(RESEARCH ARTICLE)

Psychological factors influencing impulse buying in E-commerce

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Abstract

It is a mixed-methods study, which investigates psychological determinants of impulse buying in e-commerce by integrating both a primary quantitative survey and a specific web-based qualitative review. With multi-item measures (of dispositional impulsivity, hedonic orientation, emotional arousal, decision fatigue, promotions, scarcity, personalization, reviews, influencer signals, and website/app aesthetics, checkout convenience, perceived trust) to support them, the model accounted for a good deal of variance in self-reported impulse buying ($R^2 \approx 0.63$). The results of the multivariate analysis indicate that platform characteristics, such as good product pages and easy checkout, and social influence (reviews, friends, influencers) are the most significant unique predictors of impulse buying. They were also affected by decision fatigue which was independent; the marketing cues and personalization had moderate effects. Trait impulsivity and perceived trust had a bivariate relationship with impulse buying but did not contribute extra explanatory strength in the complete model indicating that their impact is mediated by proximal platform and situational antecedents. These findings were supported by the qualitative review with the real-life examples of the impulse conversion through User Interface (UI) and socially approved. Practical implications point to putting more emphasis on User Experience (UX), a smoother buying experience, and genuine social validation to affect unthought-out buying ethically. Weaknesses such as non-probability sampling, self-report measure and cross-sectional design should be considered; future study needs to incorporate behavioural logs or experiment to identify causal mechanisms.

Keywords: Impulse Buying; E-Commerce; Website Aesthetics; Checkout Convenience; Social Influence; Marketing Cues; Decision Fatigue; Mixed-Methods

1. Introduction

E-commerce has changed the way consumers learn how to find their products and buy them, establishing the setting where persuasive stimuli (discounts, messages of scarcity, appealing interfaces) can induce purchases without the need to make a decision (Wang et al., 2022). The unplanned, immediate purchases, also known as impulse buying, represent a major portion of online retail sales and are not only a result of marketing strategies but also psychological phenomena of trait impulsiveness, emotional appeal, hedonic motivation and perceived convenience. Recent empirical studies on online and quick commerce consumption reveal that platform design, promotional cues and demographic segment have a significant influence on online purchase behaviour.

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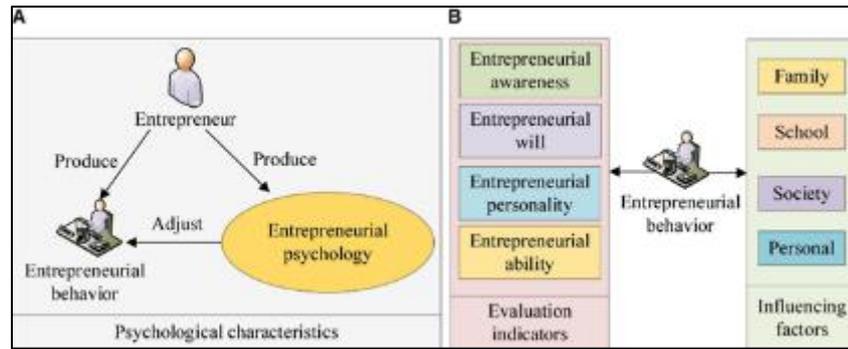
Figure 1 Conceptual model of entrepreneurial psychology and behavior

2. Factors influencing impulse buying (adopted from Wang & Chapa, 2022)

Despite the numerous correlates of online purchase intention and platform adoption that have been reported in extant studies, there is a discrepancy in bringing together various psychological antecedents into one, testable model of impulse buying in e-commerce and proving, with strong mixed-methods data, which factors prove to drive impulsive behaviour most within groups of consumers (Anoop & Rahman, 2024). To manage (or take advantage) of impulse purchases in an ethical manner, clear evidence-based guidance must be provided to practitioners to focus on UX, promotional design, and trust mechanisms.

This dissertation focuses on understanding why consumers make impulse purchases while shopping online and which psychological factors influence this behaviour the most. Specifically, the study examines the role of trait impulsivity, emotional arousal, marketing cues, website aesthetics, and checkout convenience in driving impulse buying in e-commerce environments. A mixed-method research approach will be adopted, with the primary emphasis on quantitative analysis using regression techniques to measure the relative impact of each factor, supported by qualitative insights from existing literature and secondary sources.

