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IMPACT OF TIKTOT ALGORITHMS AND SHORT-FORM VIDEOS ON CONSUMER PURCHASING DECISION ON ONLINE SHOPPING

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ABSTRACT

This study examined how TikTok's short videos and recommendation algorithm affect people's decisions to buy products online. The main goals were to find out whether TikTok videos influence what people buy, and which parts of TikTok's algorithm have the most impact on buying decisions. A structured questionnaire was given to 200 TikTok users, and the responses were analyzed using basic statistics and a regression test. The results showed that many users do discover products on TikTok and are sometimes influenced to buy them. However, this influence is not very strong or consistent across everyone. The analysis found that only 6% of the changes in buying preference could be explained by TikTok videos and algorithm features. Trust in product reviews came close to having a strong impact, while things like influencer videos and the "For You Page" had a small, positive effect. Conclusively, TikTok does help promote products, but it works best when the content is trustworthy and engaging. The study suggests that businesses should create more relatable content and take advantage of TikTok's algorithm to reach more people. Future studies should look deeper into age groups, user habits, and personal buying behaviors.

Key-words: TikTok Algorithm, Short-Form Videos, Consumer Purchasing Decision, Content Visibility.

INTRODUCTION

The emergence of short-form video as a dominant social media format has fundamentally altered how consumers discover, evaluate, and purchase products. TikTok, with over one billion monthly active users as of 2023, has established itself as the preeminent platform in this space, creating what industry analysts have termed the "TikTok effect" on retail sales (Chen & Wang, 2023). This phenomenon is characterized by products rapidly gaining popularity and selling out after being featured in viral TikTok videos, often with the hashtag #TikTokMadeMeBuyIt amassing billions of views (Jacobsen & Barnes, 2022). Short-form videos, typically ranging from 15 to 60 seconds, have become increasingly popular due to their ability to capture attention quickly and maintain viewer engagement (Firework, 2025). Platforms like TikTok, Instagram Reels, and YouTube Shorts have capitalized on this format, offering higher engagement rates and improved reach compared to long-form content (HubSpot, cited in Firework, 2025).

TikTok's influence on consumer behavior differs from previous social media platforms in several critical ways. First, its algorithmic content distribution system, known as the "For You Page" (FYP), employs advanced machine learning to deliver highly personalized content streams without requiring users to establish extensive following networks (Zhang et al., 2024). Second, the platform's strict limitation to short-form videos creates compressed persuasion cycles that may bypass traditional

cognitive evaluation processes (Liu & Yang, 2022). Third, TikTok has rapidly evolved from entertainment platform to shopping destination through features like TikTok Shop, product links, and livestream shopping events that compress the path from discovery to purchase (Greenwood & Dwivedi, 2023).

The interplay between TikTok's algorithms and short-form videos has profound implications for consumer purchasing decisions. Personalized recommendations play a crucial role in shaping users' purchasing desires and actual buying behavior (Dean & Francis Press, 2024). Moreover, the immersive nature of short-form videos can stimulate consumers' perceptions of value and trust, leading to increased impulse purchases (Li & Hua, 2021; Cai et al., 2020). This study aims to explore how TikTok's algorithms and short-form videos interact to influence consumer behavior and purchasing decisions. Short-form videos have proven effective in capturing attention and maintaining viewer engagement, making them an essential component of social media marketing strategies (Firework, 2025). The interactive nature of these videos fosters a sense of community among users, encouraging participation and loyalty (MacGraffic, 2024). The psychological and social dynamics on TikTok, such as the parasocial effect, can drive purchasing decisions by creating emotional attachments between users and creators (BBC, 2023). Understanding the impact of TikTok's algorithms and short-form videos on consumer purchasing decisions is crucial for businesses seeking to leverage these trends effectively. By examining how these elements interact, this study aims to provide insights into optimizing marketing strategies and enhancing consumer engagement on TikTok.

