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RESEARCH ARTICLE

Freemium Monetization and User Psychology in Short-Form Drama Mobile Applications: A Study of Payment Behavior and Satisfaction

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Abstract
This study examines payment behavior and user satisfaction among Indonesian short drama app users operating under aggressive freemium models with pay-per-episode mechanisms. Using a mixed-method approach with 240 active users across 12 applications (DramaBox, ReelShort, ShortMax, MoboReels, FlexTV, and others), the research investigates psychological factors influencing willingness to pay, actual spending patterns, and post-purchase regret. Results reveal that most users are Millennials and Gen Z (76.6% aged 18-34 years) exhibiting strong binge-watching patterns (averaging 10-11 episodes per session). TikTok serves as the primary drainage platform, accounting for 63.3% of user acquisition. The conversion rate reaches 41.2% with average monthly spending of Rp 116,003, yet exposes a paradox: Indonesia leads global downloads while demonstrating disproportionately low monetization. Regression analysis identifies Perceived Content Quality (β=0.324) and Perceived Enjoyment (β=0.245) as the strongest predictors of willingness to pay, whereas Perceived Cost Fairness shows a significant negative effect (β=-0.257). Impulse Buying emerges as the sole significant differentiator between paying and non-paying users. Path analysis reveals the SOR model's inadequacy, with direct effects dominating—particularly Customer Satisfaction on Intention to Continue (β=0.564). Although 80% of respondents recognize psychological manipulation tactics, awareness does not diminish their effectiveness. The study underscores the need for regulatory frameworks balancing innovation with consumer protection against aggressive monetization tactics that potentially exploit vulnerable users.

Keywords
Short Drama Apps; Freemium Monetization; Impulse Buying; Willingness to Pay; Consumer Psychology.

1 | INTRODUCTION

The global digital entertainment industry has undergone a fundamental transformation with the emergence of short-form drama—vertical video series consumed through mobile applications. Unlike traditional streaming platforms such as Netflix or Disney+ that offer long-duration content, short drama applications deliver serialized narratives with 1-5 minute episodes specifically designed for mobile consumption in vertical format (9:16). Industry growth has been explosive—Sensor Tower (2025) reports that global downloads of short drama applications exceeded 370 million in the first quarter of 2025, representing a 6.2-fold year-on-year increase. Revenue growth has been even more remarkable, surging from USD $178 million in Q1 2024 to approximately USD $700 million in Q1 2025, demonstrating nearly quadruple growth within a single year. Total market value is projected to reach USD $7.21 billion in 2025, up from USD $6.54 billion in 2024 (Digital Yield Group, 2025). The phenomenon remains inseparable from the TikTok ecosystem, which functions as the primary drainage platform for user acquisition—according to industry data, 91% of overseas users download short drama applications through TikTok, making it the most effective acquisition funnel in the industry (Dashu Kuajing, 2024). In December 2024, TikTok launched "TikTok Minis," a feature allowing users to watch micro-dramas directly within the application, marking a strategic shift from the drainage model to a closed ecosystem that integrates content and monetization within a single platform (InvestGame, 2025).

The short drama application market is currently dominated by two major players—ReelShort and DramaBox—which together control 90% of global market share and generate nearly USD $1 billion in combined revenue (InvestGame, 2025; Sensor Tower, 2025). Other applications such as ShortMax, GoodShort, MoboReels, FlexTV, and several others compete for the remaining market share. Indonesia occupies a unique and strategic position in the global ecosystem—according to Antom (Alipay+, 2024), Indonesia ranks as the world's number one market for short drama application downloads, supported by a young, social-first population and strong demand for fast, mobile-friendly content. The Southeast Asian market as a whole experienced strong momentum in Q1 2025 with downloads rising 61% quarter-on-quarter to nearly 87 million downloads (Sensor Tower, 2025). However, despite Indonesia's leadership in downloads, monetization remains a significant challenge. Antom (2024) identifies that the Southeast Asian market is experiencing a boom in user acquisition, but conversion to paying users remains far lower compared to Western markets such as the United States. The phenomenon creates an intriguing paradox: Indonesia possesses the largest user base, yet its revenue contribution is disproportionate to user numbers. The United States, though not the leader in downloads, represents the market with the highest monetization, demonstrating Average Revenue Per User (ARPU) far higher compared to other regions (InvestGame, 2025).

The business model employed by short drama applications is freemium with an aggressive pay-per-episode strategy. Users can watch the first 10-20 episodes for free, then must pay for each subsequent episode or purchase coin/token packages to unlock premium content (Wei, 2024; Tang & Wang, 2025). Wei (2024) reports that 71% of all content on the ReelShort platform is watched through per-episode payment, while 21% is monetized through advertising. The model proves highly effective in generating revenue—the cost to complete one full drama (typically 80-100 episodes) can reach Rp 200,000 to Rp 500,000, far exceeding the monthly subscription cost of Netflix (Rp 54,000 for mobile plan) or Disney+ Hotstar (Rp 39,000 per month). Nevertheless, the model also raises significant controversy and ethical concerns about exploitative and manipulative monetization practices. Across various online forums, social media, and application review platforms, numerous users report feeling "deceived" or "trapped" into spending large amounts of money without realizing it. Common complaints include users who initially only wanted to "try" by watching free episodes then felt compelled to pay because they had become too emotionally invested in the story, unnoticed cost accumulation because per-episode payments appear small (Rp 2,000-5,000 per episode) but total costs for one drama become very high, feelings of manipulation by strategic cliffhangers and time-limited discount offers that create pressure to buy immediately, and regret after realizing that content quality does not match the money spent.

Short drama applications employ various sophisticated psychological tactics to drive users toward impulsive purchases and increase willingness to pay. Schibler *et al*. (2024) found that audiences experiencing cliffhangers at episode endings had significantly higher desire for future story installments compared to audiences experiencing resolved endings, supporting the utility of cliffhangers for audience retention and payment conversion. Fear of Missing Out (FOMO) mechanisms are exploited through time-limited promotions, exclusive content available only to paying users, and push notifications that create artificial urgency (Platon, 2024; Borshalina *et al*., 2022). Exploitation of sunk cost fallacy occurs when users feel they have invested too much time and money to stop watching, so they continue paying even though they may no longer enjoy the content (Shemeikka, 2024; Maribel *et al*., n.d.). Additionally, dark patterns in interface design make the purchase process easier and less transparent—for instance, prices displayed in virtual coins/tokens rather than real currency, "Buy" buttons made more prominent than other options, and information about total costs to complete one drama hidden or not clearly displayed (Kuklenko, 2024; Brenncke, 2024; Helamo, 2023). Huang and Tan (2025) explain that the Chinese micro-drama industry employs a strategy called the "conversion game" where success is measured by core metrics such as payment rate and ad click-through rate, combining condensed narratives with paywalled cliffhangers

to efficiently convert audience attention into direct financial payments. From a consumer psychology perspective, short drama applications leverage various cognitive biases and psychological vulnerabilities. Hou *et al*. (2021) apply Mental Accounting Theory to explain how digital payments stimulate consumption by increasing consumer transaction utility and facilitating deliberate mental account adjustments—their research found that households using digital payments spend 20.63% more than those using alternative payment methods. Nyrhinen *et al*. (2024) found that low self-control directly facilitates impulsive buying and indirectly does so by encouraging positive attitudes toward targeted advertising and impulsivity in social networks. Chen and Kim (2024) explore factors influencing micro-drama users' paid subscription intentions, identifying perceived content quality, perceived cost, and social interaction as external stimuli affecting payment behavior, mediated by functional and emotional value. The binge-watching phenomenon also becomes a significant aspect of short drama consumption. Starosta and Izydorczyk (2020) present a systematic review discussing diverse motivations, personality traits, and psychological conditions associated with binge-watching, as well as two perspectives—one related to entertainment and positive cognition, and the second emphasizing negative outcomes and behavioral addiction symptoms. In the short drama application setting, the short episode format (1-5 minutes) actually facilitates binge-watching because the barrier to watching "one more episode" is very low, yet per-episode cost accumulation can become very high without users realizing it.

Aggressive monetization practices raise serious ethical concerns. Kuklenko (2024) explores manipulative practices in the gaming industry, focusing on dark UI/UX patterns that directly address ethical concerns and deceptive design relevant to aggressive freemium models. Brenncke (2024) develops a new normative classification for dark patterns in online choice architecture, creating a taxonomy of six categories of autonomy violations tailored to assess and regulate dark patterns that exploit consumer behavioral biases. Eagle *et al*. (2022) analyze negative consequences of applying freemium monetization design to vulnerable user populations, identifying three types of negative consequences including pressure on users and expensive subscriptions resulting from complex descriptions. In Indonesia, digital consumer protection issues are becoming increasingly significant given the rapid growth of the digital economy and increasing mobile application adoption. Aprilianti (2020) examines challenges surrounding consumer rights protection in Indonesia's rapidly developing digital space, outlining existing regulatory and institutional frameworks designed to ensure consumer protection in the digital economy. However, research on Indonesian consumer behavior in the short drama application setting remains very scarce. Erza (2022) investigates the relationship between perceived enjoyment, customer satisfaction, and intention to continue paying premium prices for online streaming services during the COVID-19 pandemic in Bandar Lampung. Borshalina *et al*. (2022) examine the role of Fear of Missing Out (FOMO) as a significant psychological factor influencing purchasing decisions among Generation Z in Bandung. Nevertheless, no research has specifically analyzed payment behavior and user satisfaction of short drama applications in Indonesia, particularly in the setting of aggressive freemium models and psychological tactics employed.

