1 Overview of Apple Inc.

Apple Inc. is widely recognized as a symbol of innovation, creativity, design, and authenticity. The brand maintains a consistent presence across media platforms, including television programs, documentaries, films, as well as scholarly studies, academic articles, and theses, particularly in the fields of technology, marketing, communications, and advertising. Apple was founded in 1976 in the garage of Steve Jobs' parents' home, with its first product being the Apple I personal computer. However, the company gained widespread recognition only a year later with the release of the Apple II, which allowed it to outperform its competitor Microsoft. After leaving Apple in 1985, Steve Jobs established NeXT, gradually funding it through his personal resources, leveraging his unconventional leadership style and visionary approach.

Although his new venture did not achieve significant success, Steve Jobs faced a critical turning point when Apple acquired NeXT in 1997. This merger allowed Jobs to resume his role as Apple's CEO until 2009, leading the company skillfully before stepping down in favor of Tim Cook while retaining influence over strategic decisions. Two years later, Jobs passed away due to a rare form of pancreatic cancer. Tim Cook continued as CEO, holding the central role in Apple's organizational structure, overseeing all aspects of design, engineering, operations, marketing, and retail sales of Apple's main products, just as Jobs had done.

Regarding its business model, Apple excels in establishing strong and enduring relationships with its customers. Through integrated and strategic approaches, the company earns customer trust and ensures their retention within its ecosystem, thereby reinforcing sustainable success. Its diverse product portfolio includes the iPhone, tablets, laptops, desktop computers, smartwatches, wireless headphones, and television streaming devices (Sila et al., 2023).

Our systematic literature review revealed that the role of digital post-purchase support in addressing delivery issues in e-commerce has not been extensively studied. Research in this area is limited, particularly concerning global companies such as the Apple Online Store. Accordingly, the research questions were designed to identify the role of digital support at the Apple Online Store in resolving post-purchase delivery issues. To achieve this objective, the interview combined both open-ended and closed-ended questions, as they are suitable for this study and allow the collection of detailed and comprehensive data.

The responses from the store management and the discussions conducted with them regarding

the research topic served as a primary source for collecting qualitative data, which contribute to achieving the study's objectives. In qualitative research, validity refers to the extent to which the data are credible, reliable, and trustworthy (Muhammad Bashir et al., 2008).

To ensure reliability during data collection, interviews were employed as a core tool for building shared understanding through constructive interaction and dialogue between the researcher and company management staff, acknowledging that absolute neutrality cannot be fully achieved. Interviews also provide substantial information that holds significance and resonance for the reader (Lim, 2024).

4.2 Data Collection Methods: Semi-Structured Interviews

A semi-structured research design was employed to conduct remote interviews with the online store management. Interviews with managerial staff were considered an appropriate data collection tool due to their extensive knowledge of the problems and the efforts made to address them, which are largely derived from their positions within the company and their work experience of at least seven years.

The semi-structured interviews were conducted using a flexible set of questions, adaptable to the flow of each discussion with the store management. This included exploratory questions to deepen understanding and extract more detailed information beyond the participants' initial responses, as well as follow-up questions to facilitate a natural transition between ideas or to the next question after completing the previous one. This approach strikes a balance between consistency and focus on the research topic, thereby enhancing the reliability and accuracy of the collected qualitative data.

The interviews were conducted in stages, taking into account both the employees' work schedules and the information requirements of the study. In the first stage, a pilot interview was conducted with several managers to understand the dimensions of the topic and to refine the questions. Subsequently, a formal interview was conducted, comprising a series of questions distributed across multiple sessions, with new questions introduced gradually to achieve a comprehensive level of information necessary to address the research problem.

The first round of interviews focused on questions regarding the Apple Online Store and the order lifecycle, while the second round addressed the types of delivery-related issues and the solutions implemented to resolve them.

The interview process spanned a full month, as immediate responses were not always available for the questions posed, necessitating some questions to be re-asked to ensure the collection of reliable and accurate information. Research integrity was carefully maintained, ensuring that no misleading information was used that could compromise the credibility of the store. The interview consisted of 24 questions covering all aspects of the study variables, with a 100% response rate. However, questions related to statistical responsibility for delivery issues—whether attributable to management, delivery companies, or customers—were omitted, as each issue involved a unique case.