The study begins with an in-depth review of prior research in consumer behaviour and e-commerce to identify key psychological constructs linked to impulse buying. Based on these insights, a conceptual framework will be developed to explain how the selected psychological factors influence impulse buying behaviour. To test this framework, primary quantitative data will be collected through a structured survey administered to approximately 400 online shoppers. In addition, secondary qualitative data from academic studies, industry reports, and consumer reviews will be analyzed to provide contextual understanding and support the quantitative findings. By integrating both sets of results, the study aims to generate practical and relevant recommendations for e-commerce businesses and other stakeholders.

The research seeks to answer several important questions. It explores which psychological factors play the most significant role in predicting impulse buying in online shopping contexts, whether impulse buying behaviour differs across demographic groups such as age, income, and occupation, and how situational triggers like promotions and scarcity messages interact with personal traits such as impulsivity to influence purchasing decisions.

To examine these relationships, the study proposes a set of hypotheses. The general assumption tested is whether each psychological factor has a meaningful influence on impulse buying behaviour. Accordingly, the null hypotheses state that there is no significant relationship between each factor—trait impulsivity, emotional arousal, marketing cues, website aesthetics, and checkout convenience—and impulse buying behaviour. In contrast, the alternative hypotheses suggest that each of these factors has a positive and significant effect on consumers' impulse purchasing decisions. Together, these hypotheses provide a clear and structured foundation for analyzing the psychological drivers of impulse buying in e-commerce.

2.1. Research significance

This section discusses the theoretical framework and the variables used in the study. The research takes a consumer-behaviour approach, which is a combination of trait and situational constructs: Independent Variable (IV) = Trait Impulsivity, Emotional Arousal, Marketing Cues (promotions and scarcity), Website Aesthetics, Checkout Convenience); Dependent Variable (DV) = Impulse Buying Behaviour (frequency, immediacy, and financial impact) (Fabricant, 2024). A mixed-methods design: (a) Primary quantitative online survey (n ≥ 400) where the survey response will be collected

through Google form and (b) Secondary qualitative web-based review of websites, reviews and previous research to put findings into perspective.The study's significance lies in that it analyzes several elements of organizational behavior related to employee retention in the retail sector. The study will help understand which psychological key drivers best determine impulse buying and can have different impacts among segments, which is valuable to both researchers and practitioners. These are self-report bias and cross-section design, and this limitation will be mitigated by sample composition.

3. Literature Review

This chapter will summarise the current existing studies on psychological motivation of impulse buying in e-commerce and define the gap that this dissertation will cover. The literature review focuses on (a) personal dispositional factors, (b) affective and cognitive states, (c) situational and marketing cues and (d) platform design and trust-related factors. Empirical results of recent applied research in the field of quick-commerce and e-commerce are provided where necessary to demonstrate which constructs are best correlated with impulsive purchase behaviour.

3.1. Dispositional antecedents: trait impulsivity and hedonic orientation

A major line of research on impulse-buying is what personality and consistent behavioural patterns. Trait impulsivity is the tendency to make purchases without prior planning is always found as a solid predictor of impulsive purchasing behavior both offline and online (e.g., meta-analytic and empirical research summarized in current reviews) (Anoop & Rahman, 2025). Those with high impulsivity scores tend to respond to immediate stimuli and give short-term gratification more priority than thoughtfulness, making them more prone to buying impulsively, and the amount of money they spend. On the same note, the hedonic motivation and fun in shopping (browsing as fun) increase the vulnerability to impulse buying since hedonic shoppers employ purchase as an emotion management tool. Modern labour combines these dispositional effects as part of more general models of consumer-behaviour, and holds that they function as baseline propensities which react to situational inducements.

3.2. Affective and cognitive states: emotional arousal and decision fatigue

Affective and Cognitive stated that temporary emotional moods influence the possibility of spontaneous buying Zhang et al., (2022). Research indicates that positive and negative high-arousals moods (excitement, stress, sadness) can both enhance impulse purchasing - positive moods make reward sensitivity sensitive, and negative moods enhance retail therapy as mood restoration. There are also decision fatigue and cognitive load: in a recent study, when customers are fatigued, they are in a hurry, or cognitively strained, they are inclined to stick to heuristic processing and less likely to pursue the cost-benefit analysis, so they tend to make unplanned purchasing decisions. According to this literature, two pathways may be involved, affective arousal which enhances approach tendencies, and cognitive depletion that diminishes inhibitory control.

