



Impact of Impulse Buying in the E-Commerce Industry During Flash Sales in Tirupur District

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I. ABSTRACT

This study explores how impulse buying is influenced by consumer psychology and the strategies used by e-commerce platforms during flash sales. These sales, often driven by limited-time offers, discounts, and countdown timers play a significant role in encouraging spontaneous purchases. The research is employed by both the primary and secondary data. Data analysis was conducted using various methods including analysis, graphical representation, and categorical interpretation. The interpretation highlights how factors like countdown timers, promotional alerts, and limited availability prompt impulsive behavior. The findings highlight how important it is to understand the psychological factors that influence online shoppers during flash sales. The study also suggests that online businesses should follow ethical marketing methods to help customers make more thoughtful and informed buying decisions. This research adds useful knowledge to the areas of consumer behavior, online shopping strategies.

Keywords: Impulse buying, Flash sales, E-Commerce, Consumer behavior, Online marketing, Purchase intention.

II. INTRODUCTION

The rapid growth of e-commerce industry among the people has paved way for online purchasing. In that, one of the most impactful and noticeable shifts in the people is impulse buying, especially during the flash sales. This impulse buying means spontaneous purchase without any pre-planning, that occurs suddenly when people are often influenced by emotional triggers and marketing stimuli. Flash sales are sales that typically offer time-bound deals, discounts, product scarcity that creates urgency among consumers. This strategy of flash sales erupts the psychological concept of FOMO (Fear of Missing Out), pushing customers to make quick decisions. In the today's world, as the consumers increasingly dependent on mobile apps and digital platforms, their exposure to limited-time offers and targeted advertisements increases, further enhancing impulsive behavior. This paper investigates the factors leading to impulse buying during flash sales and examines how marketing techniques manipulate customer psychology.

III. STATEMENT OF THE PROBLEM

In today's quick evolving digital marketplace, flash sales became one of the recurrent marketing strategies used by most of e-commerce industry to drive quick sales. These short-term deals are structured to create urgency and trigger unplanned, impulsive purchase. These flash sales campaign often uplift the short-term sales which creates concerns about consumer awareness, pre-purchasing pleasure and ethical commercial practices. Many e-shoppers are intimidated by limited-time deals, countdowns timers, instant discounts that leads them to purchase impulsive purchases without proper evaluation or actual needs. Despite the emerging popularity of flash sales, there is only few understandings of how these strategies affects the consumers purchasing habits in the long run. That being the case, it becomes important to explore the factors that leads to impulse buying during flash sales.

IV. OBJECTIVES OF THE STUDY

- To identify psychological drivers like urgency, scarcity and FOMO (fear of missing out) in impulse buying.
- To evaluate the impact of discounts, timers, notifications on consumer purchasing behaviour.
- To examine how e-commerce platforms use marketing strategies to encourage impulse purchases during flash sales.

V. RESEARCH METHODOLOGY

This study employs quantitative research approach to explore consumer attitudes during flash sales by collecting and interpreting numerical data. A structured questionnaire was used to gather the details about consumer habits, emotional triggers and their reaction towards flash sales. The collected data was analyzed using descriptive and inferential statistical methods to identify patterns and key challenges. To ensure diverse representation, the study used convenience sampling by adopting respondents based on accessibility and willingness to respond. This approach includes the different age groups, income habits and shopping habits.

VI. COLLECTION OF DATA

The research incorporates both primary and secondary data. The primary data has been gathered from the respondents using structure questionnaire. Secondary data has been obtained from diverse sources, including publications, unpublished reports, journals, and articles, etc.

VII. SCOPE OF THE STUDY

This study looks at why people buy things suddenly during online flash sales. These sales have big discounts and time limits that make people feel rushed. It also talks about how websites use tricks like countdown timers and messages to make people buy quickly. The study checks how age, gender, and income affect buying habits. For example, young people may shop more because of social media. The goal is to help online shops use fair methods and help people shop more carefully

VIII. REVIEW OF LITERATURE

Aashiek Cheriyan and Dr. S. Tamilarasi (2019)¹ conducted a study examining the factors influencing impulsive purchases of mobile accessories, with a specific focus on Chennai. The research analysed both internal and external factors contributing to such buying behavior. Surveying 250 respondents, the study employed ANOVA through SPSS, utilizing both primary and secondary data collected via a structured questionnaire. The findings revealed that evolving lifestyles and increasing disposable incomes significantly drive impulsive purchases. The study further suggested that, given the current market trajectory, the mobile accessories sector has the potential to surpass the smartphone industry by 2026.

