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Article

# The Impact of Personalized Recommendations on Consumer Purchase Decisions: An Analysis of Douyin from the Perspective of Impulse Buying

Shiqi Xiao<sup>1,\*</sup>

<sup>1</sup> Cardiff and Vale College, Nantong, China

\* Correspondence: Shiqi Xiao, Cardiff and Vale College, Nantong, China

**Abstract:** This study investigates how Douyin's personalized recommendation system shapes consumer purchase decisions through the lens of impulse buying behavior. Rather than conceptualizing the recommendation algorithm as a deterministic force that directly dictates purchasing outcomes, this paper examines how recommendation feeds reorganize the conditions under which products are noticed, evaluated, and ultimately acted upon by consumers. Drawing on Rook's impulse-buying theory and the Stimulus-Organism-Response (S-O-R) framework, the study interprets recommended short videos, livestreams, scarcity messages, product cards, and payment links as platform stimuli that facilitate the transition of users from casual browsing to active purchase consideration. Within this digital environment, product relevance is not merely sought out by consumers through deliberate search; instead, it is repeatedly surfaced through entertainment-oriented content. The analysis demonstrates that recommendation-driven exposure can significantly heighten perceived product fit, emotional arousal, immersive engagement, platform trust, and fear of missing out, while simultaneously reducing the temporal and cognitive effort required to convert a transient desire into a completed transaction. Nevertheless, consumer agency remains a critical moderating factor. Budget constraints, self-regulatory capacity, price sensitivity, product category characteristics, platform trust, and normative judgments continue to influence whether an initial buying impulse translates into an actual purchase. Consequently, Douyin's recommendation system is best understood as an infrastructure that accelerates and amplifies impulse-oriented decision-making processes, rather than as a mechanism that exerts complete control over consumer behavior.

**Keywords:** personalized recommendation; consumer behavior; impulse buying; short-video e-commerce; social commerce

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## 1. Introduction

Short-video commerce has integrated product discovery with entertainment experiences. In traditional online shopping, consumers typically initiate the process with a recognized need, followed by information search, comparative evaluation of alternatives, and then purchase decision-making. On platforms such as Douyin, this linear sequence is significantly less rigid [1]. Product-related content may appear organically during consumption of tutorials, reviews, livestreams, lifestyle content, or general entertainment videos. Consequently, shopping opportunities are embedded within routine browsing behavior rather than restricted to dedicated search interfaces. This integration positions Douyin as a valuable context for investigating how algorithmic

recommendation reshapes the environment in which consumer purchase decisions emerge.

Although Douyin originated as a short-video social platform, it now integrates content distribution with comprehensive commerce functionalities—including product cards, creator-operated stores, livestream shopping rooms, promotional coupons, and Douyin Mall. The resulting ecosystem tightly couples content viewing and purchasing activities. A user may launch the application for leisure purposes yet encounter product showcases, creator endorsements, or time-sensitive livestream offers within the same feed [2]. In this model, the initiation point of the purchase journey shifts: products can be introduced algorithmically prior to the formation of an explicit shopping intention.

Personalized recommendation serves as the core mechanism enabling this integration [3]. The platform collects behavioral signals—including watch duration, likes, comments, saves, follows, search queries, clicks, and transaction history—to infer user attention preferences and engagement likelihood. These signals do not merely categorize users; they actively shape the subsequent flow of content and product exposure. As recommendations increasingly reflect prior interactions, product visibility becomes more frequent, more tailored, and more deeply embedded within emotionally resonant narratives.

This study examines how Douyin's personalized recommendation system influences consumer purchase decisions through impulse-driven pathways. The inquiry is significant because many transactions in short-video commerce originate during moments of incidental attention. Product presentations, peer commentary, livestream persuasion, urgency cues, and streamlined checkout mechanisms collectively foster a perception that immediate purchase is appropriate—even when no pre-existing demand was articulated [4].

