

Examining the Impact of Limited-Time Offers on Consumer Purchase Behavior in Online Shopping Platforms

Ann Magdalene S. Baybayon¹, Ralph Jay C. Parungao¹, Kathlyn Mae M. Rivera¹, Lovely Krizzel G. Salvador¹, Noemi C. Vega¹

¹Nueva Ecija University of Science and Technology, Philippines

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Email of Corresponding Author: baybayonmagdalene25@gmail.com

Abstract

This study examines the influence of limited-time offers (LTOs) on online consumer behavior, focusing on purchase intention, impulse buying, and perceived product value. Grounded in behavioral and psychological theories—particularly the principles of urgency, scarcity, social proof, and perceived value—the research explores how these mechanisms shape decision-making in digital commerce environments. A descriptive research design was employed, with data collected through an electronic survey questionnaire distributed via Google Forms to online shoppers aged 18 and above in San Isidro, Nueva Ecija. Using convenience sampling, responses were analyzed through descriptive statistics and a 4-point Likert scale to determine levels of influence. Findings indicate that LTOs moderately influence consumer behavior, with social proof emerging as the strongest psychological driver, significantly affecting purchase decisions through reviews, ratings, and peer influence. Fear of Missing Out (FOMO), scarcity, and urgency also contributed to increased impulsive buying, faster decision-making, and enhanced perceived value, though to a moderate extent. Results further reveal a balance between impulsive and rational decision-making, as consumers often compare prices despite time pressure and may experience post-purchase regret. Demographically, younger and lower-income consumers were more engaged in online shopping and responsive to LTOs. The study concludes that while LTOs are effective marketing tools for increasing engagement and sales, excessive or misleading use may lead to promotion fatigue, reduced trust, and diminished brand credibility. It recommends that businesses adopt ethical, transparent, and personalized LTO strategies while leveraging verified social proof and responsible data practices. The study aligns with Sustainable Development Goals (SDG) 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), and SDG 12 (Responsible Consumption and Production), as it enhances understanding of digital marketing practices and consumer decision-making in e-commerce. Its sustainability impact lies in promoting responsible marketing strategies, informed consumer behavior, and ethical digital commerce practices that support long-term trust and economic sustainability.

Keywords: E-Commerce, Fear of Missing Out, Impulse Buying, Limited-Time Offers, Perceived Value, Purchase Intention, Scarcity, Social Proof

1. Introduction

E-commerce has significantly transformed global consumer purchasing behavior by enabling continuous access to products, eliminating geographical barriers, and facilitating informed decision-making through price comparisons and product research (Chakraborty & Paul, 2022; Cao, 2023; Gelder, 2025). Within this evolving digital landscape, limited-time offers (LTOs) have emerged as a strategic marketing tool that leverages urgency, scarcity, and psychological triggers to influence consumer decisions. These promotions are widely associated with increased impulse buying, enhanced perceived value, and faster purchasing behavior. However, despite their widespread use, the psychological mechanisms underlying LTOs—particularly across demographic groups and their long-term implications—remain insufficiently understood. This study examines how LTOs influence online consumer behavior, focusing on purchase intention, impulsive buying, and perceived product value.

1.1 Background of Limited-Time Offers (LTOs) and Online Consumer Behavior

The rapid expansion of e-commerce has reshaped traditional retail by enabling global access, convenience, and continuous purchasing opportunities (Chakraborty & Paul, 2022; Cao, 2023). Increased internet penetration, with over five billion users worldwide, has accelerated online transaction adoption (Gelder, 2025). As a result, businesses increasingly utilize digital marketing strategies to influence consumer behavior. Limited-time offers (LTOs) are widely employed to stimulate immediate purchasing decisions by creating urgency and perceived scarcity (Oberoi, 2024). These strategies reduce hesitation, enhance engagement, and increase conversion rates (Marjerison, Hu, & Wang, 2022). Empirical studies show that time-constrained promotions significantly drive impulse buying, particularly among consumers with high shopping enjoyment (Gong & Huang, 2024). Additionally, time pressure positively correlates with impulsive behavior in online

retail environments, where emotional responses and perceived value play critical roles (Dong, Wang, & Qin, 2023). Despite their effectiveness, the psychological effects of LTOs—especially regarding emotional responses, gender differences, and long-term trust—remain underexplored (Oberoi, 2024; Kanwal et al., 2022).