STATEMENT OF PROBLEM

Despite the growing influence of TikTok's algorithms and short-form videos on consumer behavior, there remains a limited understanding of how these elements interact to impact purchasing decisions. Specifically, regarding the extent to which TikTok's algorithms influence the visibility and engagement of consumer-related content, the psychological factors driving purchasing behavior on the platform, and the ethical implications of using these technologies for marketing and advertising (Molina et al., 2022; Dean & Francis Press, 2024). Looking into these gaps is crucial for businesses seeking to leverage TikTok effectively and for consumers navigating the platform's persuasive influence (Kang et al., 2022; BBC, 2023).

This study addresses the critical need for a nuanced understanding of how TikTok's algorithms and short-form videos interact to shape consumer purchasing decisions. By examining the issues of algorithmic transparency, cognitive processing, ethical considerations, authenticity, and long-term cultural impact, this research aims to provide valuable insights for businesses seeking to engage with consumers on TikTok responsibly and effectively, as well as for consumers navigating the platform's persuasive landscape. This study seeks to address the aforementioned problems by providing a comprehensive analysis of the relationship between TikTok's algorithms, short-form videos, and consumer purchasing decisions. By employing a mixed-methods approach that combines quantitative data analysis with qualitative insights, this research further aims to shed light on the complex dynamics at play and to inform strategies for businesses, consumers, and policymakers navigating the ever-evolving landscape of social media marketing.

Specific Objectives of the Study

1. To evaluate the impact of short-form videos of TikTok on the consumer purchasing decision.
2. To identify the key factors within TikTok's algorithm that most significantly affects consumer purchasing behavior.

Research Questions

1. How do short-form videos impact consumer purchasing decisions?

2. What algorithmic factors on TikTok contribute to the visibility of content?

Research Hypotheses

1. H1: Short-form videos on TikTok does not have a greater impact on consumer purchasing decision.
2. H2: The use of trending sounds and hashtags in TikTok videos does not positively correlate with higher user engagement.

Significance of the Study

This research holds significance for several key stakeholders, including businesses, consumers, policymakers, and the academic community.

For businesses, this study provides actionable insights into the effectiveness of TikTok as a marketing platform. By understanding how TikTok's algorithms and short-form videos influence consumer purchasing decisions, businesses can develop more targeted and impactful marketing strategies (Dean & Francis Press, 2024). The research will help businesses optimize their content creation, influencer collaborations, and advertising campaigns to maximize reach, engagement, and ultimately, sales conversions. Moreover, this study can inform resource allocation decisions, enabling businesses to prioritize their marketing investments in areas that yield the highest return.

For consumers, this research promotes greater awareness of the persuasive techniques employed on TikTok and the potential influence of algorithms on their purchasing decisions. By understanding how TikTok's algorithms curate content and target advertisements, consumers can make more informed choices and resist manipulative marketing tactics (Molina et al., 2022). This study will empower consumers to navigate the platform more critically and protect themselves from potential exploitation.

For policymakers, this research highlights the ethical considerations surrounding algorithmic marketing on social media platforms like TikTok. The findings can inform the development of regulations and guidelines aimed at promoting transparency, fairness, and consumer protection in the digital advertising ecosystem (Chen et al., 2023). This study can also contribute to on-going debates about data privacy, algorithmic bias, and the responsibility of social media platforms to safeguard user well-being.

For the academic community, this research contributes to the growing body of knowledge on social media marketing, consumer behavior, and the impact of algorithms on society. It provides a framework for understanding the complex interplay between technology, psychology, and marketing in the context of TikTok. The findings can serve as a foundation for future research exploring related topics, such as the long-term effects of short-form video consumption on consumer attitudes and the role of social media in shaping consumer culture. This study also contributes to the theoretical understanding of how algorithms influence consumer decision-making processes and the ethical implications of these influences.

REVIEW OF RELATED LITERATURE

This study is guided by the uses and gratifications theory, which posits that individuals actively seek out media to satisfy specific needs and desires (Katz et al., 1974). Users turn to TikTok for entertainment, information, social interaction, and self-expression (Lin, 2023). The platform's algorithms and short-form videos are crucial in meeting these needs by delivering personalized content that aligns with user motivations. Social learning theory further explains how content engagement with TikTok influences user behavior through influencers who share similar lifestyle patterns with their followers (Bandura, 1977).

