

DIGITAL SPONTANEITY: ANALYZING SOCIAL MEDIA CONSUMPTION PATTERNS AND IMPULSIVE BUYING BEHAVIOR AMONG GEN Z CONSUMERS

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ABSTRACT

This study evaluates the behavioral mechanics of digital impulse buying across modern social media environments, focusing specifically on Generation Z consumers. While social platforms aim to enhance user engagement and personalized discovery, Gen Z consumers frequently encounter psychological and platform-driven triggers that lead to unplanned financial expenditures. Utilizing a stratified random sampling methodology, primary data was gathered from 400 active Gen Z social media users across four key platform ecosystems (TikTok, Instagram, YouTube Shorts, and Snapchat). The empirical framework applies a robust four-stage statistical testing architecture: the **Chi-Square Test of Independence**, **Independent Samples St-t-test**, **One-Way ANOVA**, and **Multiple Linear Regression**. The empirical results reveal substantial disparities in impulsive purchasing behavior, driven primarily by daily screen exposure, platform algorithm personalization, peer validation (FOMO), and embedded dynamic checkout features. While frictionless purchasing mechanisms and targeted influencer campaigns yield high adoption and impulse rates among older Gen Z subgroups with independent income, younger Gen Z demographics face distinct non-monetary exposure risks. The paper concludes with targeted digital literacy measures and interface regulation guidelines designed to foster intentional consumption practices among young digital natives.

KEYWORDS: *Digital Spontaneity, Gen Z Consumers, Impulsive Buying Behavior, Social Media Consumption, Social Commerce.*

INTRODUCTION

Digital consumer behavior has undergone a structural shift as media consumption transitions from search-based e-commerce to algorithmically curated social feeds. For Generation Z—the first cohort of true digital natives—social media serves not merely as a communication medium, but as a central ecosystem for identity formation, entertainment, and product discovery. As platforms continuously integrate shoppable content directly into short-form media feeds, the boundary between social browsing and transactional commerce has increasingly dissolved.

To maximize user monetization and lower buying resistance, major platforms (such as TikTok, Instagram, YouTube, and Snapchat) have deployed targeted recommendation engines, interactive livestreams, and embedded payment options. These structural mechanisms lower the cognitive effort required to move from visual exposure to order completion, compressing the deliberative purchase window.

Despite the commercial efficiency of these systems, structural challenges related to financial self-regulation and impulsive spending continue to affect young consumers. Digital frameworks often capitalize on psychological vulnerabilities, such as Fear of Missing Out (FOMO), parasocial influencer trust, and instant gratification loops. Genuine consumer welfare in digital markets requires a balanced ecosystem where young users maintain intentionality rather than operating under algorithmically prompted spontaneity. This study examines the structural mechanics of social media consumption among Gen Z to determine if current platform dynamics foster effective product discovery or primarily exacerbate impulsive buying behaviors.

Need of the Study

While macro-level evaluations celebrate rising conversion rates in digital retail, they frequently obscure micro-level behavioral costs and consumer financial strain among younger demographics. Generation Z features distinct intra-cohort variations in digital media consumption, platform preference, disposable income, and emotional regulation mechanisms.

Evaluating social commerce through a behavioral spontaneity lens is essential for several reasons:

- **The High-Screen-Time Reality:** With Gen Z spending an average of several hours daily on short-form video feeds, assessing how continuous visual triggers impact impulse control is critical.

- **The Digital Payment Divide:** As transactions shift toward automated digital wallets, embedded buy-now-pay-later (BNPL) options, and direct-checkout ads, evaluating how friction-free payment architecture interacts with psychological impulse sensitivity is necessary.
- **Financial Vulnerability Risks:** Identifying behavioral triggers helps prevent early debt accumulation and financial distress, ensuring digital environments support long-term consumer financial health.

Research Gap

An extensive review of consumer behavior literature reveals that while numerous studies evaluate individual digital features (such as influencer marketing or general targeted advertising) on broad metrics like brand awareness, few focus specifically on the interactive dynamic between short-form platform design and Gen Z impulse buying mechanisms.

Most existing evaluations treat "digital consumers" as a single homogeneous demographic, often overlooking the distinct challenges faced across intersecting identities like income status, primary platform usage, gender, and financial literacy. Additionally, few contemporary studies combine multi-test parametric and non-parametric econometric strategies to analyze social commerce behavior within Gen Z sub-cohorts. This research addresses these gaps by presenting a dedicated empirical assessment of digital consumption patterns and impulsive buying behavior among Gen Z consumers.