1.2 Themes on Demographics and Psychological Drivers of LTO-Influenced Consumer Behavior

Existing literature highlights that demographic factors such as age, gender, and income significantly influence online shopping behavior. Generational differences show that Gen Z and Millennials are more engaged in online shopping and are highly responsive to discounts and convenience, while Gen X and Baby Boomers demonstrate more cautious or traditional purchasing patterns (Chevalier, 2024; Ross, 2019; HubSpot, 2024; Bewicke, 2021). Gender also plays a critical role, with women being more influenced by social factors and emotional responses, while both genders are affected by privacy concerns (Wang & Kim, 2019; Kanwal et al., 2022). Income level further shapes purchasing behavior, as higher-income consumers exhibit greater impulsive tendencies, whereas lower-income consumers prioritize affordability (Williams, 2024; Suvadashini & Mishra, 2021). Psychological mechanisms such as Fear of Missing Out (FOMO), scarcity, and social proof are central to LTO effectiveness. FOMO induces urgency and anxiety, leading to impulsive decisions (Friederich et al., 2024; Soueidi, R. 2024). Scarcity increases perceived product desirability by emphasizing limited availability (FasterCapital, 2024; Cybertek Marketing, 2024). Social proof enhances trust and confidence through reviews, endorsements, and peer influence (Arunkumar et al., 2023; Epstein et al., 2022). These factors collectively drive rapid decision-making and increased purchase frequency (Khetarpal & Singh, 2024). However, consumer hesitation may arise due to financial concerns, product complexity, or lack of trust (Rodrigues et al., 2021; Daroch et al., 2021). Trust-building elements such as reviews and product information help mitigate these barriers (Chen et al., 2022).

1.3 Global, National, and Local Context of Online Shopping and LTO Adoption

Globally, the growth of e-commerce has expanded consumer access to diverse products and digital shopping platforms (Gelder, 2025). Online purchasing trends show high demand for categories such as apparel, electronics, cosmetics, and household items (Ok, Lee, & Kim, 2019). At the national and local levels, similar patterns are observed. In the Philippines, particularly in Nueva Ecija, consumers favor clothing, electronics, and beauty products, driven by convenience, affordability, and product variety (Ibarra et al., 2022). These findings reflect the increasing reliance on e-commerce platforms to meet both practical and lifestyle needs across different contexts.

1.4 Theoretical Foundations of LTO Influence on Purchase Intention, Impulse Buying, and Perceived Value

This study is grounded in behavioral and psychological theories related to consumer decision-making, particularly the principles of urgency, scarcity, and social influence. The scarcity principle explains that limited availability increases perceived value and desirability (FasterCapital, 2024). Similarly, urgency-driven marketing triggers emotional responses such as anticipatory regret and fear of missing out, which accelerate purchasing decisions (Behl, 2024; Dholakia, 2019). Social proof theory further supports that individuals rely on others' behaviors and opinions when making decisions, especially in uncertain environments (Arunkumar et al., 2023). These frameworks collectively explain how LTOs influence perceived value, impulse buying, and decision-making behavior. Additionally, perceived value theory highlights that consumer judgments are based on the trade-off between benefits and costs (Parasuraman et al., 2018), while engagement in promotional activities enhances value perception and purchase likelihood (Kaveh et al., 2020).

1.5 Research Gaps in LTO Effects on Online Purchase Intention, Impulse Buying, and Perceived Value

Although existing studies confirm the effectiveness of LTOs in driving impulse buying and perceived value, several gaps remain. First, the psychological mechanisms underlying LTOs—particularly emotional responses such as FOMO—are not fully understood (Oberoi, 2024). Second, limited research examines demographic variations, including gender and generational differences, in response to LTOs (Dai et al., 2019; Zhang et al., 2024). Additionally, most studies focus on physical retail environments rather than online platforms, leaving a gap in understanding digital consumer behavior (Turunen et al., 2023). Concerns regarding the long-term effects of LTOs on consumer trust and perceived product value also remain insufficiently addressed (Kanwal et al., 2022). This study aims to address these gaps by examining how LTOs influence purchase intention, impulsive buying, and perceived value within online shopping environments.