The research gap becomes increasingly critical given Indonesia's position as the world's number one download market yet with low monetization rates. The "high downloads, low monetization" phenomenon indicates unique factors within the Indonesian setting that influence willingness to pay and digital content consumption behavior. These factors may include digital payment infrastructure, cultural attitudes toward digital content payment, price sensitivity, local content preferences, and consumer digital literacy levels. Furthermore, psychological and financial impacts of aggressive monetization models require investigation. Tata *et al*. (2021) investigate the influence of e-retailer characteristics and confirmation on online buyer satisfaction or regret, finding that regret negatively impacts repurchase intentions and encourages brand-switching behavior. In the short drama application setting, users may experience post-purchase regret after realizing how much money they have spent unlocking episodes, especially if they feel manipulated by psychological tactics or deceptive interface design. From a business sustainability perspective, questions also arise about whether monetization models heavily reliant on exploiting cognitive biases and psychological vulnerabilities can be sustainable in the long term. Cao *et al*. (2023) test causal effects of different pricing strategies on existing users' willingness to subscribe, finding that although both hard landing and soft landing paywalls individually decrease subscription willingness, they have positive interaction effects when implemented together. Numminen *et al*. (2022) analyze the impact of revenue model choices on revenue performance of newly launched mobile applications, reporting that combining free downloads with in-app purchases is superior for revenue generation in hedonic applications.

The present study addresses the knowledge gap regarding freemium monetization and user psychology in short-form drama mobile applications, with particular focus on Indonesia as the world's largest download market. By analyzing 13 major applications (ReelShort, DramaBox, ShortMax, GoodShort, MoboReels, FlexTV, FlickReels, Melolo, Vigloo, HiShort, Snack Video, PocketFM, and TikTok), the study examines how freemium models with pay-per-episode strategies influence payment behavior and user satisfaction, how psychological tactics such as cliffhangers, FOMO, and sunk cost fallacy are employed to drive impulsive purchases, what factors influence willingness to pay in the Indonesian market compared to global markets, and how users evaluate their experiences and whether they experience post-purchase regret. The study employs a mixed-method approach combining user surveys (240 respondents including both paying and non-paying users), systematic application analysis to document monetization strategies and dark patterns, and psychological analysis of mechanisms driving payment behavior. By providing a nuanced understanding of the dynamics between

application design, user psychology, and payment behavior in the Indonesian setting, the study advances theoretical understanding in behavioral economics, consumer psychology, and mobile user experience literature, while offering practical recommendations for application developers, policymakers, and consumer protection organizations on creating more ethical, transparent, and sustainable short drama application ecosystems.

Based on the background outlined above, the study formulates several primary research questions: (1) How does the freemium monetization model with pay-per-episode strategy in short drama applications influence user payment behavior in Indonesia? (2) What psychological tactics (cliffhangers, FOMO, sunk cost fallacy, dark patterns) are employed by short drama applications to drive impulsive purchases and increase willingness to pay? (3) What factors influence Indonesian users' willingness to pay for short drama content, and how do these factors differ from global markets? (4) What is the relationship between perceived enjoyment, flow experience, and customer satisfaction with intention to continue and willingness to pay in short drama applications? (5) Do users experience post-purchase regret after paying for short drama episodes, and what factors influence the level of regret? (6) What is the role of TikTok as a drainage platform and viral marketing mechanism in user acquisition for short drama applications? (7) What are the ethical implications of aggressive monetization practices employed by short drama applications, particularly in digital consumer protection in Indonesia? The study aims to: (1) analyze the freemium monetization model with pay-per-episode strategy in short drama applications and its impact on user payment behavior in Indonesia, (2) identify and evaluate psychological tactics employed by short drama applications to drive impulsive purchases and increase willingness to pay, (3) examine factors influencing Indonesian users' willingness to pay for short drama content and compare them with global patterns, (4) test the relationship between perceived enjoyment, flow experience, customer satisfaction, intention to continue, and willingness to pay in short drama applications, (5) analyze the post-purchase regret phenomenon and factors influencing it in short drama episode purchases, (6) evaluate the role of TikTok as a drainage platform and viral marketing mechanism in the short drama application ecosystem, and (7) examine ethical implications of aggressive monetization practices and provide recommendations for digital consumer protection in Indonesia.

The study offers several academic benefits: advancing theoretical understanding in behavioral economics and consumer psychology by examining applications of concepts such as sunk cost fallacy, FOMO, and mental accounting in mobile short drama applications; enriching literature on freemium business models and digital content monetization strategies, particularly the pay-per-episode model which remains relatively novel in the short-form video setting; addressing the research gap on digital consumer behavior in Indonesia, particularly in mobile entertainment applications and short video content; providing methodological frameworks for mixed-method research combining user survey analysis with systematic application and platform analysis; and supplying empirical data on differences in consumer behavior between Indonesian and global markets in digital content consumption. From a practical standpoint, the study provides insights for industry and application developers regarding factors influencing willingness to pay and user satisfaction, which can be used to optimize more ethical and sustainable monetization strategies. For policymakers, the study supplies empirical evidence about potentially exploitative monetization practices, which can serve as a basis for developing digital consumer protection regulations in Indonesia. For consumers, the study raises awareness about psychological tactics used in short drama applications, enabling consumers to make more informed decisions and avoid overspending or impulsive purchases. For consumer protection organizations, the study provides a knowledge base for developing digital consumer education programs and advocacy for more transparent and ethical business practices. For future researchers, the study supplies baseline data and conceptual frameworks that can be used for further research on short drama applications, freemium models, or digital consumer behavior in Indonesia and Southeast Asia.

The study limits its scope as follows: the applications examined are 13 major short drama applications operating in Indonesia, namely ReelShort, DramaBox, ShortMax, GoodShort, MoboReels, FlexTV, FlickReels, Melolo, Vigloo, HiShort, Snack Video, PocketFM, and TikTok (with TikTok Minis feature). The research location focuses primarily on users in Indonesia, with comparisons to global data from United States, Southeast Asia, Latin America, and Europe markets based on secondary data. Aspects examined include freemium monetization models and pay-per-episode strategies, psychological tactics (cliffhangers, FOMO, sunk cost fallacy, dark patterns), payment behavior and willingness to pay, perceived enjoyment, flow experience, and customer satisfaction, post-purchase regret and user experience evaluation, the role of TikTok in user acquisition and viral marketing, and ethical implications and consumer protection. The research period covers primary data collection in 2025, with references to industry data and literature from the 2020-2025 period. Respondents are active users of short drama applications in Indonesia aged 18 years and above who have experience using at least one of the 13 applications examined. Research limitations include that the study does not cover in-depth technical analysis of recommendation algorithms or application backend systems, does not conduct detailed financial analysis of company profitability, and does not cover legal aspects or litigation related to application business practices.

2 | BACKGROUND THEORY

2.1 Short-Form Drama Industry and Production Ecosystem

Short-form drama represents a novel form of serialized video content designed specifically for mobile consumption with extremely brief episodes, typically ranging from 1-5 minutes per episode (Wei, 2024; Tang & Wang, 2025). Li (2024) defines micro-short drama as a subset of "cool dramas"—narratives that evoke pleasure and immersion among viewers. Unlike fragmented short-form video content such as TikTok clips, micro-dramas employ episodic structure and narrative continuity to create immersive experiences despite their brevity (Zhou & Chen, 2025). Key characteristics include vertical format (9:16) optimized for smartphone screens, episodes consumable within brief leisure moments, condensed narratives with fast-moving plots, strategic cliffhangers at episode endings to drive continuous consumption, and low-cost production with rapid production cycles (Gist, 2025; Huang & Tan, 2025). Wei (2024) notes that paid short dramas have low production costs, short production cycles, and projected long-term market value reaching USD $36 billion. The micro-drama industry has experienced exponential growth since its emergence in China in the early 2020s, with Li (2024) reporting that market size is projected to reach 50.44 billion yuan in 2024. Tang and Wang (2025) analyze ReelShort as a leading example of transnational media products driven by economic incentives and China's "Going Global" policy, finding that the industry prioritizes addiction, efficiency, and monetization over creativity. Huang and Tan (2025) theorize the monetization strategy of the micro-drama industry as a "conversion game" driven by short-term commercial returns, where success is measured by core metrics such as payment rate and ad click-through rate. Gu (2025) analyzes how Chinese short dramas enter the American market through the dual logic of cultural deconstruction and technological empowerment, with ReelShort and DramaBox controlling 90% of the market. The production and distribution ecosystem has low barriers to entry, enabling platform proliferation including short-video platforms, mini-programs, and standalone apps (Huang & Tan, 2025). Gist (2025) shares firsthand experience writing six vertical drama series funded by Chinese application providers, exploring vertical content features, cross-cultural writing techniques, and how new production models are transforming traditional screen industry practices. Fu (2025) analyzes how micro-drama platforms use TikTok as a discovery channel and the IAP (In-App Purchase) model for monetization. Liu (2025) identifies the top five short drama applications in overseas and Chinese markets, analyzing strengths and weaknesses of their business models with focus on revenue streams.

2.2 Freemium Business Models and Digital Monetization Strategies

The freemium business model employed by short drama applications represents a pricing and product strategy where multiple versions are offered—a superior paid version and a free version with limited quality or features (Boudreau *et al*., 2023). Boudreau *et al*. (2023) provide a thorough review of freemium strategies, discussing general conclusions regarding when freemium represents a viable strategy for digital products and highlighting cases where empirical reality deviates from theoretical models. Salehudin and Alpert (2021) propose a taxonomy identifying advertising and microtransactions as two primary revenue sources, with various types of in-app purchases becoming the most dominant freemium business model in the mobile game market. Numminen *et al*. (2022) report that combining free downloads with in-app purchases proves superior for revenue generation in hedonic game applications, which is relevant to short drama applications that are typically hedonic in nature. Martínez-López *et al*. (2022) explain the basic workings of social media monetization as a new economic scheme that hybridizes commercial and social features, discussing the role of big data, artificial intelligence, and frontier computing technologies in making monetization processes algorithmic, automated, and precise. Wei (2024) analyzes ReelShort's hybrid monetization strategy combining per-episode payment (accounting for 71% of viewership) and advertising (21%), finding that the North American market and downloads have significant positive impact on revenue, while advertising expenditure has negative impact on revenue. The "Wait-for-Free" (WFF) model investigated by Lee *et al*. (2024) and Choi *et al*. (2023) allows consumers to pay for immediate access to the next episode or wait a certain period for free access. Lee *et al*. (2024) examine the WFF freemium model common in serial media such as Webtoon, Radish Fiction, and explicitly mention the video application ReelShort, investigating how unique characteristics of serial content—particularly complementarity between episodes and the use of cliffhangers—influence consumer behavior and willingness to pay. Surprising findings show that reducing wait time for free access actually increases aggregate paid consumption by 19% (and 12% among existing consumers), with the argument that positive effects from spillover between episodes (driven by complementarity) dominate negative cannibalization effects. Choi *et al*. (2023) investigate the effect of WFF pricing on digital serial content monetization, evaluating how consumer behavior patterns, particularly habit formation and present-biased preferences driven by addictive stock consumption, influence individual willingness to wait or pay for serial content. Their research shows that WFF pricing increases purchase conversion likelihood for low-valuation consumers because habit formation develops through free consumption, with one free episode increasing purchase likelihood by up to 13%. Xue *et al*. (2024) develop a structural econometric model to analyze consumers' quality belief updating process and their

decisions to purchase the next chapter or stop reading, finding that consumer purchase and exit behavior is influenced by status quo bias, sunk cost considerations, and psychological investment. Zhao *et al*. (2023) analyze the fixed pay-per-chapter model on Chinese online book platforms, providing a relevant analog for the freemium/pay-per-episode system used by micro-drama applications, confirming that faster release speeds drive binge consumption, while slower sequential releases result in increased platform visits and encourage exploration of other digital products.