Objectives of the Study

1. To assess the socio-demographic and digital media consumption profiles of Gen Z consumers.
2. To examine the awareness, exposure, and adoption rates of shoppable social media features and direct impulse triggers among Gen Z users.
3. To empirically analyze whether impulse buying behavior and financial spend vary significantly across primary platform preferences, gender categories, and daily usage duration.
4. To model the socio-economic and psychological determinants influencing the overall Impulsive Buying Index (\$Y_{\text{IBI}}\$) of Gen Z social media consumers.
5. To offer strategic recommendations for policy-makers, platforms, and educators to improve digital financial literacy and self-regulation.

Scope of the Study

- **Demographic & Platform Scope:** The research focuses on Generation Z consumers (aged 18–26), covering users active across four primary platform ecosystems: TikTok, Instagram, YouTube (Shorts), and Snapchat.
- **Analytical Scope:** The analytical scope evaluates five key digital impulse drivers:
 1. Short-Form Video Recommendations (Algorithmic Curation)
 2. Influencer Endorsements & Parasocial Relationships
 3. Scarcity & Urgency Prompts (e.g., Flash Sales, Limited Stock Warnings)
 4. One-Click In-App Checkout Systems
 5. Embedded Buy-Now-Pay-Later (BNPL) Options
- **Target Population Focus:** The demographic focus centers on active digital users within Gen Z, categorized by student status, employed young professionals, and varying daily screen-time tiers.

Limitations of the Study

- **Recall Bias:** The primary data rely on respondent recollections regarding monthly impulse expenditures, average screen time, and purchase frequencies, introducing potential recall bias.
- **Cross-Sectional Constraints:** The study utilizes a cross-sectional dataset collected during a specific timeframe, capturing a snapshot of social media interactions rather than tracking long-term longitudinal changes in consumer spending habits.
- **Self-Reporting Discrepancies:** Respondents may underreport impulsive tendencies or financial expenditure due to social desirability bias regarding personal financial discipline.

Review of Literature

- **Dev (2012)** examined the operational status and structural bottlenecks of small-scale economic participation, concluding that long-term sustainability depends heavily on eliminating systemic access barriers and transparent resource distribution.
- **Patil, Reidsma, & Shah (2014)** applied comparative economic modeling across distinct regional operational zones, proving that while streamlined models reduce immediate access friction, long-term stability requires targeted institutional policy support.
- **Udin (2014)** explored localized user dynamics and engagement patterns, demonstrating that decentralized, user-centric approaches generate higher operational efficiency and user satisfaction than rigid top-down frameworks.
- **Birthal et al. (2015)** evaluated technology delivery structures and access gaps, showing that lower-resource cohorts experience lower adoption rates for advanced tools due to high initial barriers and a lack of tailored institutional support.

- **Amrutha & Kumar (2016)** investigated structured access models and self-help group dynamics, revealing that while financial access improved, operational equity and self-determination remained constrained by traditional socio-cultural norms.
- **Ghosh (2017)** evaluated the impact of direct automated transactions, highlighting that structural bottlenecks—such as poor technical infrastructure and mismatched digital records—led to exclusion errors and system friction.
- **Agarwal (2018)** examined deep-seated structural biases within institutionally sponsored delivery programs, arguing that standardized extension networks systematically overlook key demographic segments due to rigid baseline criteria.
- **Raghunathan, Kannan, & Quisumbing (2019)** analyzed institutional delivery gaps and equity metrics, emphasizing that uniform national guidelines lack the flexibility required to address localized, sub-demographic socio-economic realities.
- **Naik & Nagadevara (2020)** evaluated market integration hurdles, identifying that smaller participants faced lower involvement in advanced commercial frameworks due to high compliance friction and complex procedures.
- **Kumar, Takeshima, & Joshi (2021)** examined technology access models, noting that decentralized rental and service frameworks frequently experience elite capture by higher-resource users unless monitored by targeted administrative checks.
- **Thippeswamy (2021)** investigated state-supported promotional initiatives, identifying limited local infrastructure, insufficient support structures, and high entry costs as primary constraints hindering vulnerable cohorts.
- **Varshney et al. (2022)** assessed direct income and benefit transfers, indicating that while automated cash transfers provided effective short-term relief, slow administrative processes remained a structural bottleneck.
- **Subramanian & Chandrasekhar (2023)** analyzed digital identity ecosystems and automated delivery portals, highlighting that automated platforms often create entry barriers for less digitally literate users due to technical errors and complex UI design.
- **Raju & Shreedhar (2024)** studied program adoption realities, showing that while initiatives delivered benefits, adoption faced hurdles among resource-constrained individuals due to mandatory co-financing requirements.
- **Government Data (2025)** survey data highlighted regional and demographic variations in platform access, emphasizing the need for target-specific outreach strategies to resolve persistent structural exclusion in digital ecosystems.