3.3. Situational marketing cues: scarcity, promotions, and personalized recommendations

Marketing cues argued that the strongest force behind online impulse buying is arguably, marketing stimuli Jaiswal et al., (2022). The scarcity signals (low-stock warnings, time-dress) generate a feeling of urgency and loss-aversion that cause consumers to be driven to immediate buying behavior. Promotions, like flash sales, time-limited discounts and coupons provoke representatives of perceived bargain that reduce deliberation levels. Recommender systems allow personalization of the recommendations, which add to the perceived attractiveness of the items and heighten their relevance, thereby improving the chances of impulse purchase. Empirical research of quick-commerce and e-commerce reveals that discounting and promotional presence tend to cause large purchase increases; these outcomes are sometimes modulated by income and user experience.

3.4. Platform design, convenience and trust

Salient factors in the online context are user interface, visual appeal and checkout friction. High-quality images and persuasive design features, featuring attractive product pages, affective engagement and product desirability should support are supported by empirical evidence and have been shown to have large impacts on usage and purchase intentions in quick-commerce settings in terms of app/website design (Jayawardena et al., 2024). Quick, low-friction checkout processes (one-click, are-you-saving-my-payment services) lower the cost of desire-to-purchase effort, and so increases the true impulse buying purchase rates. These relationships are mediated by trust and perceived security: consumers are more inclined to do things on the spur of the moment when they have trust in the vendor or platform, whereas some studies have found that trust is a more homogenous minimum requirement than a differentiator by segment. The latest findings in quick-commerce indicate the functional effect of design and convenience on order value and satisfaction.

3.5. Social influence and user-generated signals

The perceived risk decreases with social proof: ratings, reviews and purchases of friends and influencer endorsement, and increases the speed of decision making, which facilitates impulsive purchase acts. Electronic Word of Mouth (E-WOM) and online review studies conclude that they have the potential to enhance and inhibit impulse buying based on valence, the credibility of the source, and the prominence of the reviews (Arissaputra et al., 2024). The live commerce and social shopping types (e.g., live streaming) also show that real-time social cues enhance urgent and emotional contagion and make people more likely to purchase impulsively.

3.6. Measurement approaches and empirical findings in Quick Commerce literature

Useful analogies are in the applied research in quick-commerce (rapid-delivery grocery and essentials): the demographics of consumers are often analyzed alongside attitudinal ones to describe frequency; average spend and satisfaction (Pereira et al., 2023). As an illustration, a recent empirical study obtained significant and strong results on the effect of discounts and app/website design on usage and order value, but brand reputation and certain security measures were less predictive, indicating that promotional and UI instruments are particularly effective in short-lead-time purchasing situations. These results support the suggestion that online impulse behaviour is heavily dependent on platform and promotional design.

