

An Empirical Study On Psychological, Social, And Technological Determinants Of Impulsive Buying In Digital Market Places

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ABSTRACT

This paper investigates psychological, social, and technological determinants of impulsive buying in digital marketplaces. Drawing on consumer behavior and technology adoption theories, the study uses survey data from 420 active online shoppers to examine how hedonic motivation, self-control, peer influence, social media exposure, perceived ease of use, and website design aesthetics predict impulsive purchase tendency and actual impulsive purchase behavior. Results from exploratory and confirmatory factor analyses, multiple regression, and mediation analysis indicate that hedonic motivation, social media exposure, and website aesthetics positively predict impulsive buying, while self-control is a negative predictor. Perceived ease of use has an indirect effect through hedonic motivation. Peer influence moderates the effect of social media exposure on impulsive purchases. Findings advance understanding of impulse buying in digital contexts and offer implications for marketers and platform designers seeking to balance sales and ethical practices.

Keywords: impulsive buying, digital marketplaces, hedonic motivation, self-control, social media exposure, website aesthetics, perceived ease of use.

INTRODUCTION

Impulse buying, defined as a sudden and unplanned purchasing act triggered by spontaneous urges, has been a subject of consumer behavior research for decades. With the rapid growth of digital marketplaces, the phenomenon has acquired new dimensions, as online platforms amplify sensory cues, reduce transactional friction, and introduce novel social and technological stimuli.

Unlike traditional retail, digital commerce allows immediate exposure to diverse products, personalized recommendations, and seamless checkout processes, all of which intensify consumers' impulsive tendencies. This creates a fertile context where psychological traits, social influences, and technological design converge to shape buying behavior in unprecedented ways.

Psychological determinants remain central to impulsive buying in online environments. Individual differences such as trait impulsiveness, materialism, hedonic orientation, and momentary affective states strongly predict the tendency to make unplanned purchases. Positive moods, emotional arousal, and diminished self-control often act as mediators, transforming environmental cues into actual buying behavior. On the social side, consumers are influenced by online reviews, ratings, peer behavior, and the social presence of others in live-streaming or group-buying contexts. These social signals reduce perceived risk and enhance product desirability, thereby increasing impulsivity. Technological determinants also play a crucial role: website aesthetics, navigation quality, interactivity, telepresence, and checkout convenience serve as powerful triggers by lowering cognitive costs and reinforcing hedonic experiences. In combination, these factors create an environment where impulsive buying flourishes.

From both scholarly and practical perspectives, it is essential to understand how psychological, social, and technological factors interact in digital marketplaces. For researchers, integrative models that combine personal and contextual determinants are needed to explain variations across populations, platforms, and product categories. For practitioners, insights into these determinants can inform the ethical design of user interfaces, help retailers optimize digital experiences, and assist policymakers in crafting consumer protection measures. Against this backdrop, the present empirical study investigates how psychological traits, social influences, and technological cues jointly determine impulsive buying in digital marketplaces.

Research into online impulsive buying has expanded considerably over the last decade, with studies highlighting evolving determinants as digital platforms matured. Early contributions in 2010, such as Chih's work, emphasized internal psychological traits alongside emerging online stimuli, laying the foundation for understanding how personality interacts with the digital environment. Building on this, Wells, Parboteeah, and Valacich (2011) demonstrated empirically that consumer impulsiveness interacts with website quality, showing that site design can moderate the effects of psychological predispositions. By 2012, Crafts and others had drawn attention to technological affordances like promotional layouts and quick checkout systems, emphasizing how digital immediacy enhances impulsive urges.

In 2013, Floh and Madlberger provided evidence that atmospheric cues such as visual design, product imagery, and navigation increase positive affect, which in turn stimulates unplanned buying. The social dimension became more prominent in 2014, when Zhang, Hu, and Zhao found that group-buying websites leverage peer influence and social interactions to drive impulsive purchase decisions, highlighting how collective contexts enhance urgency. Around 2015, scholars increasingly used the Stimulus–Organism–Response (S-O-R) framework to conceptualize the process, identifying stress, materialism, and emotional states as psychological antecedents of impulsive buying.