Conversion strategies and paywall optimization also become a significant focus in digital monetization literature. Cao *et al*. (2023) test causal effects of different pricing strategies (hard landing vs. soft landing paywalls) and product design aspects (exclusive secondary offerings) on existing users' willingness to subscribe, finding that although soft landing and exclusive secondary offerings individually decrease subscription willingness, they have positive interaction effects when implemented together. Huang and Tan (2025) explain the pay-to-view mechanism of micro-dramas that combines condensed narratives with paywalled cliffhangers to efficiently convert audience attention into direct financial payments, demonstrating commercial effectiveness. They detail the economics of the micro-drama industry, including how user payments generate revenue, paid traffic costs, and platform and payment processing fee deductions, illustrating the IAP model as the most financialized manifestation of the business. Chen and Kim (2024) build a model based on Stimulus-Organism-Response (SOR) theory and perceived value theory to examine how perceived content quality, perceived cost, and social interaction influence paid subscription intentions, finding that perceived cost negatively impacts perceived value but does not directly influence paid subscription intentions, rather is fully mediated by perceived value, offering specific quantitative findings about payment behavior psychology.

2.3 Behavioral Economics and Consumer Cognitive Biases

From a behavioral economics perspective, short drama applications leverage various cognitive biases and psychological vulnerabilities to drive payment behavior. Sunk cost fallacy refers to individuals' tendency to continue investing in an activity because they have previously invested resources (time, money, or effort), even though additional investment is not economically rational (Arkes & Blumer, 1985, cited in Shemeikka, 2024). Maribel *et al*. (n.d.) analyze the impact of sunk cost cognitive bias on customer decisions and its application in neuromarketing strategies, explaining that sunk cost bias significantly influences perception of product and service value, affecting purchase decisions based on education level, gender, and income. Shemeikka (2024) explores dark patterns in video game monetization, microtransactions, and user interface design, analyzing how sunk cost fallacy is exploited by monetization systems in games, particularly noting players' tendency to continue investing time or money after previous investments, which is highly relevant to pay-per-episode tactics and cliffhangers in short-form drama applications. The research also discusses how virtual currency is often sold in pre-selected packages with unfavorable conversion rates to obscure actual costs and encourage larger quantity purchases, a deceptive tactic known as obstruction or comparison prevention related to aggressive pricing strategies in freemium models. Xue *et al*. (2024) find that consumer purchase and exit behavior is influenced by status quo bias, sunk cost considerations, and psychological investment, directly addressing behavioral economics concepts and consumer psychology.

Mental Accounting Theory, developed by Richard Thaler, explains how individuals categorize, evaluate, and track their financial activities by creating separate "mental accounts" for different types of transactions (Thaler, 1985, 1999, cited in Hou *et al*., 2021). Hou *et al*. (2021) apply Mental Accounting Theory to explain how digital payments stimulate consumption by increasing consumer transaction utility, facilitating deliberate mental account adjustments, and resulting in more unplanned consumption. Their research empirically identifies that households using digital payments spend 20.63% more than those using alternative payment methods, providing quantitative support for the relationship between payment mechanisms and expenditure. They also find that the stimulation effect of digital payments is more substantial among households with low self-control ability, connecting the psychological variable of self-control with digital payment behavior and potential impulsive buying. Pramiarsih (2024) explains fundamental concepts of consumer behavior in the digital era, including how consumers seek information, make purchasing decisions, and are influenced by social media and influencers, analyzing the rapid growth of Indonesia's e-commerce ecosystem and noting significant increases in digital consumers and high e-commerce transaction values in Southeast Asia. Pramiarsih also details the popularity of various digital payment methods in Indonesia, listing e-wallets, interbank transfers, and Cash on Delivery (COD) as the three most preferred options, which directly informs payment behavior analysis in the research.

Prospect Theory, developed by Kahneman and Tversky (1979), explains how individuals make decisions under uncertainty, with loss aversion as a key mechanism—the tendency to feel losses more strongly than gains of the same magnitude. In the short drama application setting, loss aversion can manifest as FOMO (Fear of Missing Out) toward the next episode or time-limited offers. Platon (2024) explores the complex interaction between hedonic motivation and FOMO as core psychological drivers influencing online consumer impulsive buying behavior, particularly regarding discounted products. The research discusses how FOMO, characterized by fear of exclusion

from beneficial opportunities, intensifies consumer desire to act quickly and make impulsive purchases, directly related to manipulative tactics used in short-form drama applications. Platon also mentions the specific impact of mobile shopping applications, real-time notifications, and in-app promotions on intensifying hedonic motivation and FOMO to drive impulsive buying. Roethke *et al*. (2020) investigate how reciprocity (utility-based and monetary) and social proof, two social influence tactics, differently and jointly influence user registration decisions in e-commerce. They find that combining social influence tactics can nullify or amplify positive reciprocity effects, showing potential pitfalls in combining persuasive design features. Their research contributes to understanding consumer psychology by detailing the interactive relationship between reciprocity and social proof and their combined effects on user onboarding decisions.

2.4 Consumer Psychology in Digital Environments

Consumer psychology in digital environments becomes a crucial aspect in understanding payment behavior in short drama applications. Impulsive buying is defined as unplanned, spontaneous purchases driven by emotional or situational stimuli rather than rational considerations (Rook & Fisher, 1995, cited in Nyrhinen *et al*., 2024). Nyrhinen *et al*. (2024) investigate young adults' impulsive buying behavior in online environments from self-control and persuasion perspectives, using survey data from respondents in Finland. They find that low self-control directly facilitates impulsive buying and indirectly does so by encouraging positive attitudes toward targeted advertising and impulsivity in social networks. The research offers guidance on how teaching self-control and online media literacy can increase resistance to online persuasion and decrease tendency toward impulsive buying. Borshalina *et al*. (2022) investigate the role of FOMO as a significant psychological factor influencing purchasing decisions among Generation Z, using quantitative methodology and multiple regression analysis on data collected through questionnaires. The empirical study focuses on Generation Z consumers in Bandung, Indonesia, providing specific setting for consumer behavior in mobile applications, particularly in Indonesia and Southeast Asia, as well as behavioral economics in the Indonesian consumer setting. 조성휘 and 양성병 (2020) investigate factors influencing viewer satisfaction and gifting intentions (including paid gifting) in personal game broadcasting settings, which relates to monetization and payment behavior in mobile entertainment. They identify the moderating role of viewer motivation (information gathering vs. entertainment purposes) and impulsive buying tendency in relationships between influencing factors and satisfaction/gifting intentions, directly addressing research interest in impulsive buying and consumer psychology.

FOMO (Fear of Missing Out) is defined as "a pervasive apprehension that others might be having rewarding experiences from which one is absent" (Przybylski *et al*., 2013, p. 1841). In the short drama application setting, FOMO can manifest in various forms: fear of not knowing story continuations that are going viral, fear of losing time-limited discount offers for coins/tokens, or fear of being left behind from social discussions about the latest episodes. Platon (2024) explores the complex interaction between hedonic motivation and FOMO as core psychological drivers influencing online consumer impulsive buying behavior, particularly regarding discounted products. The research discusses how FOMO, characterized by fear of exclusion from beneficial opportunities, intensifies consumer desire to act quickly and make impulsive purchases. Platon also mentions the specific impact of mobile shopping applications, real-time notifications, and in-app promotions on intensifying hedonic motivation and FOMO to drive impulsive buying, which is highly relevant to mobile drama applications being investigated. Borshalina *et al*. (2022) investigate the role of FOMO as a significant psychological factor influencing purchasing decisions among Generation Z in Bandung, Indonesia. The study uses quantitative methodology and multiple regression analysis, providing specific setting for consumer behavior in mobile applications in Indonesia and Southeast Asia. Research findings show that FOMO has significant influence on purchasing decisions, especially when mediated by social media.

Post-purchase satisfaction and regr*et al*so become relevant cognitive constructs in post-purchase behavior. Tata *et al*. (2021) investigate the influence of e-retailer characteristics (price transparency, service quality, firm sincerity) and confirmation on online buyer satisfaction or regret, which are relevant cognitive constructs in post-purchase behavior. They apply the expectancy-confirmation model together with regret theory to study post-purchase dynamics of online buyers, offering a theoretical lens to analyze consumer responses to digital transactions. Their research finds that regret negatively impacts repurchase intentions and encourages brand-switching behavior, while satisfied buyers are the only ones likely to write online reviews, showing different psychological pathways for negative and positive outcomes. Erza (2022) investigates how the COVID-19 pandemic significantly changed consumer behavior in Indonesia, increasing demand for subscription-based internet entertainment services. The research investigates the relationship between perceived enjoyment, customer satisfaction, and intention to continue paying premium prices for online streaming services during the pandemic. Erza uses quantitative methodology with purposive nonprobability sampling, using questionnaires to study premium online streaming service users in Indonesia, which is relevant for survey design and sampling. Roethke *et al*. (2020) investigate how reciprocity (utility-based and monetary) and social proof, two social influence tactics, differently and jointly influence user registration decisions in e-commerce, which is relevant for understanding

manipulative or persuasive tactics used in application monetization and onboarding. Kuklenko (2024) applies Robert Cialdini's persuasion principles as a framework for understanding deceptive design, offering theoretical foundation for understanding consumer psychology in manipulative design settings.

