



## The Influence Of Countdown Timer On Purchase Urgency And Cart Abandonment In Flash Deals Promotions

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### ABSTRACT

The growth of e-commerce has led online retailers to use flash deal promotions with countdown timers to create urgency and influence consumer behavior in online shopping. This study examines the influence of countdown timers on consumers' purchase urgency and cart abandonment behavior during flash deal promotions. Data were collected through an online survey administered to consumers aged 18 and above who have experience with flash deal promotions. Using descriptive statistics, the intensity of countdown timers, purchase urgency, and cart abandonment behaviors of consumers were analyzed. Meanwhile, linear regression was used to determine the influence of countdown timers on consumers' purchase urgency and cart abandonment during flash deal promotions. The findings indicate that countdown timers make consumers more engaged and are effective in creating time pressure during promotions, significantly increasing purchase urgency and reducing cart abandonment, with a stronger effect on purchase urgency than on cart abandonment. This study concludes that countdown timers can influence purchase urgency, while their effect on preventing cart abandonment varies among consumers, providing practical insights for online retailers to strategically integrate time-sensitive campaigns, encourage faster checkout, and implement measures such as reminders and streamlined processes to reduce cart abandonment.

**Keywords:** *Fear of Missing Out, Online Impulsive Buying, Social Comparison*

### INTRODUCTION

#### Background of the Study

The rapid growth of e-commerce has significantly affected individuals' day-to-day lives, as more people rely on online platforms to purchase goods and services electronically. According to Montano and Mercado (2023), the COVID-19 pandemic further increased the demand for online shopping as people worked and studied from home. Since buying products has become part of individuals' lives, e-commerce plays an essential role in fulfilling their needs and necessities while ensuring their safety and health.

With this growth, online retailers are forced to adopt various promotional strategies to remain competitive in the e-commerce industry, aiming to attract and retain more customers. Based on the study of Dsilva & N, (2021), one such tactic includes flash deals—online promotions that offer highly discounted prices for a short period of time, also known as daily sales or private sales. Flash deals often use countdown timers—a display of the time remaining before a promotion expires. These enhance purchase urgency by motivating consumers to make quicker decisions and increasing the perceived value of time-limited offers (Suvarna & Malagi, 2025).

Despite the effectiveness of countdown timers in increasing urgency, online retailers still face high rates of cart abandonment. As stated by Jiang et al., (2021) Some items placed in consumers' shopping carts are purchased, while others remain unpurchased; this is known as cart discard (abandonment), broadly referred to as Internet Abandoned Cart Syndrome (IACS). Cart abandonment remains high even during flash deals, indicating that countdown timers may not always lead to completed purchases.

While existing literature studies the effect of countdown timers on consumers' purchase urgency, there is limited research examining the relationship among countdown timers, purchase urgency, and cart abandonment simultaneously during flash deal sales, as well as their influence on actual customer purchasing behavior.

Furthermore, few studies have examined current customer behavior during the flash offer process, such as whether countdown timers effectively increase checkout completion or unintentionally lead to cart abandonment.

This study aims to address these gaps by analyzing the effects of countdown timers on customers' purchase urgency, purchasing behavior, and cart abandonment in flash deal sales, in line with the study's objectives of measuring these relationships, understanding customer behavior, and evaluating the influence of countdown timers on purchase decisions.

#### Objectives of the Study

To analyze the effects of countdown timer of customers' purchase urgency and cart abandonment, during flash deals sales. (1) To perceive the intensity of countdown timer used in flash deals promotions. (2) To investigate the degree of consumer's purchase urgency and cart abandonment in flash deals promotions, with countdown timer. (3) To determine the influence of a countdown timer on customers' purchase urgency and cart abandonment during flash deals promotions.