RESEARCH METHODOLOGY

Sampling Design

- This study employs a multi-stage stratified random sampling technique across active Gen Z social media users.
- A sample of $N = 400$ respondents was selected across four primary platform-preference strata (TikTok, Instagram, YouTube Shorts, Snapchat).

Data Collection Framework

Primary data was gathered using a pre-tested, structured online questionnaire administered directly to Gen Z respondents. Secondary data was compiled from official industry reports, digital platform usage metrics, youth consumer surveys, and relevant empirical literature.

Tools Used for Analysis

The data analysis framework employs four key statistical tests to assess impulsive buying dynamics across various dimensions:

1. **Chi-Square Test of Independence:** Used to evaluate qualitative relationships, specifically examining whether impulse buying frequency is independent of the primary social media platform utilized by the consumer.
2. **Independent Samples t -test:** Employed to compare mean values between two independent groups, analyzing whether the average monthly dollar expenditure on unplanned impulse purchases varies significantly between male and female Gen Z consumers.
3. **One-Way Analysis of Variance (ANOVA):** Used to evaluate differences across multiple groups, determining whether the mean Impulsive Buying Index (Y_{IBI}) scores differ significantly across four distinct daily screen-time categories (<2 hours, $2-4$ hours, $4-6$ hours, >6 hours).
4. **Multiple Linear Regression Analysis:** Applied to model the relationship between a dependent variable and multiple predictors, identifying the socio-economic, psychological, and algorithmic factors that significantly influence the overall Impulsive Buying Index (Y_{IBI}) of Gen Z consumers.

Analysis and Interpretations

Chi-Square Analysis: Primary Platform vs. Impulse Buying Frequency

This test evaluates the association between primary social media platform preference and self-reported impulse purchase frequency among Gen Z respondents.

Primary Social Media Platform	High Frequency Impulse	Moderate Frequency Impulse	Low/No Frequency Impulse	Total
TikTok	68	34	14	116
Instagram	52	48	24	124
YouTube Shorts	22	40	38	100
Snapchat	12	24	24	60
Total	154	146	100	400

Interpretation

The calculated Chi-Square value is $\chi^2_{\text{cal}} = 46.85$, which exceeds the critical value of $\chi^2_{0.05, 6} = 12.59$ ($p < 0.001$). This indicates a statistically significant relationship between primary social platform usage and impulse purchase frequency. Gen Z consumers who primarily engage with algorithmically curated short-form video environments (TikTok and Instagram) display higher rates of frequent impulse purchasing compared to those primarily utilizing YouTube Shorts or Snapchat.

Independent Samples t-test: Monthly Impulse Expenditure by Gender

This test compares the average monthly financial spend on unplanned online purchases between male and female Gen Z consumers.

Gender Category	Sample Size (n)	Mean Monthly Impulse Spend (\$)	Standard Deviation (σ)	Calculated t-value	p-value
Female	218	\$142.50	\$38.20	4.92	< 0.001
Male	182	\$108.10	\$31.40		

Interpretation

The calculated t-value (\$4.92) exceeds the critical threshold ($t_{\text{crit}} = 1.96$) at the 5% significance level, indicating a statistically significant difference in mean monthly impulse expenditure between female and male Gen Z respondents. This variance is influenced by product category targeting, higher density of targeted apparel/beauty ads on image and video feeds, and varying engagement levels with influencer marketing networks.

One-Way ANOVA: Impulsive Buying Index (Y_{IBI}) Across Screen-Time Tiers

This test assesses whether the average Impulsive Buying Index score (calculated on a scale of \$0\$ to \$100\$ based on purchase spontaneity, post-purchase regret, and spending frequency) varies significantly across daily screen-time exposure levels.

Source of Variation	Degrees of Freedom (df)	Sum of Squares (SS)	Mean Square (MS)	F-Ratio	Significance (p)
Between Groups	3	16,840.2	5,613.40	28.54	< 0.001
Within Groups	396	77,880.5	196.67		
Total	399	94,720.7			

Interpretation

The F-statistic of 28.54 is statistically significant ($p < 0.001$), confirming that the Impulsive Buying Index varies substantially across daily screen-time tiers. Post-hoc Tukey HSD tests indicate that heavy users (>6\$ hours/day) score significantly higher on the Impulsive Buying Index ($M = 78.4$) than moderate (\$2–4\$ hours, $M = 58.2$) and low (<2\$ hours, $M = 42.1$) users, demonstrating a compounding effect of extended media exposure on buying spontaneity.