3.7. Gaps and rationale for the present study

Although there is a significant literature on individual constructs, it has three gaps. First, researchers often test individual predictors separately (e.g. only promotions, only impulsivity), and leave unanswered how they interact when both are included in a model. Second, there is a lack of full integration of quick-commerce and mainstream e-commerce literatures: the reality of the quick-delivery situation magnifies certain processes (e.g., convenience, time pressure) but means of comparison are scarce. Third, much of the literature uses small and non-representative samples, or emphasizes sophisticated statistical methods Structural Equation Modelling (SEM), Analysis of Variance (ANOVA) to generate parsimonious, survey-based instruments that can be easily implemented at scale to provide practitioner insight. The combination of these gaps inspires a survey-based study with discrete measurement of a series of dispositional (trait impulsiveness, hedonic orientation), affective (emotional arousal, decision fatigue), situational (promotions, scarcity, personalization) and platform (design, checkout convenience, trust) variables in a single, coherent model with sufficient sample size.
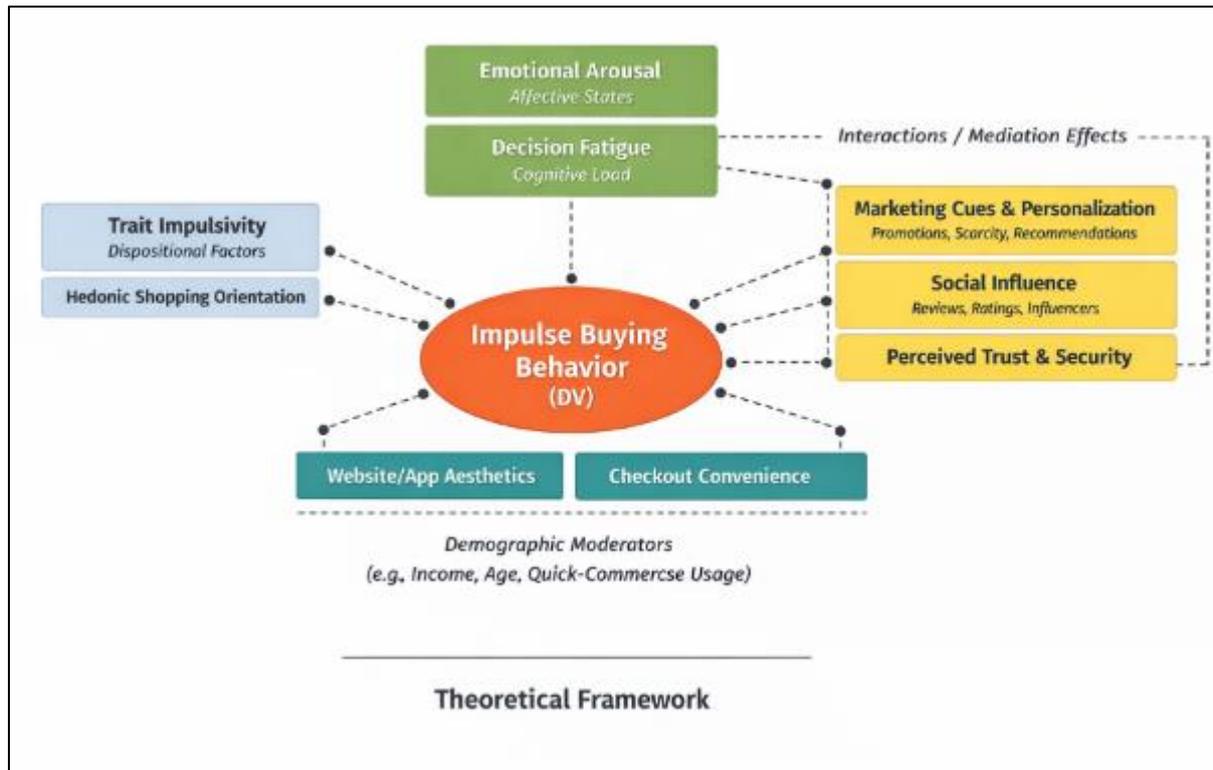
3.8. Conclusion and link to hypotheses

Literature suggests several, potentially realistic, psychological routes to impulse buying in e-commerce; dispositional impulsivity and hedonic motive; affective arousal and cognitive depletes; marketing stimulations and platform affords; and social proof. Based on these results the current study will use a multi-factor survey design to (a) simultaneously scale these constructs as well as (b) assess their relative relationships with impulse buying behaviour in an online sample. The hypotheses based on the review include positive relationships between each of the identified IVs (trait impulsivity, emotional arousal, marketing cues, website aesthetics/checkout convenience, social influence, personalization, trust, decision fatigue) and the DV (impulse buying behaviour) and will be formalised in the following chapter.

