



Buy Now Or Regret Later: The Irresistible Pull Of Scarcity Marketing In Retail

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ARTICLE INFO ABSTRACT

Purpose: The research explored the multifaceted purpose of scarcity marketing strategies in boosting sales. It delved into the psychological mechanisms driving consumer behavior, emphasizing the impact of limited-time offers and stock scarcity on impulse purchases across Demographics.

Design/methodology/approach: Descriptive cross-sectional methodology was carried out across age, gender, employment status, monthly earnings, and hometown from 250 respondents. The questionnaire was constructed using Dichotomous questions, multiple-choice questions as well as Likert scale questions.

Findings: The results show that females are influenced by various types of scarcity marketing. The presence of "only X pieces left" or "Offer available till stock lasts" can trigger FOMO and impact purchase decisions differently. The personal values and principles of the respondents play a significant factor in trusting and enduring relationships with retailers. Respondents were classified into three groups based on Factor analysis output: successful persuasion, inducing impulse purchases, and scarcity preference.

Research implications: Marketers aiming to optimize sales through scarcity marketing strategies should understand the significance of gender and ethical considerations to foster trust.

Practical implications: The marketing strategies of brands should differ based on the gender of the decision maker.

Social implications: Insights into ethical considerations highlight the importance of transparent and responsible marketing practices, shaping consumer trust and relationships with retailers within communities.

Originality/value: The research offers novel insights into the efficacy of scarcity marketing, highlighting its impact on consumer behavior and ethical considerations in the state of Gujarat.

Keywords: Scarcity marketing, limited time offers, low stock notification, countdown timers, uniqueness, FOMO

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Introduction

Scarcity marketing is a strategy that creates a medley of emotions of excitement, urgency, FOMO encouraging customers to take a positive decision towards buying a product/brand. By creating a scare of particular products/brands in terms of limited quantity or time or countdown timer, an environment that intensifies desire is created leading to high demand and a need to procure the goods instantly. It is a smart strategy since it creates uniqueness for the product making it valuable and sought after. However, if the customer feel that this scarcity is artificial and retailers do not hold on to their promise, it could lead to customers been unhappy and losing trust which could prove detrimental to the retailers.

Literature Review

Researchers have explained scarcity marketing as a marketing strategy that benefit from consumers' psychological fear of missing out on something. The strategy of using scarcity marketing in convincing consumers to buy particular products/brands has been used profitably for years by marketers. Scarcity marketing has been accepted as a primary persuasive practice in the marketplace (Cialdini, 2001). There is a need among people to possess or acquire what is difficult to procure. Marketers benefit when stores have promotional sales offers like 'ending soon' or discounts offered for a limited time or period or till stock lasts. The marketing concept of scarcity is based on the principle of the suppliers promoting the shortage of goods to the consumers for increasing purchases. Research has shown that these purchase restrictions are used as Information cues by customers for evaluation offers (Howard, Shu, and Kerin, 2007) and promote sales. Scarcity marketing strategy assumes that the attractiveness of a product/brand is increased when availability is restricted. Consumers react to the scarcity marketing strategies depending on the product/brand, demographics, relationship with brands/retailers, and uniqueness among others towards purchase decisions.

Empirical research endorsing its affect on value perceptions have been mentioned in diverse products like fast food (Brannon & Brock, 2001), batteries (Inman, Peter, & Raghubir, 1997), nylon hosiery (Fromkin, Olson, Diphaye, & Barnaby, 1971), and women's suits (Szybillo, 1976). Scarcity messages usually generate a sense of urgency towards a purchase (Bae & Lee, 2005; Eisend, 2008; Fromkin, 1972; Jung & Kellaris, 2004; Worchel et al., 1975; Wu & Hsing, 2006; 2005; Snyder, 1992; Cheema & Kaikati, 2010; Soni & Koshy, 2016).

Retail outlets or websites use numerous strategies to convince customers to visit them or click to buy something. An often popular strategy is to promote product or time scarcity. Marketers extensively use the effect of scarcity as a marketing strategy to boost consumers' subjective attractiveness towards their products (Jung & Kellaris, 2004). Communication messages like "limit one per customer", "limited quantities" or "special deal for one day only" are used regularly in commodity merchandise (Jung & Kellaris, 2004). The universal feature of this practice is the highlighting of the restriction of time, quantity, or benefits that the consumer may have, to influence them to respond instantly. Some online suppliers that help websites with embedded scarcity practices communicate that they may assist retailers to increase the conversion rate from 2 up to 80% and increase their sales by up to 450% (Scarcity Samurai).