Methodologically, this paper employs a qualitative case analysis approach. It synthesizes insights from research on impulse buying, recommendation systems, and short-video commerce, using Douyin as an empirical setting to explore the linkage between personalization algorithms and purchase behavior [5]. Rather than isolating the causal impact of a single variable, the analysis integrates theoretical frameworks with platform-specific operational logic to elucidate how recommendation systems reconfigure the decision-making environment. The central proposition is that Douyin enhances product relevance through heightened visibility, emotional resonance, repeated exposure, and frictionless transaction design. However, this influence remains conditional—not deterministic—as consumers continue to assess affordability, functional utility, trustworthiness, and contextual appropriateness before or after acting on an impulsive prompt.

## **2. Literature Review and Theoretical Framework**

### *2.1. Impulse Buying*

For the purposes of this study, impulse buying cannot be reduced to the simple absence of a shopping plan. Douyin users often encounter products before they consciously define a need, so the issue is not only whether the purchase was planned but also how the urge to buy was generated [6]. Impulse buying has been characterized as a sudden and intense desire to purchase, accompanied by pleasure, physiological arousal, and limited reflection on later consequences. This emphasis on affect and immediacy is especially relevant to short-video commerce, where product messages are delivered through highly visual and interactive content.

Subsequent work highlights that an impulse becomes a purchase only when consumers judge the behavior to be acceptable or justifiable [7]. This perspective helps avoid a technologically deterministic interpretation of Douyin. Algorithmic exposure may heighten desire, but consumers still consider price, self-image, platform trust, and personal spending norms. Recommendation therefore makes buying easier to imagine and execute, without displacing the consumer's evaluative role.

Further research indicates that impulse buying is shaped by affective, situational, and environmental conditions. Enjoyment, positive mood, browsing duration, available financial resources, and marketing cues can all increase the likelihood that a temporary desire will be acted upon. In digital settings, the interface itself becomes part of the buying situation: product information, reviews, interactivity, convenience, and platform design influence how quickly consumers move from interest to action. These findings are particularly relevant to Douyin, where entertainment, recommendation, and transaction are integrated within a single interface [8].

### *2.2. Personalized Recommendation and Short-Video E-Commerce*

In this article, personalized recommendation refers to a platform's use of behavioral traces and algorithmic ranking to select content or products for particular users. In e-commerce, this mechanism enhances discovery efficiency by reducing the effort required to locate relevant items [9]. However, it may also expose users to appealing goods prior to entering a deliberate shopping mode. Consequently, the recommendation feed serves dual functions: as an information filter and as a demand-stimulation instrument.

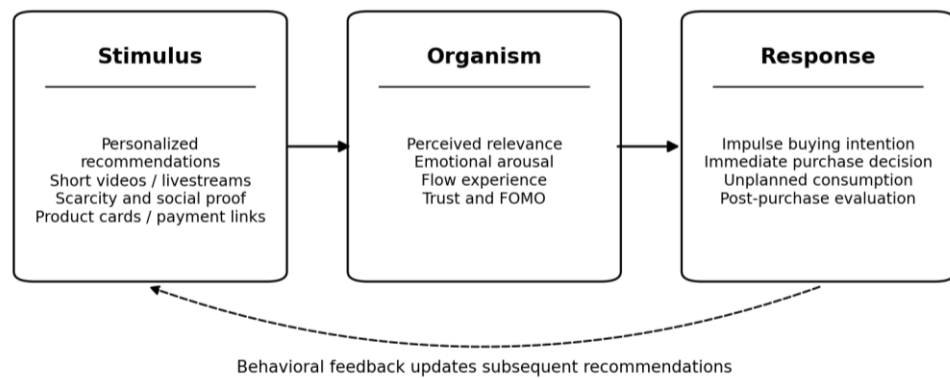
Short-video e-commerce also transforms how product information is conveyed. On search-based shopping platforms, users typically compare brands, specifications, prices, and reviews after initiating a query. In contrast, on short-video platforms, products are frequently introduced through usage scenarios, creator storytelling, live-streamed product showcases, and viewer interactions. A product is not presented solely as an object with discrete attributes; rather, it is embedded within a lifestyle context, framed as a solution to everyday challenges or aligned with emerging social patterns. This shifts evaluation toward experiential and emotionally resonant judgments [10].