1.6 Alignment of LTO-Driven Online Consumer Behavior Study with Sustainable Development Goals (SDGs)

This study aligns with SDG 8 – Decent Work and Economic Growth by supporting businesses in enhancing marketing strategies that drive sales and economic activity in the digital economy. It also contributes to SDG 9 – Industry, Innovation and Infrastructure by advancing knowledge on digital commerce and innovative marketing practices. Additionally, the study relates to SDG 12 – Responsible Consumption and Production, as understanding consumer behavior—particularly impulse buying—can promote more informed and responsible purchasing decisions. By examining how LTOs influence decision-making, the research encourages awareness of consumption patterns in online environments.

1.7 Importance of LTO Research on Online Consumer Behavior to Multidisciplinary Sustainability

This study contributes to socio-economic sustainability by providing insights that help businesses optimize strategies while enabling consumers to make more informed purchasing decisions. It also supports behavioral and educational sustainability by increasing awareness of psychological influences such as urgency, scarcity, and social proof in digital consumption. Furthermore, the research advances technological and innovation sustainability by exploring consumer behavior within digital platforms, contributing to the evolving field of e-commerce. By integrating marketing, psychology, and digital technology perspectives, the study promotes a multidisciplinary understanding of sustainable consumer behavior in modern online environments.

2. Material and methods

2.1 Research Design

The study adopted a descriptive research design, which focuses on observing and systematically describing behavioral patterns within a given context (Sharma, 2019). This approach was used to identify and characterize key attributes of online consumer behavior when exposed to limited-time offers. Specifically, the research examined demographic profiles, psychological triggers such as fear of missing out (FOMO), scarcity, and social proof, and their influence on consumer decision-making and purchasing behavior. The research paradigm illustrated on page 1 reflects the relationship between demographic variables and behavioral outcomes, including impulse buying, perceived product value, immediate purchase decisions, and purchase frequency.

2.2 Locale of the Study

The study was conducted in San Isidro, Nueva Ecija. Data were collected from online shoppers residing in this area to ensure contextual relevance. The geographic scope of the study situates San Isidro within Nueva Ecija and the Philippines, providing a localized setting for analyzing online consumer behavior.

2.3 Respondents of the Study

The respondents consisted of individuals aged 18 and above who actively engage in online shopping within San Isidro, Nueva Ecija. These participants were selected based on their direct experience with online purchasing, making them relevant to the objectives of the study.

2.4 Sample and Sampling Procedure

The study utilized a convenience sampling method to select respondents. This approach ensured accessibility and allowed the researcher to gather data efficiently from individuals who were readily available and actively involved in online shopping. The sampling strategy was aligned with the study's objective of examining consumer responses to limited-time offers within a specific locale.

2.5 Research Instrument

Data were collected using an electronic survey questionnaire administered through Google Forms. This instrument was chosen due to its accessibility and efficiency in reaching online consumers. The questionnaire included closed-ended and Likert-scale items designed to capture demographic information, psychological triggers, decision-making influences, and behavioral responses to limited-time offers. The structure of the survey enabled systematic data collection and facilitated efficient analysis.

2.6 Data Gathering Procedure

The researcher developed an electronic survey questionnaire, which underwent reliability and validity testing prior to distribution. Once finalized, the survey was disseminated online through social media platforms to reach a diverse group of respondents within the study area. Responses were collected digitally, organized systematically, and transcribed to ensure accuracy. The questionnaire was structured into sections covering demographic characteristics, psychological factors, decision-making processes, and behavioral responses to LTOs. The distribution process focused on accessibility and participation, while data organization ensured that responses were properly encoded for analysis. This systematic procedure ensured an organized and reliable data collection process.

2.7 Data Analysis Techniques

The collected data were analyzed using descriptive statistics to interpret consumer responses. A 4-point Likert scale was applied, assigning numerical values ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). Mean scores were computed for each item to determine overall respondent perceptions regarding limited-time offers. These mean values were interpreted using predefined ranges corresponding to levels of influence, from low to high. This method enabled a clear assessment of how LTOs affect consumer behavior in online shopping environments.