Research has explained that the consequences of scarcity on consumer behavior according to its three sources of demand, supply, and time-based scarcity (Gierl, Plantsch, and Schweidler 2008). Gierl and Huettl (2010) have also categorized product scarcity into two groups: scarcity caused by restricted stocks and scarcity caused by soaring demand. The difference of scarcity types (actual vs. invented and quantity vs. time) is significant in decoding peoples' responses, because each type of scarcity induces diverse conclusion. Products/brands that are limited in quantity via the supplier provide a certain uniqueness to products/brands than those available in surplus and consumed by the masses. Increases in a product's alleged attractiveness due to supply-based scarcity can partially be explained by uniqueness theory (Fromkin, 1970), which indicates that customers keep a check on scarce merchandise due to the uniqueness which provide as a tool to differentiate themselves. The uniqueness linked with retailer-imposed quantity limits satisfy's the consumers' wish to be exclusive (Amaldoss and Jain 2005; Thorstein, 1973) because few people have the possibility to buy the product. Marketing strategies like scarcity of quantity, time controlled scarcity or a combination of both is used to tempt prospective consumers into the store. Demand-caused scarcity also acts as point-of-purchase which has the potential to positively influence the customers. Demand-caused scarcity can be especially beneficial in the last stage of decision-making when consumers are at the point of their assessment. Supply-caused product scarcity can be used for both customer and consumers. It might instigate the need for awareness or be an additional push in the final stage of the decision-making process (Mallalieu, 2006). Sometimes, there are deceptive countdown timers that specify a limited-time offer that is not truly limited-time, as the sale continues after the timer reaches zero. The effects of these deceptive strategies on consumers' buying behavior have not been researched extensively.

Gender-based segmentation is regularly applied by marketers as well as researchers to concentrate on the diverse needs and preferences of men and women. There are very few studies that explore the decision-making styles with respect to scarcity marketing on Indian male and female consumers. Evaluating shopping behavior across gender is an essential market segmentation method used by researchers in scarcity marketing.

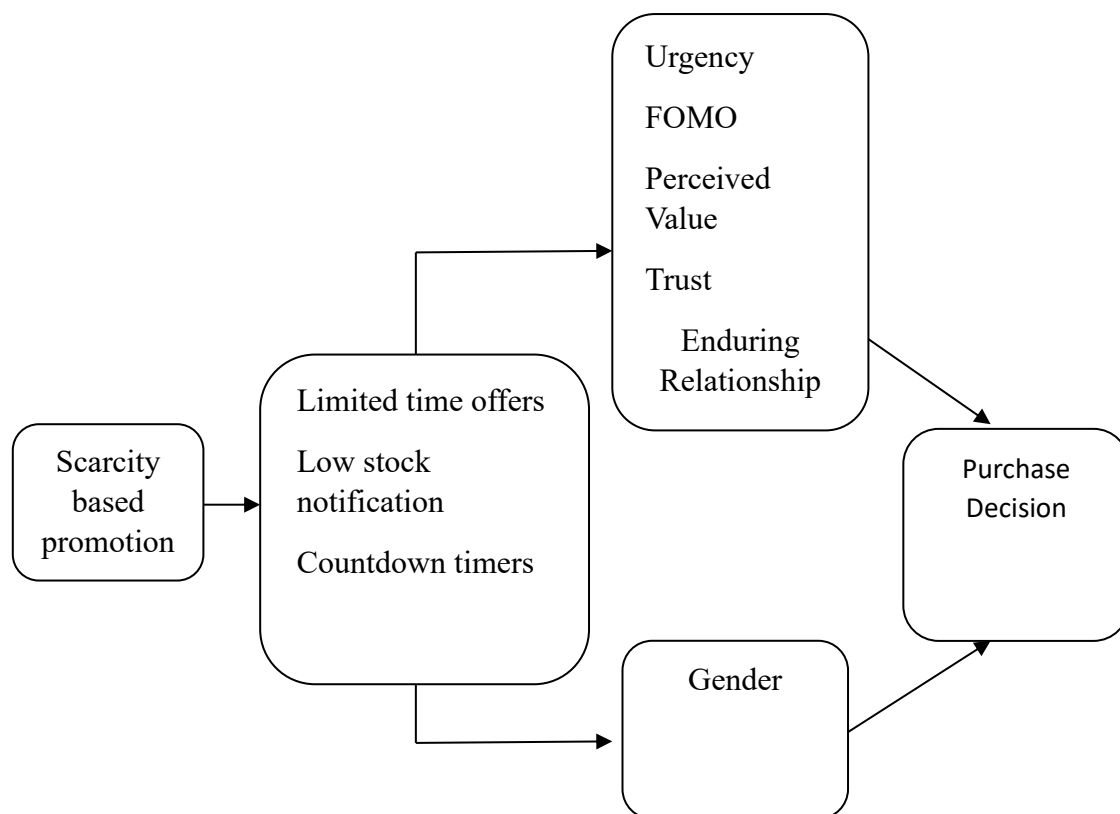
Scarcity marketing and FOMO (fear of missing out) has a significant effect on consumer decision-making. Scarcities of products/brands have cognitive and behavioral impact on the consumer mindset. This increased attention towards the scarce products/brands affects the neural mechanism towards decision making. Overall, scarcity and FOMO have a critical role in the consumer decision-making processes. Online retailers regularly use scarcity marketing tactics like countdown timers and limited quantity messages to generate a situation of urgency and enhance sales. The usage of scarcity cues is built on the psychological theories of scarcity. Research has indicated that product scarcity can impact how valuable they are supposed to be. Products and services are seen as more significant when they are scarce.