Research on short-video advertising, recommendation agents, and live-streamed commerce indicates that entertainment value, informativeness, interactivity, perceived scarcity, and host credibility significantly influence user trust, affective response, perceived usefulness, and purchase intention [6]. Accordingly, the recommendation system on such platforms should be understood as an integral component of a broader persuasive architecture—one that links users' prior viewing behavior with content that is visually compelling, socially endorsed, and directly convertible into purchases.

### *2.3. The S-O-R Model*

The S-O-R model provides a useful organizing framework that links platform features with psychological states and behavioral responses [6]. In its original formulation, environmental stimuli shape internal affective and cognitive reactions, which subsequently influence action. Consumer behavior research has extended this logic to online contexts, where interface design, promotional cues, product information, and social interaction serve as stimuli, while trust, pleasure, perceived value, arousal, and flow function as internal mediators.

In the Douyin context, stimuli include recommended product videos, livestream interactions, influencer endorsements, social proof, scarcity messages, and embedded shopping links [3]. The organism represents the user's internal response—such as perceived fit, emotional arousal, immersion, trust, fear of missing out, and reduced willingness to delay decisions. The response encompasses impulse buying intention, immediate purchase, unplanned consumption, or subsequent evaluation. This framework clarifies that recommendation influences impulse buying not by eliminating choice, but by altering the psychological conditions that generate impulsive behavior (As shown in Figure 1).



**Figure 1.** Conceptual S-O-R Model of Recommendation-Driven Impulse Buying on Douyin

Note. The model adapts the S-O-R framework to Douyin's short-video e-commerce environment. Behavioral feedback refers to how viewing, interaction, and purchase signals can update later recommendations.

### 3. Douyin's Personalized Recommendation and the Changing Purchase Decision Process

The market context in Figure 2 highlights the significance of recommendation-driven shopping. Between 2020 and 2025, livestream e-commerce transaction volume expanded substantially, increasing from RMB 1.285 trillion to RMB 6.9461 trillion. In contrast, national online retail sales grew more gradually, rising from RMB 11.7601 trillion to RMB 15.9722 trillion over the same period [9]. This disparity does not establish a causal link between personalized recommendation and impulse buying. However, it reflects a structural shift in digital consumption toward environments—such as livestreams and content platforms—where recommendation, real-time interaction, and seamless payment are deeply integrated.



**Figure 2.** Comparison of Transaction Volumes between Livestreaming E-Commerce and Online Retail (Including Livestream E-Commerce)

#### 3.1. From Active Search to Algorithmic Exposure

The first way in which personalized recommendation influences consumer purchase decisions is by transforming how product information is presented. In traditional decision-making, consumers typically recognize a need before actively seeking information. For instance, a consumer intending to purchase skincare products may search across brands, compare ingredients and prices, and then make a purchasing decision. Within the Douyin ecosystem, this sequence is frequently inverted: users often

begin without explicit shopping intent, engaging instead with beauty tutorials, lifestyle content, food videos, or livestreams. The platform leverages behavioral data to infer user interests and deliver corresponding product-related content.

Consequently, product exposure becomes algorithmically driven rather than user-initiated [11]. A user regularly viewing fitness-related content may encounter recommendations for sportswear, nutritional supplements, or exercise equipment; similarly, frequent viewers of home organization content may be exposed to storage solutions or cleaning tools. Here, the recommendation system operates prior to the articulation of a clear consumer need—not merely fulfilling existing demand, but potentially stimulating latent demand through repeated, targeted placement of relevant products within the user’s attentional field.