Data Analysis

The interviews employed clear language and a simple style, with short questions—either open-ended or closed—that did not require extensive time for comprehension or response by the participants. In the first phase, the questions focused on the store management tasks and the order lifecycle, addressed through three key questions. The second phase concentrated on delivery-related issues and the solutions provided by the store management or the parent company, while also examining the types of digital channels used for post-purchase customer support.

4.3 Transcription and Discussion of Interview Responses

This section presents the outputs of the pilot interview, followed by a discussion of the study results in the context of relevant literature.

Pilot Interview Data Outputs

The interview revealed that post-purchase services at Apple primarily focused on returns, maintenance, exchanges, and complaint handling through traditional methods. Sales were conducted in-store, complaints were received and processed on-site, and order follow-up was conducted via telephone at best.

With the advent of the internet and the expansion of online sales through websites and e-commerce platforms, digital follow-up has become a core activity for companies. It serves to ensure customer loyalty, enhance perceived value, and maintain the company's reputation.

Analysis of Interview Responses

Analysis of First Phase Responses

The Apple Online Store management for individual customers consists of several specialized teams, each responsible for a specific stage of the order lifecycle. All teams are engaged only when an issue arises, which typically occurs in no more than 3 to 5% of total orders. After the customer places and pays for an order, it proceeds through the following stages:

1. Fraud Verification Stage

When irregular indicators appear in an order, such as a mismatch between the order fulfillment location and the customer's billing address, or the use of a credit card registered under a name different from the recipient, the order is temporarily suspended. The fraud prevention team then conducts a rapid verification using specialized internal systems, which may include cross-referencing the order data with the customer's digital profile or reported professional activity.

If the discrepancy can be logically explained, the order is approved without contacting the customer. However, if suspicion persists, the customer is contacted to confirm awareness of the order and to ensure no fraudulent activity has occurred. These measures highlight the importance of continuous digital monitoring to secure orders and reinforce customer trust.

2. Payment and Billing Stage

The payment team handles initial issues related to payment processing or subsequent billing concerns. This team operates independently from the order support team, ensuring prompt response and minimizing operational complexity. This separation of responsibilities is part of the post-purchase digital support strategy, aimed at reducing issues and enhancing the customer experience through precise and continuous monitoring at each stage of the order lifecycle.

3. Execution and Delivery Stage

At this stage, the type of delivery service is determined according to the product's value. High-value products are shipped by default with a mandatory signature upon receipt, which can only be waived at the customer's explicit request, documented in the system. In such cases, if the package is lost or stolen after delivery, neither the delivery company nor the Apple Online Store bears full responsibility.

Once a customer places an order online or through an Apple retail contact center specialist, the order proceeds through a series of stages that correspond to the order status in the order management system, indicating the actions to be taken:

1. **Order Stage:** The order is placed by the customer online or through an Apple specialist on behalf of the customer.
2. **Verification Stage:** Apple verifies the order and confirms that payment information is complete.
3. **Preparation Stage:** Apple prepares and packages the orders for shipment. In areas with Apple Pickup, the system confirms product availability and allocates it for pickup.
4. **Shipping Stage:** Apple notifies the shipping company to deliver the item. For Apple Pickup locations, the product is ready for collection and the customer is notified.
5. **Delivery Stage:** The customer receives the order.

Throughout each stage of the order lifecycle, the store management executes a set of procedures, with different Apple teams completing key operations to ensure smooth order fulfillment. The importance of post-purchase digital customer support is particularly evident at this stage, as it facilitates order tracking, provides accurate updates to the customer, and allows prompt intervention to resolve any issues during execution or delivery, thereby ensuring customer satisfaction and maintaining brand loyalty and trust.