#### Literature Review

**Use of countdown timers in online shopping**

In the study of Su et al. (2025), it was stated that marketers are increasingly using countdown timers in online video advertising to capture consumer attention and improve advertising effectiveness. By employing eye-tracking methods, the study revealed that countdown timers enhance viewers’ visual attention, memory, and advertisement recall, particularly for experience-oriented advertisements. Similarly, e-commerce platforms strategically utilize micro-moment marketing to influence consumer purchase decisions by presenting urgency cues, real-time prompts, and personalized messages during critical decision-making moments (Basir, 2025). These strategies encourage consumers to act quickly by reducing cognitive deliberation and increasing the perceived relevance of offers. However, as mentioned by the study of Tiemessen (2022), it explained that while countdown timers can significantly increase purchase urgency and transaction completion, the use of deceptive time pressure cues negatively affects consumer trust, satisfaction, and perceived fairness once consumers recognize the manipulation.

In the study of Kim and Gupta (2023), they examined that countdown timers used in online shopping significantly increase consumers’ perceived urgency and purchase intention by featuring limited availability and time scarcity. The study showed that when online consumers are exposed to countdown timers, they tend to make quicker purchasing decisions and are less inclined to compare other products or research more about them. It states that in the study, countdown timers shift consumers’ focus from careful evaluation to immediate decision-making, leading to impulsive buying behavior. Furthermore, it emphasized that countdown timers are mostly effective in the e-commerce environment because they create a sense of competition among online retailers and consumers and increase the fear of missing out (FOMO), making the offers more valuable. However, the researchers in the study also showed that the continuous and repeated use of countdown timers may lead to a decline in consumers’ trust and weaken the credibility of the platform, resulting in negatively affected long-term customer relationships.

**Purchase urgency in time limited online promotions**

According to Oberoi (2024), businesses are continuously searching for inventive approaches to retain clients and compete in today’s competitive industry, often providing transient discounts that compel customers to buy limited available products, known as time-limited discounts. Moreover, time-limited discounts are found to foster brand loyalty. Businesses exploit the fear of missing out (FOMO), which instinctively makes customers act impulsively and may lead to post-purchase dissatisfaction. Some customers have an irresistible urge to buy due to their enormous desire to purchase and satisfy themselves (Meena, 2018, as cited in Rodrigues & Varela, 2021). Because of this, limited-time offers influence customers to buy within a specific period, affecting consumer behavior and increasing sales (Oberoi, 2024). Supporting this, in the recent study of Suvama and Malagi (2025) found that limited-time discounts significantly increase consumers’ sense of urgency and accelerate purchase decisions, often reducing careful evaluation of alternatives. Similarly, it was found that online promotional strategies, including time-limited offers, heighten emotional arousal and impulsive buying intentions, leading to unplanned purchases Luo et al. (2021). Lastly, the psychological triggers such as scarcity and urgency play a crucial role in shaping consumer buying behavior in online shopping environments, as these triggers intensify perceived value and prompt immediate purchasing actions emphasized by the study of Luo et al. (2021)

**Cart abandonment in online shopping**

Recent quantitative findings from 2025 indicate that shopping cart abandonment remains a significant challenge for e-commerce, with global rates averaging approximately 70.22%. This behavior is increasingly driven by the "pseudo-wishlisting" trend, where consumers use carts to store items while awaiting further price drops or promotions. To reduce this, retailers employ temporal scarcity cues such as countdown timers to induce purchase urgency. However, research suggests that the effectiveness of these timers is non-linear; while they can successfully "nudge" shoppers toward completion, excessive or perceived inauthentic time pressure can trigger consumer reactance, leading to an immediate exit from the site as a defense mechanism against psychological stress.

Online shopping cart abandonment is influenced not only by technical issues or high costs but also by underlying psychological factors. As studied by Adnan (2025) on why consumers leave their online carts without purchasing, using interviews with online shoppers in the e-commerce industry. The study found that feelings such as hesitation, uncertainty, fear of risk, lack of trust, and mental tiredness strongly influence the decision to abandon a cart. The study used the Theory of Planned Behavior (Ajzen, 1991) and the Trust–Risk Framework (Pavlou, 2003; Kim et al., 2008) to explain how attitudes, social influence, sense of control, trust, and perceived risk affect online buying decisions. It also explained that leaving a shopping cart is often a rational decision made when consumers feel uncertain, fear making the wrong choice, or believe that the online platform does not meet their expectations.