### *3.2. From Product Information to Content-Based Evaluation*

The second shift involves how consumers assess products. On conventional e-commerce platforms, assessment relies primarily on product descriptions, pricing, sales volume, and customer reviews. In contrast, on short-video platforms, evaluation is integrated into video content and live broadcasts. Consumers observe products in real-world use, hear explanations from content creators, witness demonstrable outcomes, and engage with viewer comments [1]. This renders the evaluation process more immediate and experiential.

For instance, beauty items are frequently showcased through makeup application demonstrations and visible aesthetic transformations; household goods appear in contexts of cleaning efficiency or lifestyle enhancement; food products employ high-resolution visuals and auditory cues to evoke sensory appeal. Such presentations go beyond factual disclosure—they construct an imagined usage scenario, enabling consumers to mentally project themselves benefiting from the product. Consequently, evaluation shifts away from systematic comparison toward affective engagement with a compelling consumption narrative.

Algorithmic personalization reinforces this dynamic by increasing the likelihood that users encounter content aligned with their preferences. When recommended material resonates with individual interests, the featured product appears more contextually relevant and less incidental. Users may perceive such recommendations as personally resonant, potentially lowering decisional uncertainty and strengthening purchase motivation [12]. Thus, personalization does not supplant evaluation but reshapes the informational and emotional foundations upon which it rests.

### *3.3. From Delayed Comparison to Instant Conversion*

The third change is the shortening of the decision-making chain. In traditional e-commerce, consumers typically progress from search to comparison and then to purchase, often with a time gap between initial product exposure and final decision. On Douyin, the distance between interest and action is significantly reduced because product links, coupons, shopping carts, and payment functions are seamlessly integrated into the content interface. Users can click a product card during a video or livestream, view essential information, apply a discount, and complete an order without exiting the platform environment.

This low-friction path holds particular significance for impulse-driven purchasing behavior. Buying impulses are inherently transient; delays caused by navigating away from the platform, reinitiating searches, comparing multiple alternatives, or executing complex payment procedures may substantially diminish such impulses. By streamlining the transition from content exposure to order placement, Douyin enhances responsiveness to momentary motivation. Consequently, recommendation systems influence not only content visibility but also the immediacy and ease with which users translate affective responses into concrete actions [3].

This shift reflects a reconceptualized decision path. The conventional model comprises need recognition, information search, evaluation, and purchase. In contrast, the Douyin path tends to follow algorithmic exposure, emotional attraction, perceived

relevance, urgency, and immediate purchase. While rational deliberation remains possible within this framework, its temporal window is compressed, thereby increasing the likelihood of impulse-based decisions.

### *3.4. Feedback Loop and Repeated Exposure*

Douyin's recommendation system operates as a feedback loop: user interactions—including watching, liking, saving, commenting on, sharing, searching for, or purchasing product-related content—prompt the platform to prioritize similar content in subsequent recommendations. This repeated exposure enhances product familiarity and reinforces perceived relevance. Over time, even consumers with initially weak interest in a product category may develop greater purchase willingness as the category consistently appears within engaging, contextually appealing content.

For users, such repeated recommendations often feel intuitive, aligning with prior behavioral patterns. Yet this mechanism can also subtly influence preference formation. For example, after viewing multiple videos about a specific cosmetic product, users tend to encounter increasingly diverse related content—such as comparative reviews, livestream promotions, and peer testimonials—within the same category. Cumulative exposure heightens familiarity, lowers perceived risk, and sustains attention until a promotional incentive or emotional cue triggers conversion.

Consequently, personalized recommendation actively intervenes across multiple stages of the purchase decision process: it activates latent needs, filters information, shapes evaluation criteria, accelerates conversion, and reinforces interest through iterative feedback. Collectively, these functions establish the structural foundation for impulse buying behavior on Douyin.