Roopa KV and Sanjeev Kumar K. M (2020)² conducted a study to explore the key factors driving impulsive online clothing purchases. Their research involved a survey of 256 respondents and employed various analytical methods, including descriptive statistics, ranking techniques, exploratory factor analysis, and the Likert scale. The study revealed that price sensitivity plays a crucial role in shaping online shopping behaviour. It highlighted that factor such as flash sales, loyalty programs, limited-time offers, cashback incentives, and discounts significantly contribute to impulsive buying tendencies among consumers. The findings suggest that e-commerce platforms can leverage these strategies to enhance customer engagement and boost sales in the fashion and apparel industry.

Satyendra Kumar Upadhyay (et al., 2020)³ conducted a study analysing consumer attitudes toward online flash sales and their impact on e-tailing. The research aimed to understand how consumers perceive flash sales and how these sales influence online retail businesses. Using insights from existing research, the study developed a structured questionnaire to gather data. The findings revealed that online shopping continues to grow in popularity, with flash sales serving as a key driver by offering consumers the opportunity to purchase quality products at lower prices within a limited time frame. The study emphasized the importance of flash sales in shaping consumer behaviour and suggested that online retailers, particularly new entrants, refine their marketing strategies to enhance customer engagement and maximize profitability.

Hansel DSilva and Elangovan N (2021)⁴ conducted a study exploring the impact of flash sales on impulsive buying behaviour and online shopping enjoyment. The research aimed to identify key factors that influence consumer attitudes toward flash sales, particularly in terms of shopping satisfaction and purchase decisions. Using primary data collected through online surveys from 198 respondents, the study employed Structural Equation Modelling (SEM) to analyse the relationships between flash sales characteristics—such as duration, product variety, and assortment—and consumer behaviour. The findings revealed that limited-time offers significantly enhance shopping pleasure, creating a sense of urgency that drives impulse purchases. The study emphasized that e-commerce platforms can leverage well-structured flash sales to boost customer engagement and maximize sales.

N. Vanitha and Mbonigaba Celestin (2021)⁵ conducted a study exploring the psychological factors influencing unnecessary spending, particularly the role of social and environmental cues in driving impulse purchases. Using a literature review methodology and independent sample T-test, the research analysed consumer psychology and decision-making patterns related to non-essential purchases. The study found that while impulsive buying often provides immediate gratification, it can have long-term financial and emotional consequences. Additionally, the research highlighted that excessive spending habits may be influenced by external factors such as advertisements, peer pressure, and the digital shopping environment. The findings suggest the need for increased consumer awareness and financial literacy to encourage mindful spending behaviours.

Dr. Ashamayee Mishra and Prof. Sujata Rath (2022)⁶ conducted a study on the Impact of Flash Sales on the E-Commerce Industry in India to analyse how flash sales influence revenue, sales, website traffic, and logistics for major e-commerce platforms like Flipkart, Amazon, and Snapdeal. The research relied on secondary sources to evaluate the effects on online retail businesses. The findings revealed that while flash sales significantly increase sales, revenue, and customer traffic, they also present challenges in logistics and operational planning, emphasizing the need for improved infrastructure to sustain long-term growth.

Deepak Kumar Srivastava (et al., 2022)⁷ conducted a study exploring how both functional and psychological aspects of Online Customer Shopping Experiences (OCSE) influence impulsive buying behaviour. The research analysed data from 1,489 respondents using quantitative methods, including Confirmatory Factor Analysis and Structural Equation Modelling. The findings revealed that while many consumers exhibit impulsive buying tendencies, individuals with higher self-control can resist unplanned purchases despite their loyalty to e-commerce platforms. The study emphasized the critical role of psychological factors in shaping online shopping experiences, suggesting that e-commerce businesses should incorporate behavioural insights into their platform design and marketing strategies. By understanding the psychological triggers of impulsive buying, online retailers can create more effective engagement techniques while also promoting responsible consumer behaviour.

Dr. R. Tamilselvi and Ms. K. Rajeswari (2023)⁸ investigated consumer perception and buying behavior during festive sales in India, with a focus on Chennai city. The study primarily sampled respondents aged 26-35 and employed the Chi-Square test for analysis. The findings highlighted significant differences in purchasing behavior between regular days and festive periods, emphasizing how festival sales drive higher consumer engagement. The research concluded that festive seasons have a notable impact on shopping habits, encouraging marketers to enhance sales strategies and improve service quality.