**Research Framework**

**Theoretical framework**

Countdown timers in flash deal promotions may result in various calls to action from customers. According to Rook (1997), as stated in Oberoi (2024), consumers make sudden, unplanned purchases that are triggered by certain situations, which result in customers immediately buying a product as they see it as an opportunity to get it at a much lower price. On the other hand, too much pressure due to the countdown timer may result in cart abandonment, as people sometimes avoid decisions when the cost of choosing outweighs its benefits, especially when decision-making becomes too complex or emotionally uncomfortable for some individuals (Anderson, 2003, as stated in Mittal, 2023). With this, customer actions may vary in how they generally react to countdown timers during flash deal promotions, whether they act impulsively or simply avoid the purchase.

**Conceptual framework**

The conceptual framework illustrates how a Flash Deal Countdown Timer directly influences consumer behavior. When shoppers see the time running out, it creates Purchase Urgency by making them feel they must act quickly to save money, but it can also lead to Cart Abandonment if the pressure causes them to hesitate or feel overwhelmed. These two reactions determine the Purchasing Behavioral Responses, showing whether the timer successfully leads to a completed sale or causes the customer to leave.



Figure 1. Conceptual framework

**Scope and Limitations**

The research study investigates the influence of countdown timers used in flash deal promotions on customers’ purchase urgency and cart abandonment in online shops that offer this promotional strategy. The scope of the study is defined to measure the relationship between flash deal countdown timers and customer purchasing behavior during time-limited flash deals using a quantitative approach. Other promotional strategies, platforms, and external factors that may affect purchasing decisions, such as social media advertising, email marketing, influencer endorsements, pricing strategies, online marketing websites, and offline promotions, are excluded and set outside the scope to maintain focus and clarity in the data analysis. A quantitative research design is employed, utilizing a structured survey questionnaire to collect measurable data on customers’ perceptions and behaviors during flash deals. The defined scope enables a structured investigation within the study time frame and available resources.

The respondents of the study consist of online shoppers aged 18 and above who have experienced flash deal promotions. All information provided by the respondents will remain confidential and will be used solely for research purposes; only data relevant to the study findings will be included to ensure participants’ privacy and safety.

**METHODOLOGY**

**Research Design**

The study utilizes a Predictive Correlational Design. This design allows the researchers to examine the correlation among the variables in the study, such as countdown timers, purchase urgency, and cart abandonment, and determine whether they influence one another. According to Devi et al. (2022), correlational studies examine the relationship between variables without the researchers controlling or manipulating them. With this, the study will be able to identify and describe whether countdown timers have a significant influence on customers’ purchasing behavior—specifically cart abandonment and purchase urgency—and predict how these variables are affected.

**Research Instrument**

The research will analyze data collected by means of a structured survey questionnaire. The main objective of the survey is to obtain quantitative data for use in the study of how countdown timers affect consumers’ purchase urgency and cart abandonment. Respondents will be asked to rate their level of agreement with several statements concerning the variables of interest on a range from 1–5 using a five-point Likert scale, where 1 indicates Strongly Disagree and 5 indicates Strongly Agree. The development of the questionnaire was guided by a comprehensive review of existing literature and related studies to ensure relevance and alignment with the research objectives. To ensure the validity and reliability of the instrument, the questionnaire will undergo a validation process. It will be reviewed by experts in the field, such as research advisers or subject teachers, to assess content validity, clarity, and appropriateness of the items.