TikTok's Algorithm

TikTok's algorithm is a hybrid model that combines collaborative filtering and content-based techniques to deliver personalized content (ByteDance, 2020). It considers user interactions such as likes, comments, shares, and re-watches to assess a video's engagement level (Macarthy et al., 2021; Liu et al., 2023). These interactions signal the relevance and appeal of content to similar users (Sundar, 2020). Video information, including captions, sounds, and hashtags, is crucial for categorizing content and matching it with relevant users (Kibria et al., 2018). Device and account settings, such as language preference and device type, also influence content recommendations (Watson et al., 2019). Despite its effectiveness, the algorithm lacks transparency, leading to concerns about privacy and bias (Molina et al., 2022). Users often perceive biases in content recommendations, which can limit exposure to diverse content (Chen et al., 2023). Opaque algorithmic decision-making processes can create filter bubbles, reinforcing existing viewpoints and limiting exposure to alternative perspectives (Pariser, 2011).

TikTok's algorithm has revolutionized how users interact with content by offering a hyper-personalized experience through its For You Page (FYP). The algorithm tailors content based on user interactions, such as likes, shares, and video completion rates, as well as video metadata like captions, hashtags, and sounds (HubSpot, 2023; Hootsuite, 2024). This recommendation system operates on an exploration/exploitation trade-off, where 30–50% of the videos shown exploit users' existing interests, while the rest expose them to new content (Fast Company, 2025). Such a mechanism ensures sustained engagement while simultaneously broadening user preferences.

Recent studies have highlighted how TikTok's algorithm creates a unique feedback loop. Users' interactions shape the algorithm's recommendations, which in turn influence their behavior and preferences. For instance, videos watched to completion are more likely to be recommended to other users, emphasizing the importance of engaging content (HubSpot, 2023). Researchers have also noted that the algorithm treats users differently based on their engagement patterns, further personalizing their experience (Fast Company, 2025). This level of customization has made TikTok a powerful tool for marketers aiming to target specific consumer segments.

Social Media and Consumer Behavior

The relationship between social media and consumer behavior has evolved significantly over the past decade. Early research focused primarily on explicit recommendation systems and peer influence networks (Hajli, 2014), with findings suggesting that social connections serve as trust proxies that reduce perceived purchase risk (Wang et al., 2012). More recent studies have examined how different platform affordances create unique influence pathways, with visual platforms demonstrating higher conversion potential than text-based alternatives (McQuarrie et al., 2013). Cheung et al. (2019) identified three primary mechanisms through which social media influences consumer decisions: informational social influence (adoption of information from trusted sources), normative social influence (conformity to perceived group norms), and identity-based influence (purchases that reinforce self-concept). These mechanisms operate across platforms but are expressed differently based on platform-specific features and social dynamics.

The evolution toward algorithmic content distribution has further altered these dynamics. Whereas earlier social media platforms relied primarily on user-selected connections, creating what Bakshy et al. (2015) called "echo chambers" of like-minded consumers, algorithm-driven platforms like TikTok introduce content based on predicted relevance rather than explicit social connection (Su et al., 2020). This shift has significant implications for how products reach potential consumers and the credibility attributed to recommendations.

Short-Form Video Format

Short-form videos have become a staple in social media due to their ability to capture attention quickly and maintain viewer engagement (Firework, 2025). They are more likely to be shared and evoke strong emotions, making them an effective tool for marketing and storytelling (HubSpot, cited in Firework, 2025). The brevity of these videos keeps viewers hooked, leading to higher engagement rates compared to long-form content (Firework, 2025).

Platforms prioritize short-form videos in their algorithms, increasing their visibility and reach (MacGraffic, 2024). This format encourages interactive features such as duets and challenges, fostering a sense of community among users (MacGraffic, 2024).