2.8 Ethical Considerations

The study adhered to established ethical standards to ensure the protection of participants and the integrity of the research process. Informed consent was obtained from all respondents, clearly outlining the purpose of the study, voluntary participation, and confidentiality. No personally identifiable information was collected, and all responses were anonymized. The research complied with Republic Act No. 10173, or the Data Privacy Act of 2012, ensuring responsible handling and secure storage of data. All information gathered was used strictly for academic purposes and safeguarded against unauthorized access. Throughout the study, principles of transparency, confidentiality, and voluntary participation were consistently upheld.

3. Results and Discussion

3.1 Consumer Profile and Behavioral Characteristics

3.1.1 Demographic Profile of Online Consumers

The data show that the majority of respondents were aged 18–25, followed by those aged 26–35, indicating that online shopping is more prevalent among younger individuals. Gender distribution was nearly equal, with a slightly higher proportion of female respondents. Most participants reported earning less than ₱5,000 monthly, suggesting that online shopping is widely adopted among lower-income groups. In terms of shopping behavior, most respondents engaged in online purchases three to five times per month, with fashion and apparel as the most frequently purchased category, followed by beauty products. These findings indicate that younger consumers dominate the online shopping market, likely due to greater digital familiarity and accessibility. The prominence of lower-income respondents suggests that affordability and convenience play a key role in online purchasing behavior. The popularity of fashion and beauty products reflects consumer preferences for accessible and frequently updated goods in digital marketplaces.

3.2 Psychological Triggers Activated by Limited-Time Offers

3.2.1 Influence of Fear of Missing Out (FOMO)

The results indicate that FOMO has a moderate influence on consumer purchasing behavior, with respondents showing moderate agreement that limited-time offers create pressure to buy, generate regret when missed, and lead to unplanned purchases. This suggests that while FOMO does not strongly dominate decision-making, it still plays a significant role in accelerating consumer actions. These findings support (Friederich et al., 2024), who explained that FOMO induces anxiety that can lead to impulsive purchases. Similarly, (Soueidi, 2024) emphasized that marketing strategies such as countdown timers and flash sales increase urgency, while (Hill, 2025) noted that social media exposure intensifies FOMO through continuous promotional content.

3.2.2 Influence of Scarcity

The findings reveal that scarcity has a moderate effect on consumer behavior, as respondents were more likely to purchase products when exposed to limited stock notifications and low-stock alerts. This indicates that perceived product limitation increases urgency and desirability, even if the effect is not strong. The results align with (FasterCapital, 2024), which states that consumers perceive scarce products as more valuable. Likewise, (Cybertek Marketing, 2024) highlighted that scarcity tactics encourage faster decision-making by creating a sense of urgency.

3.2.3 Influence of Social Proof

The data show that social proof has the strongest influence among the psychological triggers, with respondents highly influenced by seeing that many others purchased a product, as well as by reviews and customer feedback. This suggests that consumers rely heavily on the behavior and opinions of others when making purchase decisions. These findings are consistent with (Arunkumar et al., 2023), who emphasized that social indicators such as reviews and endorsements build trust and encourage buying behavior. Similarly, (Batool, 2024) and (Huang et al., 2024) found that positive ratings and visible customer engagement significantly increase purchase likelihood and accelerate decision-making.

3.3 Influence of Limited-Time Offers on Consumer Decision-Making

3.3.1 Sense of Urgency in Purchasing Decisions

The results indicate that urgency has a moderate influence on decision-making, with respondents reporting that time-sensitive offers, such as flash sales and expiring deals, encourage faster purchasing decisions and reduce hesitation. This suggests that urgency-based strategies effectively prompt quicker consumer actions. The findings support (Behl, 2024), who stated that urgency cues like countdown timers create psychological pressure that accelerates decision-making. These effects are further reinforced in digital environments through visual and promotional cues that limit evaluation time.

3.3.2 Purchase Hesitation and Immediate Action

The findings show that limited-time offers moderately influence both hesitation and immediate action, with many respondents indicating a tendency to compare prices despite time pressure, while also experiencing occasional regret after quick purchases. This indicates a balance between impulsive and rational decision-making among consumers. These results align with (Dholakia, 2019), who described time-limited promotions as creating both urgency and potential dissatisfaction.