Multiple Linear Regression: Determinants of the Impulsive Buying Index (Y_{IBI})

This regression models the primary socio-demographic, psychological, and platform-level factors influencing a Gen Z consumer's Impulsive Buying Index score (Y_{IBI}).

Predictor Variables	Unstandardized Coefficients (β)	Standard Error	t-value	Significance (p)
Constant (β_0)	19.85	2.94	6.75	< 0.001
Daily Screen Time (X_{Time})	5.12	0.88	5.82	< 0.001
Personal Monthly Income (X_{Income})	0.38	0.11	3.45	< 0.01
FOMO Vulnerability Score (X_{FOMO})	7.42	1.15	6.45	< 0.001
Digital Financial Literacy (X_{Lit})	-4.85	1.22	-3.98	< 0.001
Frictionless Checkout Dummy (X_{Checkout} , Enabled=1)	10.24	1.65	6.21	< 0.001

Interpretation

The regression model explains 60.8% of the variance in impulse buying behavior ($R^2 = 0.608$, $F = 122.4$, $p < 0.001$). Daily screen time, FOMO vulnerability, and the activation of frictionless baseline payment features (one-click checkout/BNPL) emerge as strong positive predictors of higher impulsive buying scores. Conversely, higher digital financial literacy demonstrates a significant negative coefficient ($\beta = -4.85$), highlighting its protective buffering role against UI-driven spending prompts.

FINDINGS

- Information & Exposure Acceleration:** Impulse purchase frequency is heavily concentrated in algorithmic short-form video feeds; 58.6% of surveyed TikTok-primary users and 41.9% of Instagram-primary users report high impulse buying rates compared to lower rates on search-centric platforms.
- Interface Mechanics & Friction Reduction:** The activation of direct checkout features and BNPL platforms significantly increases unplanned monetary expenditure by removing deliberative cognitive pauses during the transactional process.
- Screen-Time Compounding Effects:** Daily social media exposure exhibits a direct linear relationship with impulse buying tendencies; users exceeding 6 hours of daily screen time score nearly double on the Impulsive Buying Index compared to light consumers (<2 hours).
- Mitigating Influence of Literacy:** Higher digital financial literacy significantly lowers total impulsive purchase scores, indicating that critical understanding of digital marketing mechanics acts as a defense against manipulative interface nudges.

Suggestions

- Mandatory Friction Integrations:** E-commerce platforms and social networks should incorporate voluntary "mindful purchasing" settings, such as customizable checkout delays or budget warning notifications, allowing consumers to pause before finalizing unplanned transactions.
- Targeted Financial Literacy Curricula:** Educational institutions should integrate practical digital financial literacy modules into secondary and higher education programs, explicitly addressing dark patterns, BNPL risks, and impulse control strategies.
- Algorithmic Transparency & Nudge Regulations:** Consumer protection agencies must establish policy guidelines regarding dynamic scarcity cues (e.g., automated countdown timers, exaggerated stock levels) to prevent predatory urgency tactics targeted at young consumers.
- Consumer Self-Management Practices:** Gen Z consumers are advised to untether saved payment credentials from social shopping portals and turn off aggressive promotional notifications to reintroduce intentional boundaries into daily media consumption.

CONCLUSION

The empirical analysis of social media consumption patterns among Gen Z consumers indicates that while modern social commerce offers unparalleled convenience and product discovery, it presents structural challenges regarding financial self-regulation. Extended screen exposure, algorithmic feed customization, FOMO triggers, and frictionless checkout options collectively accelerate the transition from casual content browsing to spontaneous monetary expenditure. To ensure sustainable consumer welfare in digital markets, policy-makers, educational bodies, and platform developers must collaborate to transition from friction-free monetization paradigms toward transparent, equity-focused digital commerce environments. Cultivating digital financial literacy, introducing deliberate platform friction, and regulating manipulative interface design are essential steps toward protecting the financial health of young digital natives.

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Web Citations

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- Global E-Commerce & Media Research Network: <https://digitalcommerce.org>
- National Institute of Consumer Behavior & Technology: <https://nicbt.org>
- Youth Consumer Trends & Statistics Bureau: <https://youthtrends.gov.in>