Neha (et al., 2023)⁹ explored the influence of Flipkart's Big Billion Sale on consumer buying habits and its impact on Flipkart's position in India's e-commerce market. The study surveyed Flipkart shoppers using simple random sampling and analysed data through frequency and percentage analysis. Findings suggest that the sale enhances the shopping experience by offering significant discounts, additional bank promotions, user-friendly app and website features, and strong customer support, making it a preferred event among consumers.

Yi Qu (et al., 2023)¹⁰ examined how viewing frequency and anticipated emotions, such as regret and joy, influence purchase decisions driven by scarcity in live-stream commerce. The study gathered data from 376 participants through a self-administered online survey and analysed the findings using a two-step Structural Equation Modeling (SEM) approach via SmartPLS3. The research revealed that frequent viewers of live-stream shopping are more likely to make impulse purchases, with past experiences and emotional anticipation playing a crucial role in their decision-making process.

Sangjoon Lee (et al., 2023)¹¹ examined how impulse buying from home shopping television networks influences product shortages and its broader impact on retailers. The study utilized data from Korea's leading home shopping network and employed quantitative analysis to assess purchasing patterns, inventory disruptions, and supply chain challenges. Findings revealed that impulse purchases often lead to unexpected stock shortages, creating logistical issues and additional costs for retailers. These shortages can result in delayed restocking, lost sales opportunities, and customer dissatisfaction. However, the study highlights that integrating data analytics and predictive modelling can help retailers anticipate demand fluctuations, optimize inventory management, and improve overall sales efficiency. By leveraging consumer behavior insights, businesses can develop more effective strategies to balance demand and supply, minimizing losses while enhancing the shopping experience.

Naiara Oberoi's (2024)¹² study examines the impact of limited-time discounts, such as flash sales and temporary offers, on consumer decision-making and impulsive buying behavior. The research explores how urgency-driven purchasing is influenced by psychological triggers like scarcity and the fear of missing out (FOMO), leading to spontaneous and unplanned shopping. Relying on secondary data and a qualitative analytical approach, the study highlights that while time-sensitive discounts can significantly boost sales by creating an immediate need to purchase, their excessive use may have unintended consequences. Over-reliance on such strategies could diminish long-term brand loyalty, as consumers may come to expect frequent discounts and delay purchases until the next promotional event. The study suggests that retailers should carefully balance promotional frequency and brand positioning to maintain both short-term sales growth and long-term customer retention.

IX. ANALYSIS AND INTERPRETATION

Data was analysed by using descriptive statistics using simple percentage analysis, Likert scale analysis, and Chi square analysis.

9.1. SIMPLE PERCENTAGE ANALYSIS

TABLE 9.1.1

TABLE SHOWING AGE GROUP OF THE RESPONDENTS

Age groups	No. of Respondents	Percentage
Below 18 years	9	7.1 %
18 – 25 years	59	46.8 %
26 – 35 years	36	28.6 %
36 – 45 years	16	12.7 %
Above 45 years	6	4.8 %
Total	126	100 %

INFERENCE

The above table shows that 7.1% of the respondents are below 18 years followed that 46.8% of the respondents are between 18-25 years of age, 28.6% of the respondents are between 26-35 years of age, 12.7% of the respondents are between 36-45 years of age and 4.8% of the respondents are above 45 years of age.

TABLE 9.1.2

TABLE SHOWING THE FREQUENCY OF ONLINE PURCHASE

Frequency	No. Of Respondents	Percentage
Daily	11	8.7%
Weekly	21	16.7%
Monthly	35	27.8%
Yearly	22	17.5%
Occasionally	37	29.4%
Total	126	100%

INFERENCE

From the above table it is inferred that 8.7% of the respondents purchase daily, 16.7% of the respondents purchase weekly, 27.8% of the respondents purchase monthly, 17.5% of the respondents purchase yearly, 29.4% of the respondents purchase occasionally.

9.2 LIKERT SCALE ANALYSIS

TABLE 9.2.1

TABLE SHOWING HOW EXCLUSIVE DEALS EXCITE CUSTOMERS

Exclusive deals	No. of Respondents	SA (5)	A (4)	N (3)	D (2)	SD (1)	Total Score	Likert Scale Analysis
Buying unplanned items	126	47	21	24	28	6	453	3.60
Countdown timers make me excited	126	18	40	42	23	3	425	3.37
Checking e-commerce platform more	126	29	35	32	21	9	432	3.43
Flash sales make me buy quickly	126	32	55	17	19	3	472	3.75
Sometimes regret flash sales	126	45	25	28	12	16	449	3.56

INFERENCE

From the above table It is inferred that the score 3.60 shows that the respondents buying unplanned items followed by the score 3.37 shows that the respondents are excited by the countdown timers, the score 3.43 shows that the respondents check e-commerce platform, the score 3.75 shows that flash sales made the respondent buy quickly and the score 3.56 shows that the respondents sometimes regret flash sales.