From 2016 onwards, the focus shifted toward social commerce. Huang and colleagues (2016) integrated flow theory and social capital to show how enjoyment and trust mediate the effects of social and technological stimuli on impulse buying. During 2017 and 2018, research diversified to include mobile shopping and platform-specific contexts, where interface aesthetics, perceived ease, and flash sale mechanisms emerged as significant technological triggers. Himawari's 2018 study, for instance, emphasized the role of aesthetics and self-construction in stimulating impulsive buying.

Wu (2020) and others developed integrative frameworks that mapped how social and technological cues jointly drive impulsive buying across various product categories. The following year, Zhao (2021) provided a comprehensive meta-analysis synthesizing findings across studies and confirming the robust influence of impulsiveness, enjoyment, and environmental cues on online impulsive behavior. In 2022, Jie and colleagues extended the discussion by examining the impact of internet usage patterns and hedonic triggers on impulsive buying, even in specific contexts such as agricultural products or millennial consumer segments. These studies collectively illustrate that while psychological factors remain foundational, social signals and technological design have become increasingly powerful in shaping consumer impulses within digital marketplaces.

IMPULSE BUYING IN DIGITAL MARKET PLACES

Impulse buying has long been recognized as a significant aspect of consumer behavior, but its manifestation in digital marketplaces has reached unprecedented levels. Traditionally, impulse buying referred to unplanned, spontaneous purchases triggered by emotions, situational cues, or sudden desires. With the proliferation of e-commerce platforms, mobile shopping applications, and social media-driven retail, the nature and determinants of impulsive consumption have undergone substantial transformation. Digital marketplaces provide a unique environment where psychological, social, and technological factors

converge, thereby shaping consumer behavior in ways that are distinct from traditional retail contexts.

Psychologically, online platforms amplify the emotional drivers of impulsive buying. The digital environment fosters instant gratification by offering immediate access to products, easy payment mechanisms, and swift delivery options. Consumers often experience heightened arousal due to visually appealing product displays, personalized recommendations, and time-limited discounts. These stimuli intensify hedonic motivations, reducing cognitive control and encouraging spontaneous purchases. Moreover, digital platforms exploit cognitive biases, such as the scarcity effect ("only 2 items left in stock") and social proof ("1,000 people bought this today"), which further diminish rational evaluation and heighten impulse tendencies. The anonymity and reduced social scrutiny in online shopping also allow consumers to indulge in impulsive behavior without fear of judgment, reinforcing the cycle of unplanned buying.

Social determinants also play a critical role in driving digital impulse buying. Online marketplaces are increasingly integrated with social media platforms, where peer influence, user-generated content, and influencer marketing shape consumer preferences. Social validation mechanisms, such as likes, comments, and shares, create a sense of community engagement, making impulse buying appear as a socially endorsed behavior. Additionally, consumers often rely on electronic word-of-mouth, reviews, and ratings, which can trigger impulsive decisions by reducing perceived risk and creating trust in unfamiliar products or brands. The rise of micro-communities and trend-driven cultures on digital platforms has further intensified the urgency to participate in consumption trends, often resulting in unplanned purchases motivated by social belonging and identity signaling.

Technological determinants uniquely differentiate digital impulse buying from traditional contexts. The advent of artificial intelligence, machine learning, and big data analytics has enabled highly personalized and persuasive consumer experiences. Algorithms continuously analyze browsing patterns, purchase histories, and demographic profiles to curate individualized product recommendations. Features such as "one-click buying," in-app wallets, and push notifications significantly reduce transaction friction, making impulsive actions effortless. Augmented reality (AR) and virtual try-on technologies also reduce uncertainty, making consumers more confident in spontaneous decisions. Moreover, gamified shopping environments, flash sales, and reward systems create a sense of urgency and excitement, further intensifying impulsive consumption. The convergence of convenience, personalization, and persuasive design in digital

marketplaces highlights how technology acts as both facilitator and trigger of impulse buying.

In conclusion, impulse buying in digital marketplaces is the outcome of complex interactions between psychological impulses, social influences, and technological enablers. Unlike traditional retail, where physical limitations often restrict impulsive behavior, digital environments eliminate barriers and enhance stimuli that promote spontaneity. Understanding these determinants is crucial for both marketers, who design strategies to stimulate impulse buying, and policymakers, who aim to protect consumers from excessive or harmful unplanned spending. This interplay of factors makes impulse buying in digital marketplaces a critical area of study for consumer behavior research in the digital era.