Increased stimulation can decrease consumers' ability to carry out cognitive tasks, raising dependency on automatic processing and tangential cues (Sanbonmatsu and Kardes 1988). But, there exist an option if the consumers feel that the scarcity is not real- it's artificial and created by the company wherein they are

intentionally limited the supply might lead to a negative construct in the minds of the consumer. If the consumer identifies that scarcity is artificial and not genuine, the brand might lose its trustworthiness and belief in the consumers' eyes. This might lead to the customer not being loyal towards the brand/retailer and liking for the brand/retailer might decrease over time. Scarcity cues are sometimes thoughts of as "dark patterns" - manipulative design elements that spoil the user experience (Mathur et al., 2019). Dark patterns benefit from human preconceived notion against the user's interests. While at times they can be efficient for increasing sales, they can also lead to an increase in hostility, impulsive buying, and distrust (Kristofferson et al., 2017; Luguri & Strahilevitz, 2021).

The study has been conducted on 250 respondents to understand the relationship between gender and the effectiveness of different scarcity promotion techniques since research has indicated that men and women have diverse consumer decision-making cues. The study also tried to understand the psychological aspect that the respondents undergo when they are exposed to different techniques of scarcity marketing and lastly ethical scarcity marketing leads to trust and long-term relationship with the retailer.

Conceptual Map



**Created by the researchers*

Research Objectives

- To investigate the correlation among the moderating variable [gender] and effectiveness of different scarcity marketing techniques, such as limited-time offers, low stock notifications, and countdown timers, in influencing shoppers' purchasing decisions
- To investigate the psychological mechanisms that underlie the correlation between scarcity marketing and impulse purchasing including factors like urgency, fear of missing out (FOMO), and perceived value.
- To analyze the ethicality of scarcity-based marketing promotions for fostering trust and enduring relationships with retailers

Research Methodology:

A study employing descriptive cross-sectional methodology was carried out across different cities of Gujarat. 250 respondents participated in the survey. SPSS, Version 22.0 was used for all quantitative data analysis. Demographic information about age, gender, employment status, monthly earnings, and hometown was collected. Dichotomous questions and multiple-choice questions were asked to know about scarcity promotion on any product at an online portal, the frequency of visits to an online portal to get the offer through scarcity promotion, making immediate unplanned purchases due to worry about limited-time offers, concerns about limited quantity, FOMO effect, etc. were all administered to the respondents. 8 Likert scale questions relating to the respondents' perception towards limited-time offers, buying more products, getting

influenced, and countdown timers which create a sense of urgency, driving customers to make quick purchasing decisions were administered to the respondents.

Research Results:

Table 1: Construct Validity of demographic variables		
Demographics		Percentage of respondents
Gender	Male	53.6
	Female	46.4
Age Groups	16-25 years	28
	26-35 years	28
	36-45 years	25.6
	46-55 years	18.4
Education	Graduate	56
	Post Graduate	36
	School Pass out	4.8
	Diploma Holders	3.2
Occupation	Students	17.6
	Housewives	12.4
	Private sector employees	36
	Own Business	34
Monthly Income	25,000 – 50,000	28.8
	51,000 – 1 lakh per month	27.2
	1 lakh and -1,50,000	24%
	1,50,000 – 2 lakhs	20%

Data Analysis

Online Purchase frequency

92% of the respondents referenced that they routinely bought from online websites and 8% of the respondents referenced that they were hesitant to buy from online websites regularly. 64.8% of the respondents made online purchases at least 3-4 times a month, 14.4% of the respondents made online purchases at least 4-5 times a month, 11.2% of the respondents made online purchases at least 5-6 times a month and 9.6% of the respondents made online purchases at least 6-7 times a month.