TABLE 9.2.2

TABLE SHOWING FLASH SALES ENCOURAGING UNNECESSARY BUYING

Unnecessary buying	No. of Respondents	SA (5)	A (4)	N (3)	D (2)	SD (1)	Total Score	Likert Scale Analysis
Buy things not needed	126	51	24	31	16	4	480	3.81
Tempted by discounts	126	17	55	39	14	1	451	3.58
Shop just because of flash sales	126	25	37	41	21	2	440	3.49
Stock up unnecessarily	126	24	47	28	21	6	461	3.66
Hard to resist deals	126	42	25	28	16	15	453	3.60

INFERENCE

From the above table the score 3.81 shows that respondents buy things not needed, the score 3.58 shows that respondents are tempted by discounts, the score 3.49 shows that the respondents shop just because of flash

sales, the score 3.66 shows that respondent purchase and stock up unnecessarily and the score 3.60 shows that respondents find it hard to resist deals during flash sales.

9.3 CHI-SQUARE ANALYSIS

TABLE 9.3.1

TABLE SHOWING THE RELATIONSHIP BETWEEN GENDER AND FLASH SALE PARTICIPATION

CROSSTABS

		How often do you participate in flash sales					Total
		1	2	3	4	5	
Gender	1	6	8	16	25	3	58
	2	3	19	17	22	7	68
Total		9	27	33	47	10	126

CHI-SQUARE TEST

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.551 ^a	4	.162
Likelihood Ratio	6.707	4	.152
Linear-by-Linear Association	.021	1	.885
N of Valid Cases	126		

(3 cells (30.0%) have expected count less than 5. The minimum expected count is 4.14)

Degree of freedom:

$$\begin{aligned}
 V &= (R-1)(C-1) \\
 &= (2-1)(5-1) \\
 &= (1)(4) = 4
 \end{aligned}$$

INFERENCE

Since, the calculated value (6.551) is less than the table value (9.488) and the p-value (0.162) is greater than 0.05, we accept the null hypothesis. Hence, the p-value (0.162) is greater than 0.05, there is no significant relationship between Gender and flash sales participation.

TABLE 9.3.2

TABLE SHOWING THE RELATIONSHIP BETWEEN PARTICIPATING IN FLASH SALES LEADS TO MORE SHOPPING AND OVERSPENDING IN FLASH SALES

CROSSTABS

		Do you tend to overspend in flash sales					Total
		Every time	Mostly	Never	Rarely	Sometimes	
Does participating in flash sales make you shop more often	No	1	10	10	16	12	49
	Yes	6	20	5	15	31	77
Total		7	30	15	31	43	126

CHI-SQUARE TEST

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.337 ^a	4	.023
Likelihood Ratio	11.510	4	.021
N of Valid Cases	126		

(2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.72)

Degree of freedom:

$$\begin{aligned}
 V &= (R-1)(C-1) \\
 &= (2-1)(5-1) \\
 &= (1)(4) = 4
 \end{aligned}$$

INFERENCE

Since, the calculated value (11.337) is greater than the table value (9.488) and the p-value (0.023) is less than 0.05, we reject the null hypothesis. Hence, the p-value (0.023) is less than 0.05, there is a significant relationship between participating in flash sales and overspending during flash sales.

X. FINDINGS

- Majority 46.8% (59) of the respondents comes under the age group of 18-25 years.
- Majority 29.4% (37) of the respondents purchase occasionally.
- Likert scale value is 3.75 which is higher than the mid value (3), thus the flash sales make them buy quickly
- Likert scale value is 3.81 which is higher than the mid value (3), thus the flash sales make them buy things not needed.
- Since the p-value (0.162) is greater than 0.05, there is no significant relationship between Gender and flash sales participation.
- Since the p-value (0.023) is less than 0.05, there is a significant relationship between participating in flash sales and overspending during flash sales.

XI. CONCLUSION

Flash sales are effective for boosting consumer interest and online sales, but they can lead to impulsive buying and overspending, causing buyers to regret their choices later. The fear of missing out (FOMO) drives customers to purchase unnecessary items. While discounts are exciting, trust in product quality is often low. To enhance shopping, e-commerce sites should ensure product transparency, quality checks, and customer reviews. Consumers should adopt a thoughtful approach to flash sales by comparing prices, assessing needs, and budgeting. Balancing excitement with responsible shopping can lead to a more satisfying purchase experience.

XII. REFERENCE

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