1. **Order Stage:**

During order placement, call center specialists or sales chat agents assist customers by explaining available payment methods, shipping processes (including estimated shipping and delivery dates), and expected communications from Apple. Shortly after placing the order, customers receive an acknowledgment email, followed by a confirmation email once the order is processed. This step plays a crucial role in post-purchase digital support, allowing customers to continuously monitor the order status and reinforcing transparency and trust.

2. **Verification Stage:**

Orders pass through a series of automated checkpoints to ensure complete payment and order information, guaranteeing delivery within the estimated timeframe. If an issue arises, the order is flagged, and the appropriate support team (contact center, order support, or payment support) reviews and resolves the issue. The fraud prevention team may also verify the order. Continuous digital monitoring at this stage enables early problem detection and resolution, minimizing negative impacts on customer experience.

3. **Preparation Stage:**

During preparation, Apple assembles and packages orders and configures customized or personalized products. For customers selecting Apple Pickup, the system confirms product availability within the designated timeframe. Digital support in this stage includes automatic status updates and notifications to customers about expected pickup times, reducing uncertainty and enhancing customer satisfaction.

4. **Shipping Stage:**

During shipping, Apple hands the order to a delivery partner (shipping company or Apple Pickup). Customers receive email or SMS notifications containing shipment details such as the carrier, tracking number, and an alert when items are available for pickup. Continuous digital notifications allow customers to accurately track their orders and reduce risks related to delays or loss.

5. **Delivery and Post-Delivery Stage:**

Customers receive their orders, and any post-delivery issues (returns, exchanges, or refunds) are handled by the service team. For complex cases, the order support team may assist. In Apple Pickup areas, reminders are sent to customers after a specific period.

Delivery Methods:

Apple's store management employs several delivery methods:

- Delivery during weekends.
- Instant delivery (within 6 hours).
- Home delivery via courier services.
- Delivery to the courier company's facility.
- Delivery to pick-up points (retail stores, gas stations, etc.), where products are transported from the store to the pick-up point.
- Delivery to an Apple Store directly.

Pick-up points and home delivery are the most prone to issues, as these involve direct interaction between the delivery company and the customer, potentially leading to problems caused

by the driver or the customer. This stage underscores the importance of post-purchase digital support in monitoring orders, providing accurate notifications, and offering prompt assistance when issues arise, thereby enhancing customer satisfaction and minimizing operational risks.

The Apple Online Store management identifies delivery issues through multiple digital post-purchase channels, ensuring rapid and accurate detection. These channels include:

1. **Direct Customer Interaction:** The management receives reports of delivery issues from customers via real-time chat on digital platforms or through email, enabling prompt response to each issue.
2. **Communication with Delivery Partners:** The store management receives information about issues from contracted delivery companies through a dedicated electronic platform for order and delivery management, facilitating efficient tracking and resolution.

This approach highlights the significance of post-purchase digital customer support, enabling real-time information collection, proactive issue resolution, and a smoother, more satisfactory customer experience, while mitigating delays or errors in delivery.

The successful delivery of a product to the customer typically does not require direct contact between Apple Online Store management and the customer. However, any customer-initiated contact to file a complaint indicates the existence of a delivery issue requiring managerial intervention. Delivery partners may also report problems directly to the store management via digital order management platforms, particularly in exceptional circumstances, such as:

- Difficult or unusual terrain at the delivery location.
- Natural disasters or severe weather conditions.
- Extended transit times in air transport or issues related to international shipping.

These situations underscore the importance of post-purchase digital customer support, enabling management to receive real-time information, address exceptional issues promptly, coordinate effectively with delivery partners, and minimize operational risks while maintaining customer satisfaction.

Apple Online Store management monitors customers after completing a purchase through the store's dedicated digital platform, which allows the recording of all operations related to the product's movement from the store's warehouse to the customer. This digital post-purchase support enables the management to ensure safe delivery through two main mechanisms:

1. **Indirect inference:** If the delivery period ends without receiving any complaint from the customer, successful delivery is assumed.
2. **Electronic tracking:** Monitoring the product via the digital platform to confirm its arrival, where the platform generates a notification confirming successful delivery.

This process contributes to enhancing customer satisfaction and trust in the store, while providing an accurate method for managing potential issues before they escalate, highlighting the critical role of digital post-purchase support in improving the post-sale experience.