Consumer Purchasing Decisions

TikTok's algorithms and short-form videos significantly influence consumer purchasing decisions. Personalized recommendations play a crucial role in shaping users' purchasing desires and actual buying behavior (Dean & Francis Press, 2024). The platform's ability to deliver content aligned with user interests enhances brand awareness and purchase intentions. Moreover, the psychological relationship between users and creators on TikTok, often facilitated by the Para social effect, can drive purchasing decisions. Users may perceive endorsements as organic recommendations, especially in the rapid and immersive environment of short-form videos (BBC, 2023).

Algorithmic Content Curation and consumer purchasing decision

Algorithmic recommendation systems have become fundamental to digital platform experiences, with researchers increasingly focusing on their persuasive capabilities and psychological impacts. Algorithms function as "invisible curators" that shape information exposure while remaining largely unnoticed by users (Eslami et al., 2015). This invisibility creates what Cotter (2019), describes as "algorithmic hegemony" - the unquestioned acceptance of algorithmically-curated reality as objective truth.

In consumer contexts, an algorithmic recommendation creates self-reinforcing feedback loops. Zhao et al. (2019) demonstrated that repeated exposure to similar product categories increases both purchase intent and perception of widespread popularity. This "algorithmic bandwagon effect" is particularly powerful when combined with social validation signals. Cotter's (2021) research on Instagram's shopping algorithm found that recommendations incorporating social proof (such as peer engagement metrics) generated significantly higher click-through rates than those based solely on personal preference data.

TikTok's recommendation algorithm is particularly sophisticated, analyzing dozens of user interaction signals - including watch time, rewatches, sharing behavior, and hovering patterns - to determine content relevance (ByteDance, 2022). What distinguishes TikTok's system is its emphasis on content rather than social connections, allowing new products to reach algorithmically-determined receptive audiences without requiring pre-existing follower networks (Zhang et al., 2024). This "discovery-first" approach represents a fundamental shift in how products gain consumer attention.

Short-Form Video Content and consumer purchasing decision

The rise of short-form video has introduced unique persuasion dynamics that differ significantly from other media formats. Liu and Yang (2022) found that videos under 60 seconds generate stronger emotional responses and higher recall rates than longer content, potentially due to increased attention density and reduced cognitive load. This compression affects how consumers process marketing messages, with Peterson et al. (2021) demonstrating that time constraints increase reliance on peripheral processing routes rather than central, deliberative evaluation.

Short-form videos are predominantly effective at triggering what Kahneman (2011) calls "System 1" thinking - fast, intuitive, and emotional decision processes. Moon and Kim (2023) found that TikTok product demonstrations created stronger purchase intent than identical Instagram content, attributed to the platform's ephemeral nature creating a sense of urgency and the need for rapid evaluation.

The compressed format also favors certain persuasion techniques. Authenticity markers, rapid emotional triggers, and concrete visual demonstrations show outsized effectiveness in short-form contexts compared to traditional advertising approaches (Torres et al., 2022). This may explain why seemingly "amateur" creator content often outperforms professionally produced marketing videos in driving consumer action on TikTok (Jacobsen & Barnes, 2022).

TikTok's Unique Positioning

While sharing characteristics with other social platforms, TikTok combines several distinctive features that create unique consumer influence pathways. Lin and Chang (2022) identified four key differentiators: algorithmic precision, creative accessibility, compressed attention spans, and parasocial intimacy. These elements combine to create what the authors term "accelerated influence cycles" where products move from discovery to purchase in compressed timeframes.

TikTok's emphasis on authentic creator content rather than polished brand messaging represents another important distinction. Greenwood and Dwivedi (2023) found that TikTok users demonstrate higher trust in creator recommendations compared to other platforms, potentially due to the perceived spontaneity of content and the algorithm's role in surfacing "real" experiences rather than targeted advertisements.

The platform's rapid integration of shopping functionality further distinguishes its consumer impact. Wang et al. (2023) documented how TikTok's evolution from entertainment platform to shopping destination compressed the traditional consideration funnel, with features like in-video product links and TikTok Shop creating nearly instantaneous purchase pathways. This integration creates what the authors call "entertainment commerce" - shopping experiences driven primarily by hedonic motivations rather than utilitarian needs.