Awareness of Scarcity marketing

20.8% of the respondents made a spontaneous/impulse buy online at least fortnightly; 43.3% of the respondents made an unplanned/impulse purchase online once a month and 23.2% of the respondents made an unplanned/impulse purchase online once in two months. 17.6% of the respondents mentioned that they learned about scarcity promotion of products on an online platform through pop-ups. 28% of the respondents came to know about the scarcity promotion of products on an online platform through applications, 42.4% of the respondents came to know about the scarcity promotion of products on an online platform through advertisements, and 12% of the respondents came to know about the scarcity promotion of products on an online platform through social media platforms.

Impact of FOMO on Scarcity Marketing

80% of the respondents experienced the FOMO effect and ended up buying the products online. 67.2% of the respondents got carried away with promotions like “offers exist till stock last”.

Supply Based Scarcity Marketing

65.6% of the respondents were influenced by the "sold out" sign on websites and consequently ordered the products. When the online portals advertised “only X pieces left”, it influenced more than 75% of respondents' decisions and they ended up making unplanned/impulse purchases.

Time-based Scarcity Marketing

Over 80% of the respondents were affected when the online portals publicized “Limited time to buy this product”. 84% of respondents mentioned that big sales festivals online made them resort to immediate buying. 74% of respondents agreed that they ended up buying more products due to scarcity-based promotions.

Statistical Analysis:

The chi-square test was applied to three objectives and the results are interpreted below

H₀₁: There is no association between gender and susceptibility to the effectiveness of various scarcity promotion tactics, including limited-time offers, low-stock notifications, and countdown timers, in shaping the purchasing choices of online shoppers.

H₁₁: There is an association between gender and susceptibility to the effectiveness of various scarcity promotion tactics, including limited-time offers, low-stock notifications, and countdown timers, in shaping the purchasing choices of online shoppers.

Test output:

Variables	I was worried about limited-time offers		Total	Chi-Square Test Result	Test Status
Gender	Yes	No		0.025	Alternative hypothesis accepted
Male	7	62	134		
Female	6	48	116		
	I was concerned about low-stock notifications		Total	Chi-Square Test Result	Test Status
Gender	Yes	No		0.020	Alternative hypothesis accepted
Male	8	52	134		
Female	8	30	116		
	I was anxious about scarcity countdown timers.		Total	Chi-Square Test Result	Test Status
Gender	Yes	No			Alternative hypothesis accepted
Male	6	68	134	.008	
Female	6	48	116		

H₀₂: There is no association between gender and psychological mechanisms that underlie the relationship between scarcity promotion and impulse buying which includes factors like urgency, fear of missing out (FOMO), and perceived value.

H₁₂: There is an association between gender and psychological mechanisms that underlie the relationship between scarcity promotion which includes factors like impulse buying, urgency, fear of missing out (FOMO), and offer available till stock lasts.

Variables	How excited you are during impulse buying?		Total	Test Result	Test Status
Gender	Yes	No		0.025	Alternative hypothesis accepted
Male	82	52	134		
Female	78	38	116		
	When you see "only X pieces left" on online site, then did it influence your buying decision? [FOMO]		Total	Test Result	Test Status
Gender	Yes	No		0.006	Alternative hypothesis accepted
Male	84	50	134		
Female	66	50	116		
	When you see "Offer available till stock lasts" to buy this product", then did it influence your buying decision?		Total	Test Result	Test Status
Gender	Yes	No			Alternative hypothesis accepted
Male	82	52	134	.019	
Female	78	38	116		

H₀₃: There is no association between gender and they view the ethicality of scarcity-based promotions for fostering trust and enduring relationships with retailers.

H₁₃: There is an association between gender and their view regarding the ethicality of scarcity-based promotions for fostering trust and enduring relationships with retailers.