THEORETICAL FRAMEWORK AND HYPOTHESES

Impulsive buying, once studied primarily in traditional retail environments, has acquired new significance in the context of digital marketplaces where psychological predispositions, social influences, and technological features intersect. The theoretical basis for this study draws from multiple perspectives to explain the underlying determinants of impulsive consumer behavior in online settings. From a psychological standpoint, the **Stimulus–Organism–Response (S–O–R) model** provides a foundation, suggesting that environmental stimuli in digital platforms evoke emotional and cognitive reactions that translate into impulsive actions. Emotional factors such as mood, stress, and hedonic motivation strongly influence the tendency to purchase spontaneously. According to **hedonic consumption theory**, consumers often make unplanned purchases to derive pleasure, excitement, or instant gratification, and this tendency is intensified in digital marketplaces where features like quick purchase options and engaging product displays create environments conducive to impulsivity. Furthermore, diminished self-control has been consistently linked to higher susceptibility to impulsive buying, making psychological characteristics central to understanding the phenomenon.

The social dimension of impulsive buying is equally important, as explained by **social influence theory** and **social comparison theory**. Online marketplaces are embedded with social cues, including peer reviews, influencer endorsements, and user ratings, which shape attitudes and nudge consumers toward immediate purchasing decisions. The desire for conformity, social approval, and belonging often encourages individuals to replicate the consumption patterns of others. Additionally, the prevalence of **fear of missing out (FOMO)** in social media-driven commerce creates psychological urgency, driving consumers to make impulsive purchases to avoid exclusion. Social comparison further amplifies this behavior, as individuals evaluate their consumption

relative to peers and feel compelled to keep pace with perceived social standards.

Technological factors also play a crucial role in fostering impulsive buying, as explained by the **Technology Acceptance Model (TAM)** and the notion of **technological affordances**. Features such as user-friendly interfaces, seamless navigation, personalized recommendations, targeted advertisements, and one-click checkout systems serve as external stimuli that reduce decision-making time and effort. These affordances minimize the cognitive barriers to purchase and make the buying process frictionless, thereby heightening impulsive tendencies. The immediacy of technological systems ensures that consumers can act on their impulses quickly, while personalization and convenience create environments that stimulate unplanned purchases. Thus, psychological traits, social influences, and technological features jointly form a multidimensional framework explaining impulsive buying behavior in digital marketplaces.

On the basis of this integrated framework, several hypotheses are proposed. First, psychological factors are expected to drive impulsivity: consumers with higher hedonic motivations are more likely to engage in impulsive buying, individuals with lower self-control are more prone to spontaneous purchases, and positive emotional states such as excitement or happiness significantly increase the likelihood of impulsive behavior. Second, social factors are hypothesized to play a critical role: perceived social influence from peers, reviews, or influencers positively affects impulsive buying, fear of missing out mediates the relationship between social influence and impulsive buying, and strong tendencies toward social comparison are positively associated with impulsive purchases. Third, technological determinants are posited to facilitate impulsivity: ease of use of digital platforms increases the likelihood of unplanned purchases, personalization features such as tailored recommendations significantly enhance impulsive tendencies, and convenient payment systems like one-click checkout or digital wallets encourage spontaneous buying. Overall, this study argues that impulsive buying in digital marketplaces is not a function of isolated variables but rather the outcome of the interaction between psychological predispositions, social dynamics, and technological affordances. Together, these determinants create an ecosystem that fosters impulsive consumer behavior in contemporary online commerce.

ETHICAL CONSIDERATIONS

Conducting an empirical study on the psychological, social, and technological determinants of impulsive buying in digital marketplaces requires careful attention to ethical issues that safeguard participant rights and ensure the credibility of findings.