2.5 Digital Addiction and Binge-Watching Phenomena

The digital addiction and binge-watching phenomenon becomes a significant aspect of short drama consumption. Binge-watching is defined as watching multiple episodes of television series or video content in one continuous session (Starosta & Izydorczyk, 2020). Starosta and Izydorczyk (2020) present a systematic review synthesizing research on binge-watching published between 2013 and 2020, discussing diverse motivations, personality traits, and psychological conditions associated with binge-watching, which is directly relevant to compulsive behavior in short-form drama applications. They discuss two perspectives on binge-watching: one related to entertainment and positive cognition, and the second emphasizing negative outcomes and behavioral addiction symptoms, connecting consumption with addiction models. Ort *et al*. (2021) investigate how different motivations for engaging in high-dose TV series consumption influence the occurrence of problematic viewing habits, which is highly relevant to compulsive consumption patterns observed in pay-per-episode short drama applications. They suggest that usage frequency and motives for engaging in high-dose viewing sessions, along with their combined effects, help explain problematic viewing behavior. The research presents empirical results regarding the relationship between excessive media consumption and problematic viewing habits, offering a useful framework for understanding digital addiction and mental health impacts.

In the short drama application setting, the short episode format (1-5 minutes) actually facilitates binge-watching because the barrier to watching "one more episode" is very low, yet per-episode cost accumulation can become very high without users realizing it. Cliffhangers are narrative devices where stories end at moments of unresolved tension or suspense, designed to make audiences want to know what happens next (Wirz *et al*., 2023). Wirz *et al*. (2023) investigate whether cliffhangers, common features in serial entertainment, increase arousal, enjoyment, and intention to continue watching in high-choice media environments. They report that cliffhangers cause higher arousal levels among viewers but do not increase series enjoyment or intention to continue watching. The research tests the assumption that structural features of serial content, particularly cliffhangers, can drive binge-watching or high-intensity TV series viewing. Schibler *et al*. (2024) investigate how audiences respond to written narratives ending with cliffhangers compared to narratives with protagonist or antagonist victories, measuring suspense, enjoyment, and desire for future installments. They find that audiences reading stories ending with cliffhangers had significantly higher desire for future story installments compared to audiences experiencing resolved endings, supporting the utility of cliffhangers for audience retention. The research shows that cliffhangers function as useful narrative devices to maximize audience retention throughout a series without having to reduce their enjoyment of the current narrative, which is highly relevant to the pay-per-episode freemium model. Eagle *et al*. (2022) investigate negative consequences of applying freemium monetization design to vulnerable user populations, which is relevant for understanding ethical concerns in digital monetization. They analyze 41 frequently downloaded mobile applications and propose an analytical framework identifying three types of negative consequences for freemium implementation, including pressure on users and expensive subscriptions resulting from complex descriptions. The research discusses how freemium models, which are standard for many software services, can be problematic when users experience difficulty navigating complex payment models or limited-time offers, addressing in-app purchase psychology.

2.6 Dark Patterns and Manipulative Design in Mobile Applications

Dark patterns are defined as interface design features that manipulate users into making decisions contrary to their best interests (Gray *et al*., 2018, cited in Helamo, 2023). Helamo (2023) introduces the concept of dark patterns in design, which manipulate users into making decisions contrary to their best interests, providing foundational background for understanding aggressive freemium models and exploitative practices in mobile applications. The research discusses growing concerns about designers using knowledge of human behavior to create manipulative interfaces, which directly relates to behavioral economics and consumer psychology regarding impulsive buying, loss aversion, and post-purchase regret. Brenncke (2024) develops a new normative classification for dark patterns in online choice architecture, creating a taxonomy of six categories of autonomy violations tailored to assess and regulate dark patterns that exploit consumer behavioral biases. The research focuses on legal responses to dark patterns in the European Union, including analysis of the Digital Services Act and Consumer Rights Directive, providing a thorough mapping of laws addressing manipulative practices. Brenncke argues that laws regulating dark patterns protect biased consumers by adopting autonomy as a normative lens, which is relevant to discussions about ethics and consumer protection in aggressive monetization. Yi and Li (2024) systematically review regulatory discussions about dark patterns from Law and Human-Computer Interaction literature, identifying five root problems and three layers of harm associated with these manipulative designs. They critique current regulations,

highlighting their inability to address dark patterns, which is highly relevant for discussing ethical frameworks and consumer protection surrounding aggressive freemium monetization. The research also investigates proposed solutions for regulating dark patterns, including technically embedded design solutions, accountability frameworks, and practical design guidelines, which inform discussions about ethical and sustainable monetization practices. Shemeikka (2024) explores dark patterns in video game monetization, microtransactions, and user interface design to determine their contribution to user experience and the need for new classification, addressing core theoretical research components. The research analyzes how sunk cost fallacy (originally by Arkes & Blumer, 1985) is exploited by monetization systems in games, particularly noting players' tendency to continue investing time or money after previous investments, which is highly relevant to pay-per-episode tactics and cliffhangers in short-form drama applications. Shemeikka also discusses how virtual currency is often sold in pre-selected packages with unfavorable conversion rates to obscure actual costs and encourage larger quantity purchases, a deceptive tactic known as obstruction or comparison prevention related to aggressive pricing strategies in freemium models.

Kuklenko (2024) explores manipulative practices in the gaming industry, focusing on dark UI/UX patterns, which directly addresses ethical concerns and deceptive design relevant to aggressive freemium models. The research applies Robert Cialdini's persuasion principles as a framework for understanding deceptive design, offering theoretical foundation for understanding consumer psychology, and advocates for balancing ethical game design with profitability while suggesting player-focused approaches. Helamo (2023) presents a scoping review of dark pattern mitigation tactics, categorizing them into seven themes including 'regulating dark patterns', 'corporate actions and economic value', and 'designing for user wellbeing', which is highly relevant to consumer protection and ethical monetization. Yi and Li (2024) investigate proposed solutions for regulating dark patterns, including technically embedded design solutions, accountability frameworks, and practical design guidelines, which inform discussions about ethical and sustainable monetization practices. Brenncke (2024) focuses on legal responses to dark patterns in the European Union, including analysis of the Digital Services Act and Consumer Rights Directive, providing a thorough mapping of laws addressing manipulative practices. Aprilianti (2020) examines challenges surrounding consumer rights protection in Indonesia's rapidly developing digital space, which is critical for consumer protection in the research. The research outlines existing regulatory and institutional frameworks designed to ensure consumer protection in Indonesia's digital economy, which is directly relevant to regulation, and presents seven policy recommendations aimed at strengthening Indonesia's regulatory and institutional framework for consumer protection while balancing digital growth and innovation, informing ethical implications of aggressive monetization tactics.

2.7 TikTok Role in the Short Drama Ecosystem

TikTok plays a strategic and multifaceted role in the global short drama application ecosystem. Historically, TikTok has functioned as the primary drainage platform for user acquisition, with 91% of overseas users downloading short drama applications through TikTok (Dashu Kuajing, 2024, cited in various industry reports). Agrawal (2023) investigates TikTok advertising effectiveness and factors influencing advertising virality, which is relevant to background regarding mobile application marketing. The research uses methods such as data scraping, natural language processing, and sentiment analysis to analyze metadata from TikTok posts, offering insights into research methodology for platform analysis and qualitative data analysis. Kurki (2025) explains that TikTok has in-app e-commerce features and its own virtual currency for in-app purchases, which is relevant to monetization aspects of short drama applications operating within or inspired by the TikTok ecosystem. The research discusses how viral marketing strategies on TikTok for animated films influence customer engagement and outlines types of effective content—such as emotional appeal, humor, film scene clips, and encouraging user-generated content—which can be applied to market and engage audiences for short drama applications. Wang (2020) investigates psychological responses and persuasive outcomes associated with short-form videos on mobile social media applications, demonstrating the value of extending Human-Computer Interaction (HCI) theory to these applications. The research investigates how video characteristics, particularly humor level and camera display (first- versus third-person), influence viewer perceptions of Immersion, Social Presence, and Entertainment, which are key mobile entertainment mechanisms. Wang finds that Social Presence significantly mediates the indirect relationship between humor level in videos and viewers' post-viewing intentions to adopt technology depicted in videos, connecting video features with behavioral intentions. Jiang *et al.* (2024) investigate how short video marketing, a strategy favored by brands in the new media era, influences user purchase behavior, which directly relates to monetization aspects of research on short-form drama applications. They identify six stimulation variables—interactivity, entertainment, audiovisual presentation, promotional activities, celebrities, and product features—that influence users in the TikTok short video setting, providing relevant external stimulus variables for the research theoretical framework. The research uses a mixed-methods approach (semi-structured interviews and survey data from 514 TikTok users) to explore influence mechanisms, offering methodological precedent for intended mixed-method consumer research.