## **4. The Formation Mechanism of Impulse Buying on Douyin**

Impulse buying on Douyin arises from the interplay of algorithmic recommendation, content stimulation, emotional arousal, social interaction, scarcity cues, and transaction convenience. Grounded in the S-O-R framework, personalized recommendations serve as the stimulus, users' psychological responses constitute the organism, and impulse buying manifests as the behavioral response [13]. This section examines how algorithmic recommendations are translated into purchase impulses through these core mechanisms.

### *4.1. Perceived Relevance: "This Product Is Suitable for Me"*

Perceived relevance is one of the most direct psychological effects of personalized recommendation. When consumers repeatedly receive content aligned with their interests, they are more likely to perceive the product as useful, suitable, or worthy of consideration. This perception intensifies when recommendations are linked to recent browsing behavior. For instance, if a user has recently viewed multiple videos on skincare for sensitive skin, a recommendation for a product review of a gentle cleanser may appear highly relevant. The consumer may interpret the recommendation as addressing a personal need—even one not yet explicitly articulated.

Perceived relevance also reduces search effort. When platforms present products that appear well-matched to user preferences, consumers may feel less need to conduct extensive comparisons. They may rely on the recommendation as reflective of their own inclinations or the collective experience of similar users [14]. Consequently, personalized recommendation can support impulsive purchasing decisions by reinforcing the impression of personal appropriateness rather than randomness.

### *4.2. Emotional Arousal: Short Videos and Livestreams Stimulate Desire*

Emotional arousal serves as a psychological precursor to many impulsive purchases. Douyin's short-video format is particularly effective, leveraging visual imagery, musical accompaniment, rhythmic editing, narrative structure, and product showcases to generate immediate sensory appeal. Unlike text-based descriptions, short videos can convey a product's functional or aesthetic effect within seconds: a makeup item may be presented through a visible enhancement of appearance; a cleaning solution through a clear visual

contrast between pre- and post-use states; a food item through vivid color rendering, auditory cues, and tightly framed shots. These techniques elicit positive affective responses—including excitement, satisfaction, and attraction—prior to deliberate cognitive evaluation.

Livestreams intensify emotional arousal via real-time engagement. Hosts respond to viewer inquiries, present products in use, highlight value propositions, and employ persuasive communication to foster an energetic shopping environment. Real-time commentary, audience interactions, dynamic sales metrics, and user feedback collectively reinforce a sense of shared participation [15]. Consumers are not merely observing a product but engaging in a socially embedded consumption experience, which lowers decisional hesitation and heightens the motivation to purchase alongside others.

Impulse buying is frequently associated with hedonic response and internal ambivalence. Douyin's content ecosystem supports this dynamic: users may experience heightened attraction to a product and its implied lifestyle benefits while lacking sufficient time or cognitive resources to weigh longer-term implications. In this context, emotional arousal functions as a key mediator linking personalized content delivery to spontaneous purchasing behavior.

#### *4.3. Flow Experience and Reduced Rational Evaluation*

The endless feed design of Douyin facilitates impulse buying by inducing a flow state [16]. Flow denotes a psychological condition in which users become fully absorbed in an activity, often accompanied by diminished awareness of time and external objectives. On Douyin, users can scroll seamlessly from one video to the next with minimal cognitive effort. The platform's recommendation algorithm continuously delivers content aligned with individual preferences, thereby sustaining extended engagement and emotional resonance.

During immersion in this flow state, users tend to engage less in systematic product evaluation. They are less likely to conduct cross-platform price comparisons, assess actual need for the item, or scrutinize critical user feedback. Instead, attention is directed by the video content, host presentation, comment interactions, and the immediacy of the integrated purchase interface. This does not imply a complete suspension of rational judgment; rather, the platform environment lowers cognitive friction, reducing opportunities for reflective deliberation.

Flow is particularly consequential in short-video commerce, as users typically enter the platform for entertainment rather than transactional intent. Prolonged platform retention increases exposure frequency and intensity to commercial stimuli. Personalized recommendation thus enhances both the relevance and the cumulative impact of product visibility, significantly raising the likelihood of unplanned purchases [17].