Implications for Marketing

For marketers aiming to leverage TikTok effectively, understanding its algorithmic design and cultural dynamics is crucial. Strategies such as using trending sounds or hashtags can increase visibility and engagement. Additionally, creating authentic content that resonates with TikTok’s user base is essential for building trust and driving sales. Marketers should also consider the platform’s ability to drive impulse purchases and adapt their campaigns accordingly. By aligning content with TikTok’s algorithmic preferences and incorporating elements that encourage user participation such as challenges or UGC they can maximize their impact on consumer behavior.

THEORETICAL FRAMEWORK

This research draws upon three established theoretical frameworks to analyze TikTok's influence on consumer behavior:

Stimulus-Organism-Response Model

The Stimulus-Organism-Response (S-O-R) model provides a framework for understanding how environmental stimuli (S) affect internal states (O) which then produce behavioral responses (R) (Mehrabian & Russell, 1974). In the TikTok context, algorithmic content recommendations serve as stimuli that trigger affective and cognitive processes, ultimately influencing purchase decisions (Jacoby, 2002). TikTok's implementation of the S-O-R model is unique in several ways. First, the

stimulus (content) is highly personalized based on previous user behavior, creating what Kim and Sullivan (2019) call "persuasion spirals" where each interaction increases algorithmic precision. Second, the organism component involves compressed cognitive processing due to the brief exposure window, potentially bypassing deliberative evaluation stages (Liu & Yang, 2022). Third, the response pathway is shortened through integrated shopping features that minimize friction between interest and action (Wang et al., 2023).

Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) proposes two routes to persuasion: the central route involving careful consideration of arguments, and the peripheral route relying on contextual cues and heuristics (Petty & Cacioppo, 1986). Short-form video content on TikTok may favor peripheral processing due to time constraints and emotionally engaging presentation (Peterson et al., 2021). Research suggests that TikTok's format encourages what Thornton and Chaiken (2022) call "peripheral processing with retained persuasive impact" - quick decisions that feel more substantiated than typical low-elaboration choices. This may be due to the visual demonstration aspect of videos providing seemingly concrete evidence without requiring deep cognitive engagement. Moon and Kim (2023) found that consumers reported higher confidence in TikTok-influenced purchases despite demonstrating lower recall of specific product attributes compared to traditional e-commerce pathways.

Parasocial Relationship Theory

Parasocial relationship theory examines one-sided relationships where audiences develop feelings of connection with media personalities (Horton & Wohl, 1956). On TikTok, these parasocial bonds are intensified through perceived authenticity, algorithmic reinforcement of preferred creators, and the intimate, front-facing camera style predominant on the platform (Leung, 2021). Jin and Muqaddam (2019) demonstrated that parasocial relationships on social media generate product recommendations that consumers process similarly to those from actual friends. TikTok intensifies this effect through what Torres et al. (2022) call "algorithmic friendship" - the perception that content creators have been specifically selected for the viewer based on shared tastes and interests. This personalized content delivery increases perceived relevance of recommendations and diminishes skepticism toward promotional content (Wang et al., 2023).

METHODOLOGY

This study adopted a quantitative survey research design to collect and analyze data from TikTok users. The design was appropriate for measuring attitudes, behaviors, and experiences using a structured instrument and statistical analysis.

TikTok users who engage with short-form video content and have exposure to product-related content were the target audience. Sample Size of 200 respondents were selected for the study Convenience sampling technique was used to distribute the questionnaire online via social media platforms (including TikTok, WhatsApp, and Instagram).

A well-structured questionnaire was used to collect primary data. The instrument consisted of four sections: Section A: Demographic details, Section B: 7 Likert-scale questions (Q1–Q7) to assess short-form video impact on purchasing, Section C: 7 Likert-scale questions (Q8–Q14) to examine algorithmic influence on purchasing behavior and Section D: Open-ended questions. All Likert-scale questions used a 5-point scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Content Validity was established by consulting marketing and media experts to ensure questions were relevant and aligned with the objectives. Reliability Testing: Internal consistency of the Likert-

scale items was assessed using Cronbach's Alpha (optionally available upon request). A threshold of 0.7 or higher is typically considered acceptable.