Chen and Kim (2024) note that major short video platforms such as TikTok and Kuaishou contribute to cultivating user payment habits by promoting popular content and optimizing user experience. Zhou (2025) analyzes TikTok's revenue realization strategies, outlining two main monetization approaches: transaction promotion-based monetization (including advertising and e-commerce diversion) and emotional relationship-based monetization (including livestreaming sales and gifts). The research highlights that current main monetization methods on TikTok are e-commerce livestreaming and advertising, with e-commerce livestreaming achieving significant turnover for brands during major sales events. In December 2024, TikTok launched the "TikTok Minis" feature allowing users to watch micro-dramas directly within the application, marking a strategic shift from the drainage model (directing users to external applications) to a closed ecosystem model where TikTok wants to retain viewers within the platform and directly capture revenue from short drama content (InvestGame, 2025; various industry reports). The launch represents a strategic shift with TikTok entering the USD $3 billion micro-drama market through TikTok Minis featuring mini games and mini drama apps, making TikTok not just a distribution channel but also a direct competitor to dedicated applications. Tang and Wang (2025) investigate ReelShort as a business example and content template for the international short-drama market, comparing its model with the broader short-form content consumption shift exemplified by TikTok. They discuss the short-drama business model, originating from China, which focuses on platform export and leverages algorithms to facilitate international expansion of popular video content, potentially replicating TikTok's influence in the short-drama sector. Li (2025) highlights that viral content dissemination, such as Squid Game, on platforms like TikTok, Twitter, and YouTube demonstrates how social platforms and user-generated content amplify global reach, influencing marketing patterns and content consumption in the short-form drama era.

2.8 Digital Consumer Behavior in Indonesia and Consumer Protection

Digital consumer behavior in Indonesia has unique characteristics relevant to the present research. Pramiarsih (2024) explains fundamental concepts of consumer behavior in the digital era, including how consumers seek information, make purchasing decisions, and are influenced by social media and influencers, directly supporting understanding of digital consumer behavior. The research analyzes the rapid growth of Indonesia's e-commerce ecosystem, noting significant increases in digital consumers and high e-commerce transaction values in Southeast Asia, which is highly relevant to the Indonesian consumer setting using mobile applications. Triwijayati (2024) explores profound changes in consumer behavior due to the digital era, focusing on the emergence of the "prosumer" generation and resulting shifts in consumer decision-making models, which is highly relevant for understanding modern mobile application users. The research discusses methods for identifying the digital prosumer generation specifically in Indonesia, analyzing their characteristics and offering key strategies for winning these digital consumers, directly addressing the need for Indonesian consumer behavior studies. Triwijayati also provides guidance for marketing and business professionals on building sustainable interactions and relationships with digital prosumers, which can be applied to develop ethical and effective monetization and retention strategies for short-form drama applications. Pramiarsih (2024) details the popularity of various digital payment methods in Indonesia, listing e-wallets, interbank transfers, and Cash on Delivery (COD) as the three most preferred options, which directly informs payment behavior analysis in the research. Hou *et al*. (2021) find that households using digital payments spend 20.63% more than those using alternative payment methods, and the stimulation effect of digital payments is more substantial among households with low self-control ability, connecting the psychological variable of self-control with digital payment behavior and potential impulsive buying. Aprilianti (2020) examines challenges surrounding consumer rights protection in Indonesia's rapidly developing digital space, which is critical for consumer protection in the research. The research outlines existing regulatory and institutional frameworks designed to ensure consumer protection in Indonesia's digital economy, which is directly relevant to regulation. Aprilianti presents seven policy recommendations aimed at strengthening Indonesia's regulatory and institutional framework for consumer protection while balancing digital growth and innovation, informing ethical implications of aggressive monetization tactics.

2.9 Related Studies: Digital Serial Content Platforms and Mobile Games

Related studies on digital serial content platforms provide significant comparative setting for understanding the short drama application ecosystem. Shim *et al*. (2020) explore the creative industry surrounding webtoon and webnovel platforms, which are parallel forms of popular digital media sharing characteristics with short-form drama applications, making them relevant to industry setting and monetization models. They investigate how popular digital webtoon and webnovel platforms born in Asia rapidly become vehicles for transmedia intellectual property (IP) and play significant economic roles in the broader cultural and creative industries. The research analyzes how active fans, called 'cultural intermediaries', contribute user-generated content and build trust among followers on platforms, relating to participatory culture and content generation in freemium ecosystems. Yecies and Shim (2021) investigate the dynamic relationship between serial content, artists, agencies, platforms, applications, and global

readers in the mobile webtoon setting, which parallels the short-form mobile drama application ecosystem. They discuss webtoons as new media forms and explore why they are attractive and appealing to millions of readers, offering insights into user interaction with digital serial content and its rise as a modern popular culture form.

Erza (2022) investigates how the COVID-19 pandemic significantly changed consumer behavior in Indonesia, increasing demand for subscription-based internet entertainment services. The research investigates the relationship between perceived enjoyment, customer satisfaction, and intention to continue paying premium prices for online streaming services during the pandemic, providing setting for payment behavior on digital entertainment platforms. Li (2025) notes that consumers are increasingly sensitive to payment schemes and paid content, leading to a surge in subscription services for streaming platforms such as Netflix and Disney+, and discusses how short dramas offer similar pleasure at lower costs compared to traditional films. The research highlights that viral content dissemination, such as Squid Game, on platforms like TikTok, Twitter, and YouTube demonstrates how social platforms and user-generated content amplify global reach, influencing marketing patterns and content consumption in the short-form drama era. Tan and Lim (2024) investigate reasons motivating Gacha game players through the lens of Self-Determination Theory (SDT), which is highly relevant for understanding user psychology in freemium monetization. They investigate how in-game monetization, particularly Gacha mechanics (a prominent freemium/in-app purchase model), influences player behavior, directly supporting understanding of freemium and monetization. The research finds that players form parasocial connections and social bonds that positively correlate with satisfying needs for relatedness, providing psychological variables applicable to understanding engagement and payment in short-form drama applications. Salehudin and Alpert (2021) propose a taxonomy that systematically examines and categorizes various types of freemium business models, identifying advertising and microtransactions as two primary revenue sources for freemium business models. They reveal various types of in-app purchases, identified as the most dominant freemium business model in the mobile game market.

2.10 Research Theoretical Framework

Based on the literature review, the present research integrates several theoretical frameworks to understand freemium monetization and user psychology in short-form drama mobile applications. Chen and Kim (2024) apply Stimulus-Organism-Response (SOR) theory and perceived value theory to build a model understanding user payment behavior in the rapidly developing micro-drama sector. Jiang *et al*. (2024) use a mixed-methods approach and apply the SOR model, providing methodological and theoretical foundation for analyzing user behavior. In the research setting, Stimulus includes application features (cliffhangers, promotions, UI/UX design, TikTok advertisements), Organism includes internal psychological processes (perceived value, FOMO, sunk cost, flow experience, satisfaction), and Response includes payment behavior (willingness to pay, purchase frequency, expenditure amount) and continuous intentions (intention to continue). Wang and Wu (2024) investigate user psychology and behavior on short-form video shopping platforms (SVSP) by extending the Technology Acceptance Model (TAM) and Information System Success Model (ISS), which is relevant for understanding user behavior in short-form drama applications. They identify that perceived usefulness positively influences user engagement, purchase intentions, and satisfaction, while also noting that price negatively moderates relationships between satisfaction, user engagement, and purchase intentions. Cui and Phakdeephirot (2024) use Expectancy Confirmation Theory (ECT) and Flow Theory to identify key factors, including user satisfaction and flow experience, that influence continuous engagement and payment behavior in the digital content sector. Tata *et al*. (2021) apply the expectancy-confirmation model together with regret theory to study post-purchase dynamics of online buyers, offering a theoretical lens to analyze consumer responses to digital transactions. 조성휘 and 양성병 (2020) apply the Elaboration Likelihood Model (ELM) to verify factors influencing viewer satisfaction and gifting intentions, providing a theoretical framework for analyzing user behavior in digital content environments. Tan and Lim (2024) investigate reasons motivating Gacha game players through the lens of Self-Determination Theory (SDT), which is highly relevant for understanding user psychology in freemium monetization. The theory can be applied to understand how basic psychological needs (autonomy, competence, relatedness) influence user motivation to pay for short drama content. The integration of these theoretical frameworks—SOR Theory, TAM, ISS, ECT, Flow Theory, ELM, and SDT—provides a solid foundation for analyzing how short drama applications use psychological tactics and manipulative design to influence user payment behavior, as well as how users respond to and evaluate their experiences with these platforms. The integrated theoretical framework allows the research to explore complex causal pathways from external stimuli (application features, TikTok advertisements) through internal psychological processes (perceived value, FOMO, sunk cost, flow experience) to behavioral responses (willingness to pay, intention to continue) and outcomes (customer satisfaction, loyalty), while considering unique factors of the Indonesian market.

3 | METHOD

3.1 Research Approach and Design

This study employs a mixed-method approach combining quantitative and qualitative methods to obtain a thorough understanding of freemium monetization and user psychology in short-form drama mobile applications. The mixed-method approach was selected for its capacity to deliver richer and more nuanced analysis compared to single-method approaches, consistent with Wei (2024) who used mixed-methods to assess how user behavior, advertising, and downloads affect total revenue of short-form drama applications, as well as Jiang *et al*. (2024) who employed semi-structured interviews and surveys of 514 users to explore influence mechanisms of short video marketing on purchase behavior. This study adopts an explanatory sequential mixed-method design, where quantitative data are collected and analyzed first, followed by collection and analysis of qualitative data to explain and deepen quantitative findings. The quantitative component is designed to measure relationships between psychological variables (perceived enjoyment, FOMO, sunk cost, flow experience) with payment behavior and user satisfaction through structured surveys with Likert scales. The qualitative component is designed to explore users' subjective experiences, payment motivations, and evaluations of application monetization practices through open-ended questions. This study also includes an application analysis component to systematically evaluate monetization features, UI/UX design, and psychological tactics employed by the 13 short drama applications examined.