#### *4.4. Scarcity, FOMO, and Social Proof*

Scarcity cues and fear of missing out (FOMO) are key mechanisms that convert intention to purchase into immediate purchase behavior. In Douyin livestreams and product videos, consumers frequently encounter phrases such as 'limited-time discount,' 'limited stock,' 'last round of benefits,' or 'price will return to normal soon.' These messages generate time pressure. When consumers perceive that an opportunity may vanish rapidly, they tend to reduce comparative evaluation and act promptly.

Social proof further amplifies this effect. Metrics such as likes, comments, sales volume, influencer endorsements, and positive reviews signal broad appeal and perceived reliability. Observing widespread purchase activity or favorable feedback lowers perceived risk and enhances perceived social acceptability [9]. This influence is particularly pronounced in livestream environments, where host language and real-time viewer interactions reinforce the impression that purchasing is both timely and widely adopted.

The interaction of scarcity and social proof exerts a strong influence on decision-making. Scarcity prompts urgency, while social proof validates the appropriateness of acting swiftly. Together, these cues diminish deliberative processing and heighten the

probability of impulsive purchase. Personalized recommendation enhances their impact by embedding such cues within product suggestions already aligned with user preferences.

#### *4.5. Low-Friction Transactions: Turning Impulse into Purchase*

Even when consumers experience strong impulse, purchase completion may be hindered by procedural complexity. Douyin mitigates this barrier by seamlessly integrating content consumption with commerce functionality. Product cards, discount coupons, shopping carts, and payment interfaces are embedded directly within videos and livestreams, enabling users to transition from initial interest to order submission rapidly [16].

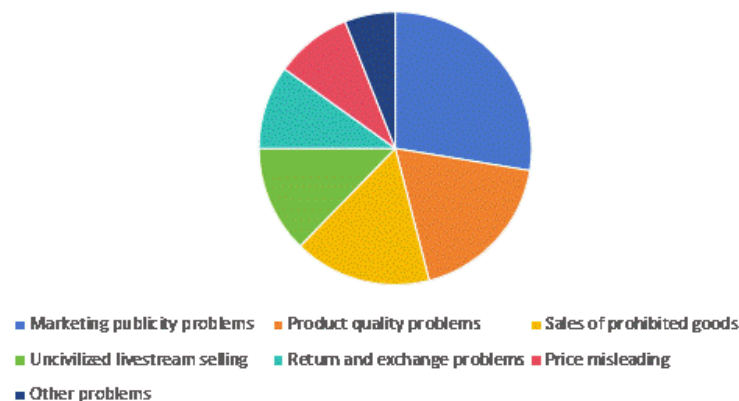
Low-friction transaction design is critical because impulse is inherently transient. Delays caused by platform switching or extended navigation increase the likelihood of impulse dissipation. Douyin's integrated architecture minimizes the temporal gap between emotional activation and behavioral response while limiting opportunities for post-impulse deliberation. Consequently, operational convenience functions not merely as a usability enhancement but as an integral component of the psychological pathway converting impulse into actual purchase behavior [8].

In summary, impulse-driven purchasing on Douyin operates through a cohesive conversion sequence: personalized recommendation enhances product relevance and exposure frequency; short-video and livestream formats stimulate affective engagement; flow-inducing interface design attenuates rational evaluation; scarcity cues and social validation foster urgency and credibility; and streamlined transaction processes convert momentary desire into immediate action. This integrated mechanism accounts for Douyin's capacity to shape purchase decisions even in the absence of premeditated shopping intent.

### **5. Critical Discussion: Consumer Agency and Platform Responsibility**

Although personalized recommendation can promote shopping convenience and improve product matching, it also raises important concerns. The first concern is overconsumption. Because Douyin repeatedly presents attractive and relevant product content, consumers may purchase items that do not align with their actual needs. Low-priced small goods, visually appealing products, and emotion-driven offerings are especially likely to trigger thoughts such as 'it is not expensive,' 'it may be useful,' or 'I should buy it before the discount ends'. Over time, repeated impulse purchases can lead to unnecessary spending and post-purchase regret.