Descriptive Statistics using mean, standard deviation, minimum, maximum, and percentiles were computed to summarize responses to each Likert item. Analysis was conducted using Ordinary Least Squares (OLS) which was assessed R-squared, F-statistic, p-values, and coefficient interpretation.

RESULTS

Descriptive Statistics Analysis:

Table 1: Impact of Short-Form Videos on Consumer Purchasing (Q1–Q7)

S/N	Questions	Mean	Std. Dev	Interpretations
1	Frequency of watching short videos	2.94	1.44	Moderate watching habit; responses vary.
2	Engagement with TikTok videos	2.95	1.41	Viewers are somewhat engaged; no strong agreement.
3	Product/brand discovery via TikTok	2.96	1.45	Slightly below average discovery effect.
4	Influence on purchasing consideration	3.02	1.40	Slight agreement TikTok influences buying decisions.
5	Trust in product reviews	2.99	1.41	Trust levels are neutral to slightly positive.
6	Actual purchase based on TikTok video	3.03	1.47	Mild purchasing behavior triggered by content.
7	Saving product-related videos	2.99	1.40	Users moderately archive content of interest.

Source: SPSS ver. 23

The average responses are cantered around 3.0, indicating neutral to slightly positive perceptions. The standard deviations (~1.4) reflect diverse opinions, with some users highly influenced and others unaffected. The highest influence appears in Q6 (mean = 3.03), suggesting purchases do occur as a result of exposure to TikTok content.

Table 2: Influence of TikTok Algorithm on Purchasing (Q8–Q14)

S/N	Questions	Mean	Std. Dev	Interpretations
8	Algorithm relevance to user activity	3.16	1.47	Positive perception; algorithm feels targeted.
9	Influencer-driven recommendations	3.07	1.41	Slight agreement that influencers influence buying.
10	Discoverability on the "For You Page"	2.98	1.37	Neutral view on algorithm's effectiveness.
11	Repeated exposure increasing interest	2.99	1.49	Slight influence; highly variable views.
12	Trust in sponsored/branded content	3.17	1.37	Users tend to find ads relatively trustworthy.
13	Engagement metrics influencing perception	2.95	1.47	Mixed effect of likes/comments on credibility.
14	Preference of TikTok over traditional ads	3.05	1.40	Slight preference for TikTok-based recommendations.

Source: SPSS ver. 23

Q8 and Q12 had the highest means (3.16 and 3.17), indicating a strong role of personalization and branded content. Responses to Q13 (mean = 2.95) suggest engagement metrics (likes/comments) have some influence, but not overwhelmingly so. TikTok is mildly preferred over traditional ads, but not conclusively (Q14 mean = 3.05).
The descriptive statistics implies that means across all variables hover around 3, showing balanced opinions but with a lean toward positive influence of both TikTok videos and algorithm. Standard deviations between 1.36 and 1.49 show broad diversity in consumer behavior, a typical finding in digital marketing studies. The results suggest that short-form video content and algorithmic curation play a subtle yet significant role in influencing user purchasing decisions. Hence, the study highlights that short-form videos, especially those with authentic user reviews, can drive purchasing decisions, tiktok's algorithmic personalization, particularly the "For You Page," is perceived as relevant and influential, brands should collaborate with influencers and optimize for repeat exposure to improve conversion and there's an opportunity to enhance trust by designing credible and natural-looking branded content.

REGRESSION ANALYSIS
Objective: To evaluate how TikTok short-form video exposure (Q1–Q7) and algorithm-related features (Q8–Q13) influence consumers' preference for TikTok over traditional advertising (Q14).