The first essential consideration is informed consent, where participants must be made fully aware of the study's objectives, procedures, potential risks, and their right to withdraw at any time without consequence. Privacy and confidentiality form another critical aspect, particularly since data may involve personal, financial, or behavioral details; hence, responses should be anonymized and securely stored using encrypted systems with access limited to authorized researchers only. The psychological well-being of participants also requires attention because reflecting on impulsive buying tendencies could trigger guilt, anxiety, or discomfort; therefore, questions should be framed sensitively, and participants should be provided with the option to skip uncomfortable items, along with information about support resources if needed. Avoidance of deception is equally important, as researchers must refrain from misleading participants about the study's purpose; any necessary concealment to minimize bias should be followed by a transparent debriefing session. Furthermore, participation should always remain voluntary, with recruitment processes free from coercion, and any incentives offered should be fair but not excessive to avoid undue influence. Ethical responsibility also extends to data integrity and transparency, ensuring accurate reporting of results, avoidance of fabrication or selective reporting, and openness regarding methods and limitations. Since the research involves digital marketplaces, the ethical use of technology is crucial; explicit consent must be obtained if any digital footprint tracking or online behavioral monitoring is used, while strict compliance with data protection laws such as GDPR or India's Digital Personal Data Protection Act (DPDPA) is mandatory. Finally, cultural sensitivity must be maintained in survey design and analysis, avoiding biased assumptions and ensuring that instruments respect diverse social and cultural contexts. By addressing these ethical considerations comprehensively, researchers can protect participants, uphold academic integrity, and contribute meaningfully to the understanding of consumer behavior in digital environments.

Table: Key Ethical Considerations

Ethical Aspect	Consideration in the Study
Informed Consent	Clear explanation of study purpose, voluntary participation, right to withdraw
Privacy & Confidentiality	Anonymization of data, secure storage, restricted access
Psychological Well-being	Sensitive questioning, minimizing distress, providing support resources

Avoidance of Deception	Transparency in aims, debriefing after study
Voluntary Participation	Non-coercive recruitment, fair compensation
Data Integrity & Transparency	Honest reporting, methodological clarity, no data manipulation
Ethical Use of Technology	Explicit consent for digital tracking, compliance with data protection laws
Cultural Sensitivity	Respect for cultural norms, unbiased instruments, inclusive interpretations

DISCUSSION

Interpretation of Findings

The findings confirm the multi-determinant nature of impulsive buying in digital marketplaces. Psychological drivers—particularly hedonic enjoyment and trait impulsivity—are the dominant forces. This aligns with theories that affect and personality have immediate influence on low-involvement purchase decisions. Social cues such as peer reviews and social proof significantly increase impulsive buying, suggesting that digital social signals reduce purchase friction and justify rapid decision-making. Technological determinants contribute indirectly by creating low-effort environments (fast checkout, relevant recommendations) where impulses can be rapidly executed.

The relative magnitudes observed (psychological > social > technological) suggest that while technology enables impulsive purchases, it is the affective states and individual predispositions that primarily drive such behavior. Notably, personalization retained significance in the full model, indicating that recommendation systems create opportunity by increasing perceived product relevance—an enabler rather than the root cause of impulses.

Theoretical Contributions

This study integrates psychological, social, and technological perspectives within a single empirical framework and quantifies their relative influences. It extends impulsive buying literature by demonstrating that affective states and personality traits remain central in online contexts, even when sophisticated technological affordances are present. The findings also highlight the mediating role of social signals in translating enjoyment into action.

Managerial implications

E-commerce firms seeking to increase impulse conversions should prioritize design elements that enhance perceived enjoyment (engaging content, gamified elements) while ensuring frictionless transaction paths (one-click checkout, saved payment methods).

Ethical considerations are important: firms should balance conversion goals with consumer welfare, offering tools such as purchase reminders or easy returns to mitigate regret. Social features (timely reviews, live purchase counts) should be used responsibly, with transparency to avoid manipulative practices.

LIMITATIONS AND FUTURE RESEARCH

Limitations include the cross-sectional design that prevents causal inference and reliance on self-reported measures that may be subject to social desirability bias. The sample, while diverse, was not nationally representative; cultural differences in impulsivity and social influence warrant cross-cultural replication. Future research could adopt experimental designs to test causal effects of specific technological features (e.g., countdown timers, animated microinteractions) and employ behavioral data (actual transaction logs) to validate self-reports. Longitudinal studies could examine how repeated exposure to persuasive design shapes trait-like changes in impulsive behavior.

CONCLUSION

This empirical study demonstrates that impulsive buying in digital marketplaces is a multifaceted phenomenon driven by psychological impulses (hedonic motivation, self-control), social processes (social media exposure, peer influence), and technological affordances (website aesthetics, ease of use). Hedonic motivation and social exposure are central drivers, while technological design both directly and indirectly shapes impulsivity. The results provide a framework for marketers to ethically harness these drivers to enhance consumer experience and for policymakers to consider protections against exploitative practices. Understanding these determinants is essential in an era where online platforms increasingly mediate consumption.

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