Practical review demonstrates that digital post-purchase monitoring and tracking of customer orders effectively prevent potential issues before they reach the customer. For instance, in the event of flight delays or a malfunction on the delivery platform—where no electronic scan occurs for a delivery within three days—the digital system automatically triggers an alert. A case is then opened jointly between the online store management and the delivery company, without customer involvement, to implement proactive solutions, such as resending the order via a faster delivery method, aiming to avoid delays and ensure timely product arrival.

This example highlights how digital post-purchase support enables store management to take proactive actions, enhancing customer satisfaction and mitigating operational risks, underscoring the pivotal role of these tools in improving the post-sale experience.

The review indicates that the response rate and resolution of potential customer issues—thanks to digital post-purchase monitoring—reach nearly 100%, with limited exceptions, such as:

- Repeated claims of issues by the same customer.
- Specific regulations in high-risk areas, such as certain regions in France.
- Recurrent fraud patterns in specific geographic areas.
- Claims of issues despite the product being delivered using secure and high-protection packaging methods.

The advantage of digital post-purchase support lies in its pre-delivery, during delivery, and post-delivery monitoring, as the digital platform records all operations with high accuracy. This allows management to review every detail of the order journey at any time and ensures efficient and proactive problem resolution.

Phase Two Analysis: Post-Purchase Issues at Apple Online Store

The second phase of the interview revealed that post-purchase issues recorded at Apple Online Store vary within the scope of the Order Support Team, including the following main problems:

- Non-receipt of the package despite the expected delivery period having passed.
- Disputes regarding the delivery signature.
- Delivery to an incorrect address or recipient.
- Receipt of an empty package.
- Receipt of a product not matching the order.
- Damage to the package or product during transit.

Analysis indicates that payment-related issues are outside the scope of the Order Support Team and are handled separately by the dedicated Payment Team.

The most common issue at Apple Online Store is non-receipt of a package despite it being recorded as delivered, often accompanied by disputes regarding the signature. In many cases, the system shows a signature while the customer denies receiving the package. This may occur when the signature was provided by a third party, such as a neighbor, reception staff, or building security, or when the customer themselves signed but later denies receipt for fraudulent purposes.

Interview data indicate that the causes of non-delivery at Apple Online Store can be categorized as follows:

1. **Courier Errors:** These errors include:
 - Loss of the package during transit.
 - Delivery to an incorrect address.
 - Delivery to another customer by mistake (cross-delivery).
 - Theft during the delivery process.
2. **Incorrect Address Provided by the Customer:** If it is confirmed that the error originated from the customer, no compensation or re-shipment is provided.
3. **Theft after Delivery:** Responsibility varies depending on the type of delivery service: if a signature is mandatory, an official investigation is opened; if the customer waived the signature requirement, responsibility is fully transferred to them.

Recorded cases indicate that the following products are most susceptible to delivery issues:

- Smartphones: high-risk.
- Laptops: high-risk.
- Tablets: medium to high-risk.
- Accessories: low-risk.

This is attributed to the high market value and the ease of reselling these products.

Interview data indicate that Apple Online Store utilizes multiple official communication channels with customers, encompassing both traditional and digital methods:

- Direct phone contact.
- Official email correspondence.
- Customer electronic portal.

These channels enable the management team to track orders, handle complaints, and provide timely support to customers throughout all stages of the order lifecycle.

Interview data indicate that social media channels are not considered official means for handling order-related issues at Apple Online Store.

Regarding the age group most likely to submit non-receipt complaints, the data show that individuals aged 18 to 40 are the most active, due to their high reliance on online shopping and their quick responsiveness to official channels.

Customers are entitled to report non-receipt issues within a maximum of fourteen days from the recorded delivery date. However, it is observed that the usual behavior is to contact support immediately upon encountering a problem, whether due to delayed delivery or receiving a delivery notification without actual receipt of the order. If a customer delays contacting support, they are asked to provide a reason for the delay, and the reason's validity is assessed by the order support staff following standard procedures.