The survey begins with information about the respondents’ demographics; this will be used to provide a better understanding of the demographic makeup of all survey respondents. The remaining parts of the survey will focus on each of the major topics of the research: countdown timer, purchase urgency, and cart abandonment. Items related to the countdown timer category examine how respondents perceive time pressure and urgency with regard to flash sale offers. Purchase urgency items examine how countdown timers create feelings of urgency and influence customers to make quicker decisions or impulse purchases. Finally, the cart abandonment section

examines whether countdown timers have caused respondents to abandon goods before completing their purchases due to stress, pressure, or hesitation.

The Likert scale provides a structured approach that ensures consistency and objectivity for researchers to analyze trends or relationships among countdown timers, urgency to buy, and cart abandonment through statistical analysis. This is also consistent with the predictive correlational design of the study.

**Sampling Method**

This study employs a non-probability purposive sampling method to select respondents who are relevant to the research objectives. This approach is suitable for the predictive correlational design, as it allows the intentional selection of online shoppers who have experienced flash deal promotions with countdown timers.

The purposive sampling method involves selecting participants based on their relevance to the study and their ability to provide meaningful insights. Although it has limitations, it remains effective for obtaining context-specific and accurate data (Tajik, Golzar, & Noor, 2025). The target population includes online shoppers aged 18 years and above—students and staff at Letran Manila—who have encountered flash deal promotions with countdown timers. Respondents must have added at least one item to their online shopping cart during a flash deal, whether the purchase was completed or abandoned.

Respondent distribution will be described using frequency and percentage analysis. Demographic variables such as age, gender, and respondent category (student or staff) will be summarized to provide a clear profile of the participants. This distribution helps in understanding the composition of the sample and ensures that the data interpretation is grounded in the characteristics of the respondents.

**Statistical Treatment**

The research will analyze its data using both descriptive and inferential statistics. Using descriptive statistics, the researchers will address the first and second objectives by calculating the mean and standard deviation, allowing the study to describe and summarize current trends and patterns, providing reliable insights. On the other hand, the third objective will be analyzed using inferential statistics, specifically linear regression, to examine the relationship, effects, and influence of flash deals’ countdown timers on customers’ purchase urgency and cart abandonment. Moreover, the analysis will be conducted using statistical software, with the significance level set at  $\alpha = 0.05$ , providing a deeper understanding of how flash deals’ countdown timers affect the purchasing behavior of students and faculty at Letran Manila.

**RESULTS AND DISCUSSION**

**Table 1. Perceived Intensity of Countdown Timers**

Statement	Mean	SD	Interpretation
I feel that countdown timers help me become more aware of the limited time in flash deals.	4.19	0.86	Agree
I believe that countdown timers make flash deal promotions feel more engaging.	4.25	0.89	Strongly Agree
I clearly notice the remaining time when a countdown timer is displayed, that somehow gives me pressure.	4.18	1.03	Agree
I prefer countdown timers during flash deals, since it feels more dynamic, compared to regular promotions.	4.09	0.99	Agree
<b>Overall</b>	<b>4.12</b>	<b>0.98</b>	<b>Agree</b>

The findings from Table 1 show that participants generally agreed that countdown timers intensify their engagement and excitement while shopping in flash sales, with an overall mean of 4.12. The highest-rated statement indicates strong agreement that countdown timers make flash deal promotions appear more engaging (mean = 4.25, SD = 0.89), showing that respondents are positively oriented in this regard. The other statements also fall within the “Agree” range, with averages ranging from 4.09 to 4.19, suggesting that countdown timers are also associated with creating hype and time pressure during promotions. The standard deviations, ranging from 0.86 to 1.03, indicate moderate variation in responses; most respondents think alike, but there are some differing opinions and feelings toward countdown timers.

To further support our findings, according to AnnCode Solutions (2025), when consumers see a ticking clock, it pushes their sense of urgency to buy a product. Due to a mere psychological phenomenon called FOMO or the fear of missing out. A powerful motivator in e-commerce. This is supported by a study of Tan and Chen (2023) in the Service Business Journal, revealing that flash sale environments create psychological pressure that affects consumer decision-making and increases purchase intention under time constraints. This supports the present study’s results, where participants generally agreed that countdown timers increase engagement, excitement, and perceived time pressure during flash sales.