Variables	Are scarcity-based promotions ethical for fostering trust and enduring relationships with retailers?		Total	Test Result	Test Status
Gender	Yes	No			Null hypothesis accepted
Male	42	92	134	.222	
Female	48	68	116		

Exploratory factor analysis

To determine whether the factors utilized in this study for assessing the potential efficacy of diverse scarcity promotion techniques aligned with those considered in prior research, an Exploratory Factor Analysis with

VARIMAX rotation was executed to ascertain if the items were clustered as initially proposed. Consequently, a KMO value of 0.834 was derived. For Bartlett's test of sphericity, a Chi-square value of 5341.335 (p-value: 0.000) was attained, thereby validating the data matrix for further progression with the factor analysis procedure. Based on the matrix of rotated coefficients, the effectiveness of various scarcity promotion techniques was categorized into three dimensions of the original scale, namely 'Successful persuasion', 'Inducing impulse purchases', and 'Scarcity preference'.

Kaiser-Meyer-Olkin

The KMO assesses the adequacy of sampling, which should exceed 0.5 to ensure that factor analysis proceeds satisfactorily. A common rule proposes that a researcher has to have no less than 10-15 members for each factor. Here the value comes out to be 0.658; Therefore, factor analysis is perfectly acceptable for processing.

Bartlett's test: measures the strength of the relationship among variables.

H0: The correlation matrix is an identity matrix.

H1: The correlation matrix is not an identity matrix.

The table below reveals that Bartlett's test of sphericity yields a significant result, with its associated probability being less than 0.05, suggesting a significance level low enough to reject the null hypothesis. This indicates that the correlation matrix is not an identity matrix.

Table 5: KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.658
Bartlett's Test of Sphericity	Approx. Chi-Square	1.487E3
	df	325
	Sig.	.000

The Results of the Measurement Model

In this study, structural equation modelling was utilized to examine two levels: the measurement model and the structural model, with their respective results outlined below. Table 6 presents the means, standard deviations, and correlation matrix. Specifically, Table 6 reveals positive correlations between scarcity promotion as a persuasion technique and respondents' impulse buying behaviour.

Factor Groups	Constructs	Mean	Standard Deviation	A	B	C
A	Persuasion	2.2267	0.83144	1		
B	Impulse	2.64	0.91567	0.641	1	
C	Scarcity preference	2.5	0.92074	0.733	0.721	1

Factor analysis

Factor analysis is a statistical method used for both data reduction and analysis. The factor loadings for the statements under consideration are provided below.

Factor analysis results of the selected sustainable factors.

	Factor Name	Cronbach Alpha Validity	Factor Loadings	AVE	Square Root of AVE
	Successful persuasion			0.865	0.930
1	Scarcity promotion makes people buy more products	0.663	0.964		
2	One gets influenced by scarcity promotion	0.669	0.597		
3	I will switch from my regular brand if I get a better offer on another brand product	0.749	0.964		
	Inducing impulse purchases			0.731	0.85
4	I trust that scarcity-based promotions are legitimate	0.76	0.71		
5	I will buy more than planned if I see scarcity-based ads.	0.665	0.747		
6	It is difficult to control oneself when seeing a good offer.	0.663	0.794		
	Scarcity preference			0.844	0.918
7	I am likely to purchase products when they are scarce	0.684	0.778		
8	Highlighting scarcity is a more effective approach to attract customers.	0.713	0.796		

Moreover, it is essential to determine the satisfactory measurement validity in this study. Two methods are utilized to validate the constructs. Firstly, Fornell and Larcker's average variance extracted (AVE) approach is employed to assess the discriminant validity of the measurement (Fornell & Larcker, 1981). The AVE measures the proportion of variance captured by the construct's items relative to the variance attributed to measurement error. To fulfil the criteria for discriminant validity, the square root of a construct's AVE should exceed the correlations between the construct and other constructs in the model. For instance, the square roots of the AVEs for the two constructs, scarcity promotion as a persuasion technique and impulse buying by respondents, are 0.930 and 0.791, respectively, as shown in Table 7, which are greater than the correlation between them, 0.641, as presented in Table 6. This indicates that there was sufficient discriminative validity between the two constructs. The square roots of all constructs' AVEs in Table 6 of this study surpass the correlations among all constructs in Table 6.

Hence, the measurement's discriminant validity in this study is deemed satisfactory. Secondly, if a construct's AVE exceeds 0.5, it suggests convergent validity for the construct. As depicted in Table 6, the AVEs for the four constructs are 0.865, 0.731, and 0.844, respectively, all surpassing 0.5. This indicates the presence of convergent validity in the study. Consequently, the measurement demonstrates acceptable discriminant and convergent validity. Through various reliability and validity assessments, it is evident that this study maintains sufficient reliability and validity.