Additionally, (Kaveh et al., 2020) emphasized that consumers perceive greater value when they feel in control of their decisions, even during promotional periods.

3.4 Impact of Limited-Time Offers on Consumer Behavior

3.4.1 Perceived Product Value

The results reveal that limited-time offers have a moderate influence on perceived product value, with respondents showing stronger trust in offers from reputable brands and moderate agreement that LTOs provide value for money and satisfaction. This suggests that perceived value is influenced not only by price reductions but also by brand credibility and emotional satisfaction. These findings are consistent with (Parasuraman et al., 2018), who defined perceived value as a balance between benefits and costs. Similarly, (Kaveh et al., 2020) noted that engagement with promotions enhances value perception, while (Dholakia, 2019) highlighted the role of urgency and emotional factors in shaping perceived desirability.

3.4.2 Impulse Buying Tendencies

The data indicate that limited-time offers moderately influence impulse buying, with respondents reporting increased likelihood of unplanned purchases, emotional excitement, and occasional overspending. This suggests that LTOs can trigger spontaneous buying behavior, though not strongly enough to fully override planned purchasing intentions. These findings support (Akram et al., 2018) and (Wu et al., 2020), who emphasized that the convenience of online platforms and targeted marketing increase impulse buying. Additionally, (Browne and Jones, 2017) explained that urgency cues heighten emotional arousal, prompting faster and less deliberate purchasing decisions.

4. Conclusion & Recommendations

This study examined the effects of limited-time offers (LTOs) on consumer behavior in online shopping, focusing on psychological triggers such as urgency, scarcity, and fear of missing out (FOMO) and their influence on decision-making, purchase frequency, and engagement. The findings revealed that LTOs significantly influence consumer behavior, with social proof emerging as the strongest factor, as consumers were more likely to purchase products with visible popularity indicators. Scarcity and urgency also contributed to faster decision-making and reduced hesitation, often appealing to emotional responses, particularly among younger and lower-income consumers. While LTOs were effective in increasing impulse buying and perceived product value, their overuse may lead to promotion fatigue, reduced responsiveness, and diminished trust. Misleading scarcity and urgency cues can negatively affect brand credibility and long-term loyalty, emphasizing the importance of transparency and authenticity. As digital commerce evolves with AI-driven personalization, LTO strategies are expected to become more adaptive, but ethical considerations such as data privacy and responsible marketing practices remain essential to sustaining consumer trust and engagement.

Based on the findings, it is recommended that online retailers continue using LTOs as a strategic marketing tool while prioritizing authenticity, personalization, and ethical transparency. Businesses should strengthen social proof by displaying verified reviews, ratings, and purchase activity to enhance consumer trust. Scarcity cues and stock indicators should only be used when accurate to maintain credibility, and the frequency of LTOs should be carefully managed to avoid promotion fatigue by reserving them for key promotional periods. Retailers are encouraged to segment their target audiences based on demographic and behavioral factors to deliver more relevant and personalized offers. The use of AI tools can further enhance effectiveness through tailored promotions, provided that data collection and usage are clearly communicated in compliance with privacy regulations. Additionally, clear return and exchange policies should be established to reduce hesitation and improve satisfaction, while continuous monitoring of promotional performance through customer feedback and sales data is necessary to refine strategies and ensure long-term success.

The study was limited to respondents from San Isidro, Nueva Ecija, which may restrict the generalizability of the findings to broader populations. The use of convenience sampling and self-reported survey data may also introduce bias and limit the accuracy of responses. Additionally, the study focused primarily on selected psychological triggers and behavioral outcomes, which may not fully capture all factors influencing consumer behavior in online shopping environments.

Compliance with ethical standards

This study adhered to established ethical standards to ensure the integrity of the research process and the protection of participants. Informed consent was obtained from all respondents, clearly outlining the purpose of the study, the voluntary nature of participation, and the assurance of confidentiality. No personally identifiable information was collected, and all responses were anonymized. The research complied with Republic Act No. 10173, or the Data Privacy Act of 2012, ensuring the responsible handling and secure storage of data. All information gathered was used exclusively for academic purposes and safeguarded against unauthorized access.

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