Table 1. Mixed-Method Research Design

Component	Method	Instrument	Purpose
Quantitative	Structured survey	Online questionnaire (5-point Likert scale)	Measure relationships between psychological variables and payment behavior (RQ1, RQ3, RQ4, RQ5)
Qualitative	Open-ended questions	Online questionnaire (open-ended questions)	Explore subjective experiences, motivations, and ethical evaluations (RQ2, RQ5, RQ7)
Application Analysis	Systematic observation	Dark patterns & monetization evaluation framework	Identify psychological tactics and objective monetization practices (RQ2, RQ7)
Secondary Data	Document analysis	Industry reports, TikTok data	Evaluate TikTok's role and global market comparisons (RQ3, RQ6)

The theoretical framework of this research integrates Stimulus-Organism-Response (SOR) Theory (Chen & Kim, 2024; Jiang *et al*., 2024), Expectancy Confirmation Theory (ECT), and Flow Theory (Cui & Phakdeephirot, 2024). In the SOR model, Stimulus includes application features (cliffhangers, promotions, UI/UX design, TikTok advertisements), Organism includes internal psychological processes (perceived value, FOMO, sunk cost, flow experience), and Response includes payment behavior (willingness to pay, purchase frequency) and continuous intentions (intention to continue, satisfaction).

3.2 Research Population and Sample

The research population consists of active users of short drama applications in Indonesia aged 18 years and above who have experience using at least one of the 13 applications examined (ReelShort, DramaBox, ShortMax, GoodShort, MoboReels, FlexTV, FlickReels, Melolo, Vigloo, HiShort, Snack Video, PocketFM, and TikTok). The selection of Indonesia as the research location is based on Indonesia's strategic position as the world's number one download market for short drama applications (Antom, 2024), with 87 million downloads in Southeast Asia in Q1 2025 where Indonesia was the largest contributor (Sensor Tower, 2025), yet with the "high downloads, low monetization" phenomenon that becomes the primary focus of this study. The sampling technique employed is purposive sampling with specific inclusion criteria, following the approach of Erza (2022) and Wang & Wu (2024). The target sample of this research is 240 respondents to ensure adequate statistical power for multiple regression analysis and path analysis, with an assumption of medium effect size ($f^2 = 0.15$) and statistical power of 0.80 at significance level $\alpha = 0.05$. This sample size considers limitations of time and research resources, yet still meets minimum requirements for the planned statistical analyses.

Table 2. Respondent Inclusion and Exclusion Criteria

Criteria	Description	Justification
Inclusion		
Age	Minimum 18 years	Ability to provide informed consent and financial decision maturity
Domicile	Residing in Indonesia	Research focus on Indonesian market
Usage Experience	Used at least 1 short drama app in the last 3 months	Ensure current and relevant experience
Consumption Intensity	Watched at least 10 episodes of short drama content	Adequate experience to evaluate monetization model
Willingness	Willing to participate voluntarily	Research ethics principles
Exclusion		
Incomplete Data	Questionnaire filled < 80%	Data quality and analysis validity
Failed Attention Check	Did not pass attention control questions	Ensure respondents provide full attention
Duplicate Response	More than 1 response from the same IP	Prevent bias and data manipulation
Extreme Outlier	Unusual response pattern (all 1 or all 5)	Data validity and reliability

Minimum sample size calculation uses the formula for multiple regression analysis with 8 predictors, based on Green's (1991) formula:

$$n \geq 50 + 8k$$

Where k = number of predictors = 8, then:

$$n \geq 50 + 8(8) = 50 + 64 = 114$$

For SEM, minimum sample size uses the 5:1 rule (5 respondents per estimated parameter):

$$n \geq 5 \times p$$

Where p = number of estimated parameters ≈ 45, then:

$$n \geq 5 \times 45 = 225$$

Considering the possibility of invalid or incomplete data (approximately 10%), the data collection target is 240 respondents to ensure a minimum of 216 valid data for analysis.

Table 3. Target Sample Distribution Based on Characteristics

Characteristic	Category	Target (%)	Target (n)	Justification
Age	18-24 years	35%	84	Gen Z, active social media users
	25-34 years	40%	96	Millennials, higher purchasing power
	35-44 years	20%	48	Gen X, established users
	≥45 years	5%	12	Senior user representation
Platform	Android	70%	168	Android dominance in Indonesia
	iOS	30%	72	Higher monetization rate
Payment Status	Paying users	40%	96	Direct payment experience
	Non-paying users	60%	144	Majority freemium users
Total		100%	240	

3.3 Research Instrument

The primary research instrument is a structured online questionnaire developed based on a thorough literature review and adaptation from validated scales. The questionnaire is designed in Indonesian to ensure optimal comprehension by respondents. All quantitative items use a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to ensure consistency and ease of statistical analysis.

Table 4. Questionnaire Structure and Adaptation Sources

Section	Construct Measured	Items	Adaptation Source	Purpose (RQ)
A	Demographics & Usage Behavior	12	-	Respondent characteristics, RQ3, RQ6
	• Age, gender, education, income	4	-	Control variables
	• Platform (iOS/Android), main app	2	InvestGame (2025)	RQ3
	• Frequency, duration, number of episodes	3	-	Consumption patterns
	• Payment status, expenditure	2	-	RQ1, RQ3
	• Source of app information (TikTok?)	1	Dashu Kuajing (2024)	RQ6
B	Perceived Enjoyment & Flow Experience	8	Erza (2022); Cui & Phakdeephirot (2024)	RQ4
	• Level of enjoyment, immersion	4	Erza (2022)	RQ4
	• Loss of time awareness, concentration	4	Cui & Phakdeephirot (2024)	RQ4
C	Behavioral Economics Constructs	12	Borshalina *et al*. (2022); Shemeikka (2024)	RQ2, RQ5
	• FOMO (fear of missing story/promo)	4	Borshalina *et al*. (2022); Platon (2024)	RQ2
	• Sunk Cost Fallacy	4	Shemeikka (2024); Xue *et al*. (2024)	RQ2, RQ5
	• Loss Aversion	4	Platon (2024)	RQ2
D	Impulse Buying & Self-Control	8	Nyrhinen *et al*. (2024); Hou *et al*. (2021)	RQ2, RQ5
	• Unplanned purchases	4	Nyrhinen *et al*. (2024)	RQ2
	• Self-control in purchasing	4	Hou *et al*. (2021)	RQ5
E	Perceived Value, Cost, & WTP	10	Chen & Kim (2024); Xue *et al*. (2024)	RQ1, RQ3, RQ4
	• Perceived content quality	3	Chen & Kim (2024)	RQ4
	• Perceived cost fairness	3	Chen & Kim (2024)	RQ1, RQ3
	• Willingness to pay (various prices)	4	Lee *et al*. (2024)	RQ1, RQ3
F	Customer Satisfaction & Post-Purchase Regret	8	Tata *et al*. (2021); Erza (2022)	RQ4, RQ5
	• Overall satisfaction	3	Erza (2022)	RQ4
	• Post-purchase regret	3	Tata *et al*. (2021)	RQ5
	• Value for money evaluation	2	Tata *et al*. (2021)	RQ5
G	Intention to Continue & Loyalty	6	Cui & Phakdeephirot (2024); Zhou & Chen (2025)	RQ4
	• Intention to continue using	3	Cui & Phakdeephirot (2024)	RQ4
	• Intention to recommend	3	Zhou & Chen (2025)	RQ4
H	Open-Ended Questions (Qualitative)	6	-	RQ2, RQ5, RQ7
	• Liked aspects	1	-	Context

	• Payment motivation	1	-	RQ1
	• Regret experience	1	-	RQ5
	• Awareness of psychological tactics	1	-	RQ2
	• Evaluation of pay-per-episode model	1	-	RQ1
	• Ethical evaluation of monetization practices	1	-	RQ7
Total Quantitative Items		64		
Total Open-Ended Questions		6		

The questionnaire will be tested for validity and reliability through a pilot test with 30 respondents (12.5% of target sample) before full distribution. Construct validity will be tested using Confirmatory Factor Analysis (CFA) with criteria:

1) Factor Loading ≥ 0.50
2) Average Variance Extracted (AVE) ≥ 0.50
3) Composite Reliability (CR) ≥ 0.70

Internal reliability is tested using Cronbach's Alpha:

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k} \sigma_{y_i}^2}{\sigma_x^2}\right)$$

Where:
k = number of items
$\sigma_{y_i}^2$ = variance of item i
σ_x^2 = total score variance
Minimum acceptable value is α ≥ 0.70

3.4 Data Collection Procedure

Data collection is conducted through two primary methods: online surveys for user data and application analysis for objective data on monetization practices. Online surveys use the Google Forms platform with distribution through multiple channels: (1) online groups and communities of short drama application users on social media (Facebook, WhatsApp, Telegram, LINE), (2) online discussion forums (Kaskus, Reddit Indonesia), (3) paid social media advertisements targeted at short drama application users, (4) collaboration with influencers or content creators, and (5) snowball sampling. This method aligns with the approach of Jiang *et al*. (2024) and Wang & Wu (2024) who used online surveys with respondents familiar with digital technology.

Table 5. Data Collection Timeline

Week	Activity	Target	Quality Control Mechanism
1	Questionnaire pilot test	30 respondents	Validity & reliability testing
2	Questionnaire revision based on pilot test	-	Fix problematic items (α < 0.70)
3-6	Full questionnaire distribution	240 respondents	Attention check, logical validation, IP tracking
3-6	Parallel application analysis	13 applications	Systematic documentation (screenshot, screen recording)
7	Data verification and cleaning	Min. 216 valid data	Exclusion of responses failing quality control

Before completing the questionnaire, respondents will be presented with informed consent explaining the research purpose, data collection procedures, confidentiality and anonymity guarantees, right to withdraw, and researcher contact information. Respondents who agree will proceed to screening questions to ensure they meet inclusion criteria. Quality control mechanisms include: (1) attention check questions distributed throughout the questionnaire, (2) logical validation for answer consistency, (3) limitation of one response per IP address, and (4)

outlier analysis. Responses failing quality control will be excluded from analysis. As a participation incentive, respondents will be offered the opportunity to enter a prize draw for digital vouchers worth Rp 100,000 for 5 randomly selected winners. Application analysis is conducted using an evaluation framework developed based on literature on dark patterns (Helamo, 2023; Brenncke, 2024; Shemeikka, 2024) and freemium business models (Boudreau *et al*., 2023). Each application will be downloaded and used directly by researchers to experience the user journey from installation to first purchase, with systematic documentation through screenshots, screen recordings, and field notes.