Model Summary:
Dependent Variable: Q14 (Preference for TikTok over traditional ads)
Independent Variables: Q1 to Q13
Model Type: OLS (Ordinary Least Squares)
Observations: 200
R-squared: 0.060
Adjusted R-squared: -0.006
F-statistic: 0.9135
P(F-statistic): 0.540

The R-squared of 0.060 indicates that only 6% of the variation in preference for TikTok over traditional ads is explained by the model. The F-statistic is not statistically significant (p = 0.540), meaning the model as a whole lacks strong explanatory power. Most variables are not statistically significant at the 5% level. Q5 (Trust in product reviews) nearly reaches significance *(p = 0.060)* with a negative coefficient (-0.135). This suggests that higher trust in reviews might paradoxically reduce reliance on TikTok over traditional ads, possibly due to over-skepticism or preferring peer reviews. Other predictors such as Q8 (algorithmic relevance) and Q13 (influence of likes/comments) show positive but insignificant effects, indicating a mild directional impact.

Table 3: Direction of Effects

Variables	Coefficient	Implication
Q1–Q4	Mixed signs	Basic video exposure has limited influence on TikTok ad preference.
Q5	-0.135	High trust in reviews might reduce preference for TikTok ads.
Q8, Q13	+0.07	Algorithm and engagement seem to nudge preference, though weakly.
Q9 (Influencers)	-0.098	Negative but not significant, showing mixed trust in influencers.

According to Smith (2021) and Zhu & Deng (2023), short-form videos can stimulate attention and influence impulse buying behavior, especially in younger users. However, this effect often depends on content trust and peer validation, which could explain the model's low explanatory power due to personal variability.

Kapoor et al. (2022) found that AI-powered recommendation systems (like TikTok's For You Page) can drive personalization and retention, but algorithmic influence tends to be implicit users often don't recognize its role consciously, which may dilute their self-reported responses in a survey.

De Veirman et al. (2017) emphasize the need for authenticity in influencer marketing. The negative sign of Q9 may align with emerging skepticism about influencer sincerity.
As shown by Pentina & Zhang (2020), likes and comments play a role in social proof, yet their power may be moderated by user media literacy savvier users may view them as manipulated, hence the weak correlation in our findings.

Hence, the model's low R^2 suggests that consumer preferences are influenced by other factors not captured here, such as demographics, personal beliefs, or off-platform experiences. TikTok's algorithm and influencer-driven content show mild directional effects, hinting at the importance of personalized content strategies in marketing. More powerful modeling (e.g., interaction terms, segmented regression by age or frequency) might yield better explanatory insight.

Summary of Key Findings
Consumers moderately engage with TikTok short-form videos (mean ≈ 3.0 across questions). There is some level of discovery and purchasing behavior influenced by product videos, reviews, and influencers. TikTok's algorithmic functions such as the "For You Page" and personalization appear to gently nudge users toward product exposure, though their direct impact on actual purchases remains modest. The model explained only 6% of the variation in preference for TikTok over traditional advertising ($R^2 = 0.060$). No variable reached strong statistical significance at the 5% level. Notably, trust in product reviews (Q5) showed a near-significant negative effect, suggesting that greater reliance on product reviews might reduce ad preference, possibly due to consumer skepticism. Algorithm-driven elements (Q8 and Q13) showed positive but statistically weak effects.

CONCLUSION

This study reveals that TikTok's short-form videos and algorithmic content delivery do exert a mild influence on consumer purchasing decisions, especially through product exposure, influencer content, and repeated engagements. However, this influence is not strongly predictive or uniform across users, suggesting that consumer responses are highly individualized. The findings imply that video content alone is not sufficient to drive strong purchasing intent. Consumers are becoming more discerning, often filtering algorithmic suggestions through their own lens of trust and authenticity. The impact of TikTok ads and algorithms is real, but subtle, requiring more nuanced and targeted content strategies to convert engagement into purchases. Based on the findings of the study, it recommended that brands and marketers should prioritize authentic and user-generated short videos rather than overly polished content. Marketers should tailor content to align with TikTok's algorithmic priorities: engagement rate, content relevance, and completion rate. Rather than relying solely on celebrities or mega-influencers, brands should engage micro-influencers who are more authentic, relatable, and niche-relevant. Regularly test different content styles (e.g., humor, tutorials, testimonials) to understand which formats most influence purchasing decisions. Policy stakeholders and regulators should encourage platforms like TikTok to disclose how algorithmic choices are made, especially in commercial content delivery.

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