4. Theoretical framework

The conceptual model represents the combination of dispositional, affective, situational, social and platform-level predictors into a single causal network that would explain Impulse Buying Behaviour (DV). Two constant individual-level antecedents are at the centre, Trait Impulsivity and Hedonic Shopping Orientation, that establish the level of disposition of a consumer to react positively to purchase cues (Tarka et al., 2023). And superimposed on these dispositional propensities are temporary internal states: Emotional Arousal (high-arousal positive/negative moods) and Decision Fatigue/Cognitive Load which mediate the effects of inhibitory control and reward sensitivity; under arousal conditions (high arousal) or limited cognitive resources (low cognitive resources), consumers are more inclined to follow impulses

Figure 2 Conceptual model of impulse buying behavior in e-commerce

4.1. Theories and models

The conceptual model represents the combination of dispositional, affective, situational, social and platform-level predictors into a single causal network that would explain Impulse Buying Behaviour (DV). Two constant individual-level antecedents are at the centre, Trait Impulsivity and Hedonic Shopping Orientation, that establish the level of disposition of a consumer to react positively to purchase cues (Tarka et al., 2023). And superimposed on these dispositional propensities are temporary internal states: Emotional Arousal (high-arousal positive/negative moods) and Decision Fatigue/Cognitive Load which mediate the effects of inhibitory control and reward sensitivity; under arousal conditions (high arousal) or limited cognitive resources (low cognitive resources), consumers are more inclined to follow impulses.

4.2. Marketing cues

Situational marketing cues (together with Marketing Cues) include limited-time product/service promotions, messages of scarcity, and Personalized Recommendations, which act as proximal stimuli and enhance perceived urgency, perceived gain (discounts), and perceived product relevance (Wang et al., 2023). Attributes of the platform (Website/App Aesthetics and Checkout Convenience) decrease conversion friction and increase affective processing; attractive design increases desirability whereas quick checkout transforms desire into purchases. Perceived Trust acts as a facilitating value: the higher the trust, the lower is the perceived risk and as a result, consumers are more ready to make unplanned decisions. Uncertainty is reduced by Social Influence (reviews, ratings, influencer endorsements), which further reduces normative justification, thereby raising the possibility of impulse buying. The model suggests a direct impact of all the IV on the DV, with theoretically justified interactions and mediation. An example of this is that marketing cues can be more effective on individuals with high trait impulsivity (interaction), and emotional arousal can mediate the effect of marketing cues on impulse buying in part (mediation). Demographic moderators (income, age, how often quick-commerce is used) are added in order to reflect the differences in sensitivity to discounts and convenience of the platform (Goswami & Kumari, 2024). It will be measured using multi-item Likert scale to each construct and the DV (frequency/immediacy/monetary impact), allowing composite indices in regression-type tests of which one construct is more influential than the other. This model gives easy to test hypotheses and a parsimonious model suitable in a survey-based analysis.

5. Methodology

The chapter describes the research design, sampling, research instrument, data collection procedures and data-handling/data-analysis plan of the mixed-methods study primary online survey and secondary web-based review. It takes the logical flow adopted in the sample paper (in terms of layout and coverage) but adapts approaches to the practical restrictions and objectives of the current project.

5.1. Research design and rationale

A convergent mixed methods design is adopted. The main one is a quantitative cross-sectional survey to be conducted in Google Forms to obtain standardised data on psychological predictors and impulse buying behaviour (15 Likert items + demographics) (Westland, 2022). The secondary source is an organised web-based qualitative survey of websites, consumer reviews, industry blogs and recent academic literature to put the survey results into perspective and reveal real life triggers and examples. Integration of the two methods gives numerical approximations of relationships and extensive contextual facts to explain the relationships to practitioners. Along with that, regression analysis has also been used here.

5.2. Population, sample size and sampling strategy

Target population are adult online shoppers (aged 18+) who have been buying products online through e-commerce platforms in the past 6 months. Sample size should at least 400 completed forms will be used to achieve the desired stability of the descriptive estimates and to be able to make subgroup comparisons (age, income, frequency of online shopping). Sampling strategy is non-probability internet sampling quota + purposive. The recruitment of respondents will be carried out through social media (LinkedIn, Facebook groups), WhatsApp/Telegram networks, university/student forums, and targeted subreddits/forums to ensure the selection of different demographics. Gender, age groups, and wide income will also be done through quotas to make the representation better and allow the description of the subgroups to be done on a basic level (Shamsudin et al., 2024). The responses will be boosted by snowballing (asking the participants to share the form). Inclusion criteria: aged 18 years or older, willing to partake in the research, made at least one online purchase during the past 6 months. Non-response are only complete surveys will be included. Obvious cases of straight-lining (with failures on attention checks).