The second concern is diminished capacity for rational evaluation. Douyin's content environment encourages rapid attention capture and immediate response. Short videos and livestreams are vivid and persuasive, while limited-time promotions encourage swift decision-making. As a result, consumers may not fully compare product quality, price, after-sales service, or alternative options, and their decisions may rely more on emotional response and time pressure than on deliberate assessment. This pattern is reflected in the 2024 Livestream Commerce Consumer Protection Public Opinion Analysis Report [6]. As Figure 3 shows, consumer protection issues in livestream commerce are primarily associated with marketing practices, product quality, sales compliance, returns and exchanges, and pricing transparency. This indicates that the risks of impulsive purchasing extend beyond individual decision-making and are closely linked to how platforms, streamers, and merchants present products, generate urgency, and manage post-transaction support.



**Figure 3.** Distribution of Consumer Rights-Protection Issues in Livestream Commerce (Beijing News, 2025)

The third concern is algorithmic influence on consumer decision-making. Consumers may perceive their choices as freely made, yet those choices are significantly shaped by the content repeatedly surfaced by platform algorithms. Personalized recommendation systems can narrow attention by reinforcing specific product categories or lifestyle aspirations over time. This does not negate consumer agency, but it does indicate that the decision-making environment is actively structured by platform design. Therefore, enhancing consumer awareness of algorithmic mechanisms is essential [1]. Users should understand that recommended items do not necessarily reflect genuine needs, optimal quality, or most competitive pricing.

Privacy considerations also arise. Personalized recommendation relies on the collection and analysis of user behavior data, and governance of algorithmic recommendation has become an important focus of regulatory oversight in China. While such data supports improved recommendation accuracy, it also necessitates careful attention to data collection scope, informed user consent, and the distinction between personalization and undue influence. Platforms should provide transparent information regarding recommendation logic, advertising identification, sponsored content, and data usage practices. Consumers should also have accessible, intuitive tools to adjust personalized recommendation settings and reduce repetitive exposure to similar content.

Platform responsibility is therefore essential. Douyin and similar platforms should balance commercial efficiency with robust consumer safeguards [9]. They should strengthen transparency in advertising disclosures, implement rigorous product quality verification, conduct proactive livestream monitoring, streamline complaint resolution processes, and reinforce after-sales protections. Merchants and influencers should avoid exaggerated claims, artificially induced scarcity, and language that unduly pressures purchasing decisions. A sustainable short-video e-commerce ecosystem depends not only on transaction volume but also on enduring trust among consumers, merchants, influencers, and platforms.

## 6. Conclusion

This paper has examined Douyin's personalized recommendation system as part of the decision environment in which short-video commerce takes place. The analysis suggests that the algorithm does not simply determine what consumers buy. Its more important role is to reorganize the moments in which products are encountered, interpreted, and converted into purchases.

Unlike traditional e-commerce, where search and comparison usually precede purchase, Douyin makes product exposure part of entertainment browsing. A user may first encounter a product as a narrative, a live demonstration, a livestream offer, or a peer-endorsed trend. When this exposure is personalized, repeated, emotionally engaging, and

connected to a simple payment path, latent interest can more easily develop into an immediate buying impulse.

The effect remains conditional. Consumers still assess affordability, usefulness, trustworthiness, product type, and personal spending norms, even if this assessment is sometimes compressed or postponed. For this reason, personalized recommendation should be understood as an amplifier of impulse-oriented decision making rather than a complete substitute for consumer judgement.

The findings also point to a governance issue. Recommendation-driven commerce creates value by improving matching and reducing transaction frictions, but the same system can encourage overconsumption, weaken comparative evaluation, and intensify privacy concerns around behavioral data. A healthier Douyin commerce ecosystem therefore depends on three forms of responsibility: users' awareness of algorithmic persuasion, platforms' transparency and after-sales protection, and merchants' commitment to accurate, non-manipulative product communication.