**Table 2. Purchase Urgency**

Statement	Mean	SD	Interpretation
I feel like countdown timers help me decide more quickly whether to buy a product.	3.98	1.05	Agree
I feel motivated to secure the deal immediately, whenever I see a countdown timer during flash deals.	4.04	1.04	Agree
I believe the discount offered in a flash deal is a unique opportunity that may not be available again soon.	4.07	1.03	Agree
I feel encouraged to make faster purchase decisions when a countdown timer is present.	4.13	1.01	Agree
5. I feel that countdown timers make flash deal offers feel more time-sensitive and important.	4.07	1.04	Agree
<b>Overall</b>	<b>4.06</b>	<b>1.03</b>	<b>Agree</b>

Note: Legend: 1.00 - 1.79 Strongly Disagree; 1.80 - 2.59 Disagree; 2.60 - 3.39 Neutral; 3.40 - 4.19 Agree; 4.20 - 5.00 Strongly Agree

As shown in Table 2, the respondents tend to agree that countdown timers generate a strong sense of purchase urgency, with an overall mean of 4.06 and a standard deviation of 1.03. Therefore, it can be inferred that respondents are motivated to shop for more items or at least feel urged to make faster purchasing decisions when countdown timers are present, though there is some divergence in the intensity of this urgency. The item means range from 3.98 to 4.13, indicating agreement that the countdown timer promotes immediate action, draws attention to the limited-time nature of the offer, and affects decision-making in flash sales. The item-level standard deviations, which are close to the overall SD, further suggest that while most respondents feel more urgency, some feel less due to individual shopping styles and sensitivity to time pressure. Overall, the moderate SD supports the idea that countdown timers induce purchase urgency among participants to a certain degree. According to Cybertek (2024), the flash sales taps into a consumer’s fear of missing out, which consequently results in purchase urgency. Making people sometimes tend to buy products without thinking. This is further supported by the study of Sun et al. (2023), which found that time pressure in online shopping environments significantly increases impulsive buying behavior and leads consumers to make faster purchasing decisions due to heightened urgency during limited-time conditions.

**Table 3. Cart Abandonment**

Statement	Mean	SD	Interpretation
I believe countdown timers help me stay engaged throughout the checkout process.	4.22	0.88	Strongly Agree
I feel like countdown timers positively influence me to complete a purchase rather than leave items in my cart.	4.18	0.93	Agree
I prefer the presence of a countdown timer that motivates me to finalize my order.	4.11	0.95	Agree
I believe countdown timers reduce my tendency to leave items unpurchased in my cart.	4.00	1.08	Agree
I am confident that countdown timers influence me positively, to purchase rather than abandon my cart.	4.11	1.06	Agree
<b>Overall</b>	<b>4.12</b>	<b>0.98</b>	<b>Agree</b>

Note: Legend: 1.00 - 1.79 Strongly Disagree; 1.80 - 2.59 Disagree; 2.60 - 3.39 Neutral; 3.40 - 4.19 Agree; 4.20 - 5.00 Strongly Agree

The findings in Table 2.2 reveal that respondents agree that countdown timers are perceived to affect cart abandonment, with an overall mean of 4.12. The overall standard deviation of 0.98 indicates moderate variation in responses. This means that although respondents perceive countdown timers as useful for keeping them on-task and motivating purchase completion, the intensity of this effect varies among individuals. Item means range from 4.00 to 4.22, with sustained engagement during checkout being the strongest predictor. However, this moderate variability indicates that not all consumers are affected equally; some are more influenced by countdown timers than others. In general, the results imply that countdown timers have the potential to decrease cart abandonment for a large group of shoppers, though this influence is not universal among all participants in the study. Furthermore, according to Baymard Institute (2024), one of the main factors influencing cart abandonment is the design itself, being too infuriating or confusing for some consumers, leading to them not completing the purchase. Additionally, in the study of Li, Zhang, and Wang (2022), they found that perceived effort and checkout friction in online shopping environments significantly increase the likelihood of cart abandonment, as consumers are more likely to abandon purchases when the process feels time-consuming or mentally demanding.