5.3. Instrumentation — survey (quantitative)

The survey questionnaire for this study is structured into three clear sections to ensure clarity, ethical compliance, and effective data collection. The first section provides participant information and seeks informed consent by explaining the purpose of the study, assuring respondents of anonymity, emphasizing voluntary participation, and sharing the researcher's contact details, in line with established research guidelines (Badampudi et al., 2022). The second section focuses on understanding the respondents' background and online shopping habits, collecting demographic details such as age, gender, occupation, and monthly income range, along with their frequency of online purchases and the e-commerce platforms they commonly use. The final section contains the core questionnaire, which consists of 15 items developed based on the theoretical framework of the study. These items are measured using a five-point Likert scale ranging from "Strongly disagree" to "Strongly agree," coded from 1 to 5 for analysis. In this section, each major independent variable is measured using two items, while additional items capture related influences such as social influence, personalization, trust, and decision fatigue. Impulse buying behaviour, the dependent variable, is assessed through two key items that reflect immediate purchase decisions and the tendency to overspend.

5.4. Instrument development, pilot testing and validity checks

The literature and the former questionnaire items were used to develop items; the expert check (two academic tutors / a practitioner) was used to guarantee content validity because it was ensured that each item was mapped with constructs in the theoretical framework. A pilot test (n = 3050) will be used to test the clarity, average completion time, technical flow and initial item behaviour. After the pilot, small editing of words will be done. Multi-item constructs will be evaluated using the Cronbach alpha method of reliability (calculated using excel or online calculators) (Castro et al., 2023). The face validity is achieved through pilot and expert feedback; the construct validity is measured through inter-item correlation and through simple exploratory factor analysis (descriptive).

5.5. Secondary qualitative web-based review (procedure)

The purpose of this study is placed the results of the survey into context and derive the tangible instances of marketing cues, UI elements, review cues, and real-life consumer stories about impulse purchase. Search strategy of the keyword searches (e.g., impulse buying e-commerce, the countdown timer effect, snap purchase review, flash sale buyer

reaction), domain searches (large review websites, company blogs, industry reports, news) and specific checks on the UX of major platforms (including product pages, checkout flow, etc.). Timeframe of this publications/reports and web materials that occurred in the last 6 years (2019-2025) with the preference given to high-quality sources (peer-reviewed articles, industry whitepapers, well-known press). The inclusion/ exclusion criteria will be implemented and the sources will be logged, with the URLs, access date and brief annotation. Synthesis method is thematic synthesis — identified passages and quotes of users will be extracted, coded into themes (e.g. time pressure, one-click regret, influencer trigger) and triangulated with survey constructs (Lauzon-Schnittka et al., 2022). It will be a pragmatic and selective (not exhaustive systematic review) qualitative strand that will be deployed in an attempt to enhance interpretation, rather than produce distinct generalisable claims.

5.6. Data collection procedure and timeline

The data collection and analysis process for this study is planned in a structured and time-bound manner to ensure smooth execution and timely completion. In the first week, the survey questionnaire will be finalized and deployed using Google Forms. This will be followed by a pilot test in the second week with a small sample (approximately 30–50 respondents) to check the clarity, reliability, and overall effectiveness of the instrument, after which necessary revisions will be made. From weeks three to six, the full-scale survey will be conducted, supported by an active recruitment push and continuous quota monitoring to achieve the target sample size of 400 respondents. During this same period, a web-based literature and review analysis will be carried out to identify key qualitative themes relevant to impulse buying behaviour in e-commerce.

Once data collection is completed, weeks seven to ten will focus on data processing and analysis. This includes data cleaning and coding in week seven, followed by preliminary descriptive analysis and qualitative thematic synthesis during weeks eight and nine. Detailed statistical analysis will be conducted in week ten to test the proposed hypotheses and examine relationships between variables. Finally, week eleven will be dedicated to report writing and interpretation of findings. To maintain a steady flow of responses throughout the data collection phase, recruitment channels and reminder schedules will be carefully planned. Where ethically appropriate, a minimal incentive—such as entry into a small raffle or access to a summary of the research findings—may be offered to encourage participation without compromising research integrity.