## References

1. M. Boeker and A. Urman, "An empirical investigation of personalization factors on TikTok," in *Proceedings of the ACM Web Conference 2022*, 2022, pp. 2298–2309.
2. S. E. Beatty and M. E. Ferrell, "Impulse buying: Modeling its precursors," *Journal of Retailing*, vol. 74, no. 2, pp. 169–191, 1998.
3. G. R. Iyer, M. Blut, S. H. Xiao, and D. Grewal, "Impulse buying: A meta-analytic review," *Journal of the Academy of Marketing Science*, vol. 48, no. 3, pp. 384–404, 2020.
4. T. K. Chan, C. M. Cheung, and Z. W. Lee, "The state of online impulse-buying research: A literature analysis," *Information & Management*, vol. 54, no. 2, pp. 204–217, 2017.
5. A. Mehrabian and J. A. Russell, *An Approach to Environmental Psychology*. Cambridge, MA: MIT Press, 1974.
6. D. W. Rook, "The buying impulse," *Journal of Consumer Research*, pp. 189–199, 1987.
7. D. W. Rook and R. J. Fisher, "Normative influences on impulsive buying behavior," *Journal of Consumer Research*, vol. 22, no. 3, pp. 305–313, 1995.
8. H. Zhu, Z. Yang, C. X. Ou, H. Liu, and R. M. Davison, "Investigating the impacts of recommendation agents on impulsive purchase behaviour," *arXiv preprint arXiv:1606.01349*, 2016.
9. M. A. Raji, H. B. Olodo, T. T. Oke, W. A. Addy, O. C. Ofodile, and A. T. Oyewole, "E-commerce and consumer behavior: A review of AI-powered personalization and market trends," *GSC Advanced Research and Reviews*, vol. 18, no. 3, pp. 066–077, 2024.
10. S. Y. Ho, D. Bodoff, and K. Y. Tam, "Timing of adaptive web personalization and its effects on online consumer behavior," *Information Systems Research*, vol. 22, no. 3, pp. 660–679, 2011.
11. V. Pleskach, O. S. Bulgakova, V. V. Zosimov, E. Vashchilina, and I. Tumasoniene, "An E-Commerce Recommendation Systems Based on Analysis of Consumer Behavior Models," in *IntSol*, Sep. 2023, pp. 210–221.
12. H. Gao, L. Kuang, Y. Yin, B. Guo, and K. Dou, "Mining consuming behaviors with temporal evolution for personalized recommendation in mobile marketing apps," *Mobile Networks and Applications*, vol. 25, no. 4, pp. 1233–1248, 2020.
13. J. Jeong, D. Kim, X. Li, Q. Li, I. Choi, and J. Kim, "An empirical investigation of personalized recommendation and reward effect on customer behavior: a stimulus–organism–response (SOR) model perspective," *Sustainability*, vol. 14, no. 22, p. 15369, 2022.
14. L. Zhao, B. Fu, and S. Bai, "Understanding the influence of personalized recommendation on purchase intentions from a self-determination perspective: contingent upon product categories," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 20, no. 1, p. 32, 2025.
15. Q. Yan, L. Zhang, Y. Li, S. Wu, T. Sun, L. Wang, and H. Chen, "Effects of product portfolios and recommendation timing in the efficiency of personalized recommendation," *Journal of Consumer Behaviour*, vol. 15, no. 6, pp. 516–526, 2016.
16. V. Nesterov, "Analyzing user behavior patterns for personalized recommender systems in e-commerce: A literature review," *\*Automation of Technological & Business Processes/Avtomatizaciâ Tehnologiceskih i Biznes-Processov\**, vol. 16, no. 3, 2024.
17. J. Huang, "Personalized recommendation method for cultural creative products in tourism cities based on user profiles," *Procedia Computer Science*, vol. 243, pp. 1133–1142, 2024.

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