Test of the Proposed Model

We employed the SEM technique using AMOS Ver.17 to evaluate the model. The observed variables used for predicting the latent variables in SEM were derived from processing the instrument data. The SEM analysis results demonstrate a strong fit between the model and the data. Seven fit indices commonly referenced in the literature, including chi-square/degrees of freedom, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), non-normed fit index (NNFI), comparative fit index (CFI), root mean square residual (RMSR), and root mean square error of approximation (RMSEA), were utilized to assess the model fit. The standard criteria for model fit, as outlined by Schumacker and Lomax (2004), include a chi-square/degrees of freedom ratio of less than 3, GFI, NNFI, and CFI values exceeding 0.9, AGFI values exceeding 0.8, RMSR values less than 0.1, and RMSEA values less than 0.06 or 0.08, indicating a good fit. As illustrated in Table 8, all goodness-of-fit statistics fall within the acceptable ranges.

Fit Index	Recommended Values	Observed Values
Chi-square/ degrees of freedom	<=3	2.12
GFI	>=0.9	.096
NNFI	>=0.9	0.93
CFI	>=0.9	0.91
AGFI	>0.8	0.85
RMSR	<=0.1	0.07
RMSEA	<=0.0.8	0.06

Conclusions:

Marketing campaigns that play on scarcity have a significant impact on customer purchasing decisions because they use the psychology of rarity to instill a sense of urgency and exclusivity. Customers feel that things are more valuable when they are offered as restricted or in low supply, which motivates them to act quickly. This urgency creates a favourable buying environment by appealing to people's fear of missing out (FOMO), which leads to impulsive purchases. Customers are more likely to take advantage of a product's perceived worth when it is scarce because it confers a sense of exclusivity and status. All things considered; marketing campaigns focused on scarcity have a good effect because they match consumer wants with the excitement of obtaining rare, sought-after products.

Scarcity advertising strategies have a considerable impact on buyers' purchase decisions when they have positive relationships with demographic characteristics. Marketers may generate a positive sense of exclusivity and urgency that appeals to particular customer groups by customising scarcity methods like as countdown timers, low stock notifications, and limited-time offers to cater to specific demographic preferences. Precise targeting becomes achievable through an understanding of diverse populations by maximizing the psychological impact of scarcity. Linking scarcity promotions with demographic variables strengthens their influence and builds a stronger bond between consumers and the marketed products. This is true whether the promotion is aimed at younger demographics with time-sensitive offers or at other age groups where the goal is to create a sense of rarity for a particular product.

Positive findings uncover a deep psychologically based relationship between scarcity marketing and impulsive purchasing. One important consideration is urgency, which drives quick selections since restricted supply increases the desire to own rare goods. This impact is amplified by FOMO, or the fear of missing out, which drives hasty buying to prevent feeling left out. Furthermore, scarcity increases a product's perceived

worth and increases its attractiveness. These components work together to produce a powerful psychological concoction that incites impulsive purchasing, highlighting the success of scarcity advertising in appealing to basic human emotions and motives and providing marketers with favourable results.

The use of scarcity advertising in Internet marketing raises ethical questions about customer trust and transparency. Although scarcity strategies might increase sales, deceptive approaches run the danger of undermining confidence. It is imperative for ethical marketing to uphold honesty while announcing restricted supply. Long-term relationships and trust are fostered by honest representations of discounts or time limits, as well as by transparent disclosures concerning product scarcity. While unethical manipulation might result in short-term profits, it also jeopardizes client loyalty. Emphasizing the significance of ethical issues in the digital marketplace, ethical marketing strategies, grounded in openness and honest communication, not only retain consumer trust but also contribute to long-term, sustainable partnerships between merchants and customers.

"Scarcity promotion as a persuasion technique." The scarcity promotion persuades people to buy more products, influences decision-making, and potentially leads to a willingness to switch from a regular brand in favor of a better offer on another brand's product. "Impulse buying." These scenarios involve impulsive behavior driven by trust in scarcity-based promotions, an increased likelihood to exceed planned purchases due to scarcity-based ads, and difficulty in self-control when encountering enticing offers. "Scarcity preference." Emphasizing product scarcity enhances customer appeal, creating a sense of exclusivity and driving a heightened inclination to make purchases. In marketing, emphasizing scarcity proves to be a potent strategy, effectively capturing customer attention and fostering a sense of exclusivity that drives engagement.

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