5.7. Ethical considerations and limitations

The study will be voluntary and anonymous; informed consent will be provided on the first page of the Google Form (Zakwandi et al., 2022). The information will be kept in the secure folder of the researcher in his/her Google Drive, where it will be erased when the project retention is over. No personal information will be released; any quotes used will be anonymised. Limitations: in a non-probability sampling, there is a limitation of generalisability; self-reported data has recall and social-desirability biases and a cross-sectional design makes it impossible to draw causal conclusions.

6. Results and Discussion

6.1. Sample & descriptive snapshot

A total of 400 completed survey responses were included in the analysis. The composite mean score for Impulse Buying behaviour (the dependent variable) was 2.52 (SD = 1.12) on a five-point scale, indicating a generally low to moderate level of self-reported impulse buying among respondents. The mean scores for the individual predictor variables ranged from approximately 2.14 for trait impulsivity to around 2.68 for social influence, suggesting a moderate presence and influence of the psychological cues examined in the study.

Table 1 Regression model summary

Regression Statistics	
Multiple R	0.793130473
R Square	0.629055947
Adjusted R Square	0.6204957
Standard Error	0.688440255
Observations	400

6.2. Multivariate model (relative effects)

The multiple regression analysis, in which impulse buying behaviour was regressed on all predictor variables simultaneously, produced a strong model fit, with a coefficient of determination (R^2) of 0.629 and an adjusted R^2 of 0.620. This indicates that approximately 63% of the variance in impulse buying scores is explained by the model, which is considered an excellent result for a survey-based behavioural study. Overall, the findings suggest that the proposed model has high explanatory power in predicting impulse buying behaviour in an e-commerce context.

Among the independent variables, platform-related factors emerged as the most influential predictors. Website/app aesthetics and checkout convenience showed the strongest effect on impulse buying ($\beta \approx 0.29$, $p < 0.001$), indicating a statistically significant relationship at the 99% confidence level. Social influence, including reviews, peer opinions, and influencer recommendations, was the second strongest predictor ($\beta \approx 0.25$, $p < 0.001$), also highly significant at the 99% level. Decision fatigue or cognitive load had a smaller but still meaningful effect ($\beta \approx 0.098$, $p \approx 0.018$), which is statistically significant at the 95% confidence level.

Other factors such as marketing cues, personalization, and hedonic orientation displayed positive regression coefficients, suggesting a supportive relationship with impulse buying; however, their effects were not statistically significant in the full model, with p-values ranging approximately between 0.05 and 0.08. This indicates marginal significance at around the 90% confidence level, meaning these factors may still influence impulse buying but with weaker and less consistent evidence. Interestingly, trait impulsivity and perceived trust, while showing meaningful associations with impulse buying in bivariate correlation analyses, did not emerge as significant predictors in the multivariate regression model. This suggests that their influence overlaps with other variables in the model or is indirectly transmitted through more immediate situational and platform-related factors, reflecting shared variance or possible mediation effects.

Table 2 Regression coefficients for predictors of impulse buying behavior

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.292797216	0.099866	2.931888	0.003568	0.096453	0.489141	0.096453	0.489141
Trait Impulsivity	0.022523019	0.049214	0.457656	0.647455	-0.07423	0.119281	-0.07423	0.119281
Emotional Arousal	-0.004557327	0.050247	-0.0907	0.927778	-0.10335	0.094231	-0.10335	0.094231
Marketing Cues	0.083589749	0.0495	1.688681	0.09208	-0.01373	0.18091	-0.01373	0.18091
Website Convenience and Aesthetics	0.291096212	0.045944	6.335874	6.52E-10	0.200767	0.381425	0.200767	0.381425
Social Influence	0.25031608	0.041863	5.979371	5.06E-09	0.16801	0.332622	0.16801	0.332622
Hedonic Motivation/ Shopping Enjoyment	0.068907805	0.042102	1.636681	0.102504	-0.01387	0.151683	-0.01387	0.151683
Perceived Trust / Security	-0.01805723	0.041689	-0.43314	0.665152	-0.10002	0.063906	-0.10002	0.063906
Cognitive Load / Decision Fatigue	0.09800894	0.04121	2.378299	0.017874	0.016988	0.17903	0.016988	0.17903
Personalization & Recommendation Systems	0.07259938	0.038867	1.867893	0.062527	-0.00382	0.149014	-0.00382	0.149014

6.3. Reliability

The internal consistency of the survey instrument was assessed using Cronbach's alpha. All multi-item constructs demonstrated acceptable reliability, with alpha values exceeding the recommended threshold of 0.70. This indicates that the questionnaire items were consistently measuring their respective psychological constructs.