Interview data indicate that the initial response to the customer occurs within 48 hours of reporting the issue. Once a case is opened, the customer is granted up to three days to submit any supporting documents, such as proof of identity, an official police report, or photos of empty or damaged parcels. If the customer fails to comply within this period, the case is closed due to non-compliance.

Delivery companies are typically given 48 hours to respond to investigation requests. The Order Support Team is responsible for opening the investigation and coordinating with all parties involved in the order to identify the root cause of the issue.

Before making a decision on compensation or reshipment, the customer's full record is reviewed, including the number of previous claims and complaint patterns. Orders exceeding €5,000 require approval from the team leader. In unclear cases, the file is escalated to the legal team, which issues official guidance on how to handle the situation.

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Delivery companies are generally given 48 hours to respond to investigation requests. The Order Support Team opens the investigation and communicates with all parties involved in the order to determine the root cause of the problem.

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Types of Issues Requiring Investigation and Customer Compensation

1. Non-Receipt of Order – Delivery Delay or Missing Item:

- The service specialist identifies this issue when the order exceeds the estimated delivery date in the system. Customers usually contact the store if the order is not received on time; otherwise, a case is automatically opened.
- The delivery company must provide Proof of Delivery (POD) within 48 hours of case opening.

Customer Compensation Procedures:

- **Customer Record Verification:** The customer must have a clean order history. IP addresses, email addresses, phone numbers under the same name, and the delivery address are verified using specialized software.

- **Device Activation Verification:** Confirm the name used for device activation and the associated IP address.
- If all verifications are passed, the customer is compensated as requested, with an email notification confirming the resolution.
- **Escalation to the Delivery Company for Further Investigation:**
 - If a POD is provided after 48 hours, the case is forwarded to the logistics team to close the file and notify the delivery company for failing to provide timely proof of delivery.
 - If the delivery company fails to provide a POD, it must acknowledge the loss of the parcel, the customer is compensated, and the case is classified as “lost during transit” (carrier fault).

2- Delivery Not Received – Signature Dispute

This issue arises when a service specialist sees that an order is marked as delivered on the carrier's website, but the customer claims they have not received it.

No customer is compensated without direct communication as part of the investigation. If the team cannot reach the customer after three attempts, the investigation is closed.

Compensation Procedures:

Step 1: Proof of Signature (POS – Proof of Signature)

- The customer's signature is compared with the delivery signature recorded by the carrier (e.g., passport or driver's license).
- If the signatures match, no compensation is provided, and the customer is flagged as a potential fraud attempt.

Step 2: Proof of Delivery (POD)

- If the carrier does not provide the POD, they must acknowledge the loss of the shipment, the customer is compensated, and the issue is recorded in logistics as a carrier error.
- The customer's record is checked, including IP address, email, phone numbers, and delivery address using specialized software.
- Device activation is verified, including the name and IP address used.

3- Empty Box / Delivered but Item Missing

Before compensating, the following steps must be completed:

1. Contact the customer during the investigation to verify: whether they received the order themselves, whether the package was properly sealed, and whether they noticed any weight discrepancies.
2. Confirm delivery with the carrier (POD).
3. Obtain photos from the customer showing all sides of the box and shipping labels.
4. Police report for missing items.
5. If the customer claims the packaging was tampered with, escalate the issue to the carrier for investigation.
6. Verify activation of any missing devices.
7. Confirm the customer has no prior fraud record.
8. Ensure there are no previous refunds for the customer.

Handling Additional Items Received:

1. Check if the extra product belongs to another customer. If yes, compensate the other customer and create a return process to Apple.
2. If the extra item is an Apple product but does not belong to any customer, return it and notify the warehouse.
3. If the item is not an Apple product, escalate to the carrier for investigation.
4. If the customer wants to purchase the extra items, send an email requesting written authorization to charge their account.

Receiving Incorrect Items:

1. Identify the correct customer for the incorrect item in the system using the details provided.

2. In case of mixed orders, compensate both customers and create a return in the system for the incorrect product.
3. Make one mandatory contact attempt to obtain additional details about the incorrect item(s).
4. If the customer does not respond, send an email requesting photos of the received item(s).