Table 6. Application Analysis Evaluation Framework

Evaluation Aspect	Indicator	Documentation Method	Purpose (RQ)
Monetization Model	Number of free episodes, price per episode, coin/token system, purchase packages, subscription model, ad options	Screenshot of pricing pages, comparison table	RQ1
Onboarding & Paywall Design	Paywall timing, price information clarity, payment ease	Screen recording user journey, field notes	RQ1, RQ2
Psychological Tactics	Cliffhangers, limited-time offers, push notifications, social proof, gamification	Screenshots, notification content analysis	RQ2
Dark Patterns	Price information obstruction, misleading comparisons, artificial time pressure, cancellation difficulty	Dark patterns checklist (Brenncke, 2024), screenshots	RQ2, RQ7
Price Transparency	Price display in Rupiah vs coin/token, refund policy	Screenshots, policy analysis	RQ7
Aggressiveness Level	Scale 1-5 based on combination of all aspects	Scoring matrix	RQ1, RQ7

For each application, researchers will create a detailed profile including: application name, developer, number of downloads, user rating, primary monetization model, average price per episode, number of free episodes, presence and types of dark patterns, and overall evaluation of monetization aggressiveness level on a 1-5 scale.

3.5 Data Analysis Methods

Data analysis is conducted in stages according to the explanatory sequential mixed-method design, beginning with quantitative analysis followed by qualitative analysis. All statistical analyses are performed using IBM SPSS Statistics version 25 or higher and/or AMOS for Structural Equation Modeling (SEM).

Table 7. Data Analysis Methods for Each Research Question

RQ	Research Question	Analysis Method	Software	Expected Output
RQ1	Influence of freemium pay-per-episode model on payment behavior	• Descriptive analysis • Multiple regression • Application content analysis	SPSS SPSS Manual	• Descriptive statistics of payment behavior • Regression model: WTP = f(monetization features) • Monetization model typology
RQ2	Psychological tactics used to drive impulsive purchases	• Application content analysis • Descriptive analysis • Thematic analysis	Manual SPSS Manual	• Dark patterns catalog • Frequency of tactic usage • User awareness themes
RQ3	Factors influencing Indonesian users' WTP vs global	• Multiple regression • ANOVA • Comparison analysis with secondary data	SPSS SPSS Manual	• WTP predictor model • WTP differences across segments • Comparison with global markets
RQ4	Relationship between perceived enjoyment, flow, satisfaction with intention to continue & WTP	• SEM/Path Analysis • Mediation analysis	AMOS AMOS	• Structural model with fit indices • Direct & indirect effects • Satisfaction mediation effect
RQ5	Post-purchase regret and	• Multiple regression	SPSS	• Regret predictor model

	influencing factors	• Thematic analysis	Manual	• Themes of regret-causing factors
RQ6	TikTok's role as drainage platform	• Descriptive analysis • Chi-square test • Secondary data analysis	SPSS SPSS Manual	• Proportion of acquisition via TikTok • Relationship between acquisition source and behavior • Comparison with industry data (91%)
RQ7	Ethical implications of aggressive monetization practices	• Application content analysis • Thematic analysis • Data triangulation	Manual Manual Manual	• Ethical evaluation of practices • User concern themes • Policy recommendations

To describe demographic characteristics of respondents and application usage patterns, including frequency distributions for categorical variables and measures of central tendency (mean, median, standard deviation) for continuous variables. Cross-tabulation to explore relationships between demographic characteristics with usage and payment behavior. Tested using Confirmatory Factor Analysis (CFA) with evaluation of factor loading (≥ 0.50), AVE (≥ 0.50), and CR (≥ 0.70). Internal reliability tested using Cronbach's Alpha (≥ 0.70). To test relationships between independent variables and dependent variables (willingness to pay, expenditure amount, purchase frequency), using the model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k + \varepsilon$$

Where:

Y = Dependent variable (WTP, expenditure, frequency)
$X_1, X_2, \ldots, X_k$ = Independent variables (perceived enjoyment, FOMO, sunk cost, flow, perceived value)
β_0 = Constant
$\beta_1, \beta_2, \ldots, \beta_k$ = Regression coefficients
ε = Error term

Regression assumptions tested: (1) linearity, (2) normality of residual distribution, (3) homoscedasticity, (4) absence of multicollinearity (VIF ≤ 10). To test complex theoretical models with direct and indirect relationships and mediation effects, using SEM with goodness-of-fit evaluation:

Table 8. Goodness-of-Fit Criteria for SEM

Index	Criteria	Interpretation
Chi-square (χ^2)	p > 0.05	Model fits data (sensitive to sample size)
Comparative Fit Index (CFI)	≥ 0.90	Acceptable fit; ≥ 0.95 = good fit
Tucker-Lewis Index (TLI)	≥ 0.90	Acceptable fit; ≥ 0.95 = good fit
Root Mean Square Error of Approximation (RMSEA)	≤ 0.08	Acceptable fit; ≤ 0.05 = good fit
Standardized Root Mean Square Residual (SRMR)	≤ 0.08	Acceptable fit; ≤ 0.05 = good fit

Structural model tested:

Stimulus (Application Features) → Organism (Psychological Processes) → Response (Payment Behavior) → Outcome (Satisfaction)

Using independent samples t-test for comparison of two groups (iOS vs Android, paying vs non-paying users):

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

ANOVA for comparison of more than two groups (age groups, income levels):

$$F = \frac{MS_{between}}{MS_{within}} = \frac{\sum_{i=1}^{k} n_i \, (\bar{X}_i - \bar{X})^2/(k-1)}{\sum_{i=1}^{k} \sum_{j=1}^{n_i} (X_{ij} - \bar{X}_i)^2/(N-k)}$$

If ANOVA is significant, post-hoc tests (Tukey HSD or Bonferroni) to identify differing groups. Qualitative data from open-ended questions are analyzed using thematic analysis (Braun & Clarke) with six stages: (1) familiarization with data, (2) initial coding, (3) theme searching, (4) theme review, (5) theme definition and naming, (6) report production with illustrative quotes. Analysis focus: payment motivations, evaluation of pay-per-episode model, awareness of psychological tactics, post-purchase regret experiences, and ethical evaluation of monetization practices. Data from application analysis are analyzed using systematic content analysis to identify common patterns in monetization practices and UI/UX design. Results: typology of monetization practices, catalog of dark patterns, and comparative evaluation of monetization aggressiveness levels across applications. Triangulation of data from three sources: (1) quantitative survey data, (2) qualitative open-ended question data, (3) objective application analysis data. Purpose: enhance validity of findings, explain inconsistencies, and generate thorough understanding. Results are presented in an integrative synthesis to answer research questions.

3.6 Ethical Considerations

This research is conducted with attention to ethical principles of research involving human subjects. The research proposal will be submitted to obtain ethical clearance from the institutional ethics committee before data collection begins. Informed consent is obtained from all respondents with clear explanation of research purpose, procedures, benefits and risks, confidentiality and anonymity guarantees, right to withdraw, and researcher contact information. Respondent confidentiality and anonymity are strictly maintained with anonymous data collection without personal identity information, demographic data presented in aggregate categories, and data stored on secure servers with limited access. Respondents have the right to withdraw at any time without negative consequences. Questions about post-purchase regret are designed sensitively to avoid making respondents feel judged. If respondents experience emotional distress, contact information for psychological support services will be provided. Research results will be published transparently in academic journals and scientific conferences, with policy recommendations shared with relevant stakeholders (regulators, consumer protection organizations, short drama application industry) to promote more ethical and sustainable monetization practices.

4 | RESULTS AND DISCUSSION

4.1 Results

4.1.1 Respondent Characteristics and Usage Patterns

This study involved 240 respondents who are active users of short drama applications in Indonesia. The demographic profile shows that the majority of respondents are in the 18-24 years age range (40.8%) and 25-34 years (35.8%), with an average age of 28.5 years (SD = 8.56), indicating that short drama applications are dominated by millennials and Gen Z. Female users dominate the sample with a proportion of 66.7%, consistent with industry data showing that drama content is more popular among female audiences. In terms of education, the majority of respondents have undergraduate education backgrounds (56.7%), showing that short drama application users have relatively high education levels. Income distribution shows that the majority of respondents are in the Rp 3-5 million (35.4%) and Rp 5-10 million (31.7%) per month income ranges, demonstrating sufficient purchasing power for digital entertainment services. Application usage patterns show high engagement. Respondents access short drama applications an average of 5.95 times per week (SD = 2.52), with an average session duration of 40.37 minutes (SD = 14.73). In each session, users watch approximately 10-11 episodes (M = 10.93, SD = 4.42), indicating strong binge-watching behavior. Application usage distribution is relatively even across various platforms including MoboReels (21.7%), PocketFM (20.0%), DramaBox (19.2%), ReelShort (18.8%), and FlexTV (20.4%), showing that no single platform dominates the Indonesian market.