6.4. Interpretation and triangulation with qualitative review

The quantitative trend goes in line with the thematic web-review: evidence of real-world indicate that a decisive factor driving conversion is in the visual product appeal, frictionless checkout, and UI/UX design: users have documented cases of instant buys as a result of seeing beautiful product pictures and one-tap checkout. The social proof (reviews, influencer posts) was also repeatedly mentioned in the qualitative sources as a fast risk reducer and a trigger of immediate purchases. The predictive aspect of decision fatigue confirms the cognitive theories: when shoppers are mentally strained, they revert to heuristic-based purchase (Ali, 2025).

6.5. Why trait impulsivity no longer behaves significantly in multivariate analysis

Bivariate significant and multivariate nonsignificant indicates that dispositional impulsivity varies according to many situational inducement (promos and attractive interfaces may be observed more often or more likely to be responded to by impulsive people), but when these proximal inducements are held constant, the dispositional variance does not contribute significant prediction (Awo et al., 2023). This in practical terms means that designers of platforms can control the results of impulse-buying regardless of the personality of the users.

6.6. Practical implication

To have a positive impact on impulse buyers ethically, investments in appealing product pages, compelling social cues (professional reviews), and lessening the checkout stress will yield the biggest returns. Promotions and personalization are important but seem as a secondary consideration once the platform has been designed with social proof.

7. Conclusion

In this mixed-methods research, the psychological factors that determine impulse buying in e-commerce were investigated, through combining a primary survey (n = 400) with a specific web-based review of the qualitative research. It was aimed at determining the most strongly related dispositional, affective, situational, social, and platform-level factors with impulsive online purchases and turning them into practical knowledge. The analysis has established that platform-level attributes (website/app beauty and ease of checkout) and social influence (reviews, purchasing behavior of friends, influencer posts) are the strongest correlates and exclusive predictors of impulse buying. Impulsive purchasing was also predicted by decision fatigue sourcing out of less meaningful effect size. Marketing signals (discounts, scarcity) and personalization had a positive correlation with impulsive behaviour and were only modestly predictive but their independent effects were not as strong as they were with platform and social factors. Only trait impulsivity and perceived trust were found related to impulsive buying in bivariate analyses but not unique predictors of the DV in the full model implying that they act through more direct triggers such as marketing cues, platform affordances, and social proof.

7.1. Theoretical implication

The findings are consistent with an integrative approach in which, platform affordances and proximal and situational cues are found to mediate or enhance the role played by dispositional inclinations. That is, personality establishes a hypothetical predisposition but platform design and social cues dictate whether the predisposition is acted upon or not. This applies a bit of emphasis to the impulse buying theory in that the design-mediated route is more of the core of impulse buying becoming purchases: platform architecture and social ecosystems play the key role.

7.2. Implications to managers Managerial implications

To e-commerce and quick-commerce managers, the message here is simple and straightforward: focus on UX and minimize checkout friction; invest in noticeable and genuine social proof (reviews, confirmed purchases); employ personalization and promotions as a tactic, but not a strategy to replace good design. The application of campaigns aimed at decision fatigue moments (late-night browsing, long form-filled checkout) can boost conversion, and the implementation of mild scarcity indicators can boost conversion, but these must be implemented conscientiously to prevent consumer anger.

7.3. Limitations and Future Research

Non-probability online sampling and self-report measures were employed in the study, which limits generalisability of the population and creates bias (recall, social desirability). Cross-sectional information is incapable of causation. The qualitative review was not systematic but purposive and aimed at interpretation and not exhaustive synthesis. Future research could also be longitudinal or experimental (i.e. cause and effect) (e.g. manipulate UI or checkout friction in A/B experiments). Further granularization (based on platform, product line, or cultural situation) would better indicate the instances where promotions or personalization perform better than design investments. Lastly, it would be possible to objectively verify self-reported impulses by combining behavioural (click/transaction) logs with survey measures.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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