Cases Where Compensation is Not Provided:

- Postal shipments where Apple has no agreement with the government postal service.
- Orders delivered to an incorrect address provided by the customer (customer error).
- Orders that have not yet exceeded the estimated delivery date in the system and carrier schedule.
- Low-value items (<100 EUR / 75 GBP), where the cost of effort exceeds the item value. The company usually compensates quickly after verifying the customer's order history to prevent repeated claims.

5. Conclusion

The main findings of this study can be summarized as follows:

1. The study concluded that addressing delivery issues in e-commerce does not rely solely on logistical efficiency but requires effective digital customer support after the sale. Apple's experience serves as a successful model in this regard.
2. Expanding the scope of digital customer support at the Apple Online Store is a key factor in reducing post-sale delivery issues.
3. The most common problem is non-receipt of the package despite it being marked as delivered, along with associated signature disputes.
4. The causes of non-delivery in the Apple Online Store include: carrier errors, incorrect addresses provided by the customer and theft after delivery.
5. The products most prone to delivery issues are smartphones and laptops.
6. The most frequently used official communication channels between the customer and the store are the official email and the customer portal.
7. Data indicate that the age group 18–40 years old is the most frequent in reporting non-receipt complaints due to their heavy reliance on online shopping and rapid response to official channels.
8. The order support team opens investigations and communicates with all parties involved in the order to identify the root cause of the problem.
9. Issues requiring investigation and customer compensation include: order not received, delivery not received (signature dispute), and empty box (delivered but item missing).
10. Service specialists intervene if the issue involves the receipt of additional items or receiving incorrect items instead of the ones ordered.
11. If the missing item is low-value (£75 / €100), where the cost of time and effort exceeds the item value, the company tends to compensate the customer immediately after a quick verification of the customer's order history to avoid repeated claims.

Study Limitations:

- The research was based on interviews with leading global electronic product companies with branches in Portugal, making the geographical scope a key limitation.
- Other factors influenced data collection, particularly related to the European market, internet usage rates, and the availability of delivery services in the country.
- The study did not evaluate the online store's management regarding the success of digital customer support in resolving all issues, nor did it specify the percentage of responsibility between the store management, delivery companies, and the customer, due to management's reluctance to answer certain questions.

Future Research Suggestions:

- The topic can be studied quantitatively.
- Future research could explore the role of artificial intelligence in enhancing digital customer support.

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6. Appendices: Overview of the Questions Asked in the Interviews

1. What are the specific tasks of the Apple Online Store management in Portugal?
2. What are the stages of the order life cycle at Apple?
3. What are the order procedures?
4. What types of delivery does the store management follow?
5. How does the store management know that there is a delivery problem?
6. How is the customer accompanied after the sale?
7. What is the mechanism by which the store management ensures that the product reaches the customer safely?
8. Does post-sale customer tracking and follow-up prevent problems from occurring in advance?
9. What is the percentage of solutions found before the problem occurs thanks to digital support?
10. How is digital support conducted (before, during, and after delivery)?
11. What types of problems are recorded in the Apple Online Store after the sale in Portugal?
(Problem of non-receipt of goods – goods received damaged – goods received incomplete – additional goods received – incorrect goods received – payment problems).
12. What is the most common delivery-related problem faced by the company's online store?
13. Is the reason for non-delivery of the product to the customer due to the parent company, a technical defect in the store, or delivery companies?
14. What types of goods are most likely to experience delivery problems (phones, computers, etc.)?
15. What is the digital channel used to communicate with the customer after the sale (email – website – application – social media)?
16. Which category most frequently submits complaints about non-receipt of goods (young – elderly, etc.)?
17. What is the allowed period to report a problem?
18. What is the maximum time within which the company management handles the problem?
19. Who is responsible for finding a solution to a delivery problem in the company?
20. What problems require opening an investigation and compensating the customer?
21. Can the customer receive additional goods?
22. Can the customer receive incorrect goods?
23. Are there cases where the customer cannot be compensated?
24. What does the company do if the value of the product is small?