**Hypothesis**

**Null Hypothesis (H<sub>0</sub>):** Countdown timers used during flash deal promotions have no significant influence on customers' purchase urgency or cart abandonment rates.

**Alternative Hypothesis (H<sub>1</sub>):** Countdown timers used during flash deal promotions have a significant influence on customers' purchase urgency and cart abandonment rates.

**Table 4. Influence of countdown timer intensity on purchase urgency and cart abandonment**

Variables	Estimate	p-value	Decision	Interpretation
Countdown Timer				
Purchase Urgency	0.755	<0.001	Reject H <sub>0</sub>	Significant
Cart Abandonment	0.665	<0.001	Reject H <sub>0</sub>	Significant

Based on the regression analysis results in Table 4, the intensity of the countdown timer had a statistically significant influence on both purchase urgency and cart abandonment (p-value < 0.001 for both dependent variables), indicating that the null hypothesis was rejected for both outcomes. The effect of countdown timer intensity on purchase urgency (Estimate = 0.755) is greater than on cart abandonment (Estimate = 0.665), suggesting that countdown timers have a stronger influence on making consumers feel time pressure and make faster buying decisions than on directly preventing cart abandonment. This indicates that while countdown timers significantly increase urgency and help maintain commitment throughout the checkout process, their effect in fully aligning

motivation through the entire checkout is somewhat weaker. Strengthening this finding, according to Oberoi (2023), limited offers allow consumers to feel pressured and immediately purchase a product. However, with the findings not all are fully committed throughout the checkout process, since according to Baynard Institute (2025), factors like how the flash deals promotions and countdown timers work makes someone feel annoyed, it hinders them for completing the payment, resulting in leaving it in anger. This pattern is further supported by Huang and Zhang (2021), who found that time pressure in online shopping environments significantly increases purchase urgency but does not always guarantee purchase completion, as consumers may still abandon their carts when cognitive load or checkout effort becomes too high.

## CONCLUSION

The study concludes that countdown timers are highly effective in making flash deals feel more exciting and urgent for shoppers. Most participants agreed that seeing a timer increases their awareness of limited time and encourages faster buying decisions. These timers successfully shift the customer's focus toward immediate action, demonstrating that time pressure is a strong motivator in online sales. Additionally, the results show that countdown timers significantly help reduce cart abandonment by keeping shoppers engaged until they complete their purchase. While the timers have a stronger effect on creating initial urgency than on preventing cart abandonment, they still play a key role in helping customers follow through with their orders. Overall, the use of countdown timers is a successful strategy for online stores to convert interest into actual sales by providing customers with the extra push needed to checkout.

## Recommendations

The conclusions of this research lead to the following recommendations. Online platforms should consistently enhance the user experience during flash sales by improving transaction processes, reducing page loading times, and streamlining checkout steps. Furthermore, it is recommended that consumer feedback and shopping patterns be monitored. This will help assess the influence of countdown timers and determine whether they positively motivate or negatively pressure consumers. Such insights will enable businesses to adjust urgency-based strategies while maintaining customer satisfaction.

Online retailers should also consider optimizing the design and placement of countdown timers. The goal is to clearly inform customers about time constraints without causing them to feel overwhelmed. Countdown timers should be easily visible to create a sense of urgency but should not distract from the purchase process. Regular testing of timer placement and duration can ensure they effectively encourage faster decisions and increase the likelihood of completed purchases.

Finally, online platforms should support countdown timers with a smooth and efficient checkout process. Minimizing unnecessary steps and preventing technical delays during flash sales can help reduce cart abandonment and increase completed transactions. Enhancing checkout efficiency alongside urgency cues can improve the overall shopping experience and contribute to higher conversion rates.

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