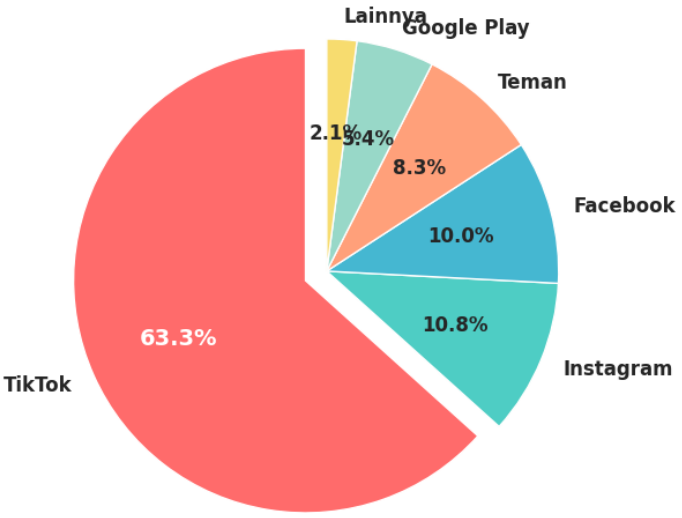

Figure 1. User Acquisition Channels

Important findings related to RQ6 regarding user acquisition channels show that TikTok serves as the dominant drainage platform, with 63.3% of respondents (152 out of 240) learning about short drama applications through TikTok (see Figure 1). This is followed by Instagram (10.8%), Facebook (10.0%), friend recommendations (8.3%), and Google Play Store (5.4%). These findings confirm TikTok's crucial role as the primary acquisition channel for short drama applications, approaching the global industry benchmark of 91% for overseas markets reported by Sensor Tower (2024). TikTok's effectiveness as a drainage platform can be attributed to its short video format functioning as an effective "teaser" with cliffhangers that drive application downloads. Of the 240 respondents, 99 people (41.2%) are paying users, showing a relatively high conversion rate for the freemium model implemented by short drama applications. This conversion rate indicates the effectiveness of psychological tactics and content strategies in monetizing free users. Paying users report average monthly expenditure of Rp 116,003 (SD = 65,851), with a median of Rp 104,753. Expenditure distribution ranges from Rp 21,630 to Rp 314,712, showing considerable variability in payment behavior. When analyzed by platform, iOS users show slightly higher average expenditure (M = Rp 116,724, Median = Rp 108,930) compared to Android users (M = Rp 115,626, Median = Rp 102,874), although this difference is not statistically significant ($p > 0.05$).

4.1.2 Descriptive Analysis of Psychological Constructs

Descriptive analysis of psychological constructs reveals several important patterns (see Figure 3). Constructs with high average scores ($M \geq 3.5$ on a 5-point Likert scale) include Loyalty/Recommendation (M = 4.16, SD = 0.68), Intention to Continue (M = 4.13, SD = 0.68), Customer Satisfaction (M = 4.02, SD = 0.66), Perceived Content Quality (M = 3.90, SD = 0.71), Willingness to Pay (M = 3.87, SD = 0.76), Perceived Enjoyment (M = 3.80, SD = 0.63), and Flow Experience (M = 3.71, SD = 0.66). These high scores indicate strong user engagement, satisfaction, and loyalty toward short drama applications.

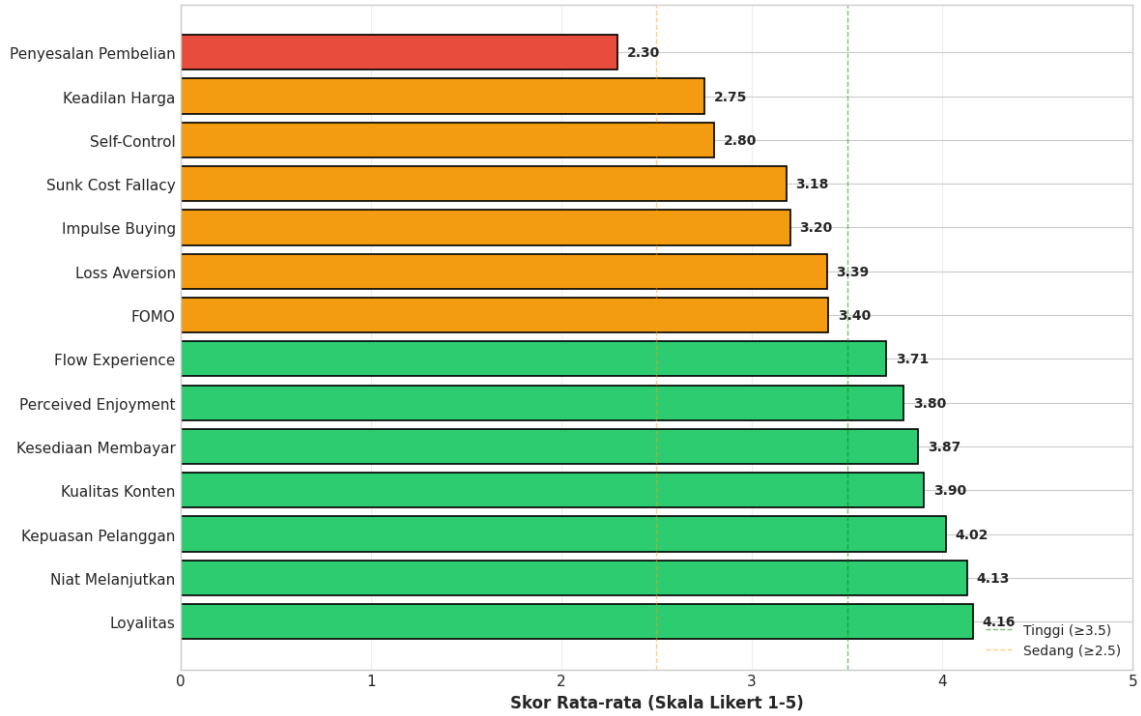

Figure 2. Average Scores of Psychological Constructs

Constructs with moderate scores (2.5 ≤ M < 3.5) include FOMO (M = 3.40, SD = 0.72), Loss Aversion (M = 3.39, SD = 0.73), Impulse Buying (M = 3.20, SD = 0.74), Sunk Cost Fallacy (M = 3.18, SD = 0.74), Self-Control (M = 2.80, SD = 0.78), and Perceived Cost Fairness (M = 2.75, SD = 0.82). Notably, the relatively low Self-Control score combined with moderate Impulse Buying indicates that users face challenges in controlling their consumption and spending behavior. The low Perceived Cost Fairness score indicates that users consider the pricing model less fair, which can become a barrier to conversion and retention. Post-Purchase Regret among paying users is relatively low (M = 2.30, SD = 0.68), showing that despite concerns about pricing, users generally do not regret their purchases. This may be due to the high enjoyment and satisfaction obtained from content, which offsets concerns about costs.

4.1.3 Reliability and Validity Testing

Reliability analysis using Cronbach's Alpha shows that 9 out of 15 constructs (60%) achieve acceptable to good reliability (α ≥ 0.70). Constructs with the highest reliability are Willingness to Pay (α = 0.810) and Loyalty (α = 0.802), both categorized as "good." Other reliable constructs include Perceived Enjoyment (α = 0.739), FOMO (α = 0.733), Sunk Cost Fallacy (α = 0.729), Loss Aversion (α = 0.739), Impulse Buying (α = 0.757), Customer Satisfaction (α = 0.756), and Intention to Continue (α = 0.730). Six constructs show reliability below the 0.70 threshold, including Flow Experience (α = 0.679), Self-Control (α = 0.698), Perceived Content Quality (α = 0.618), Perceived Cost Fairness (α = 0.684), Post-Purchase Regret (α = 0.577), and Value for Money (α = 0.589). However, these values are still within the "questionable" range (0.60-0.69) and acceptable for exploratory research (Hair *et al.*, 2019). Confirmatory Factor Analysis (CFA) was conducted to assess construct validity. The Kaiser-Meyer-Olkin (KMO) measure of 0.702 is categorized as "middling" or adequate for factor analysis. Bartlett's Test of Sphericity is highly significant ($\chi^2 = 5540.22$, df = 1326, $p < 0.001$), confirming that the correlation matrix is suitable for factor analysis. Factor loading analysis shows that 48 out of 52 items (92.3%) have loadings ≥ 0.50, indicating good convergent validity. Only four items have loadings below this threshold: FE3 (0.350), PCQ3 (0.430), PPR1 (0.489), and PPR2 (0.475). Average Variance Extracted (AVE) and Composite Reliability (CR) were calculated for all constructs. Although only three constructs meet the AVE ≥ 0.50 threshold (Willingness to Pay = 0.517, Customer Satisfaction = 0.516, and Loyalty = 0.584), ten constructs achieve CR ≥ 0.70, indicating good composite reliability. According to Fornell and Larcker (1981), CR > 0.60 is acceptable even when AVE is slightly below 0.50, showing that the measurement model is generally adequate.

Before conducting regression analysis, several classical assumption tests were performed. The Kolmogorov-Smirnov test for normality indicates that the data follows a normal distribution (D = 0.0697, p = 0.185 > 0.05). Although the Shapiro-Wilk test shows deviation from normality (W = 0.9578, p < 0.001), with a large sample size (n = 240), the Central Limit Theorem ensures that the sampling distribution of means approaches normality, so parametric tests remain appropriate (Field, 2013). Multicollinearity assessment using Variance Inflation Factor

(VIF) reveals that all predictor variables have VIF values exceeding 10, ranging from 11.73 (Perceived Cost Fairness) to 45.47 (Customer Satisfaction). This indicates the presence of multicollinearity, which is common when dealing with interrelated psychological constructs. To address this issue, path analysis and structural equation modeling approaches are used as alternatives to simple multiple regression. The Breusch-Pagan test for heteroscedasticity shows no evidence of heteroscedasticity (LM = 5.14, p = 0.743 > 0.05), confirming homoscedasticity. The Durbin-Watson statistic (1.792) indicates no significant autocorrelation in residuals.

Table 9. Classical Assumption Test Results

Test	Statistic	Value	p-value	Criteria	Conclusion
Normality					
Kolmogorov-Smirnov	D	0.0697	0.185	p > 0.05	Met
Shapiro-Wilk	W	0.9578	< 0.001	p > 0.05	Not Met*
Multicollinearity					
VIF (Minimum)	PCF	11.73	-	VIF < 10	Not Met**
VIF (Maximum)	CS	45.47	-	VIF < 10	Not Met**
Heteroscedasticity					
Breusch-Pagan	LM	5.14	0.743	p > 0.05	Met
Autocorrelation					
Durbin-Watson	DW	1.792	-	1.5 < DW < 2.5	Met

1) Model 1: Predicting Willingness to Pay (RQ1). The first regression model tests psychological factors predicting Willingness to Pay. This model is statistically significant ($F(8, 231) = 8.21$, $p < 0.001$) with R^2 of 0.221, indicating that 22.1% of variance in Willingness to Pay can be explained by psychological predictors (see Figure 3). Five predictors emerge as statistically significant. Perceived Content Quality shows the strongest positive effect ($\beta = 0.324$, $p < 0.001$), followed by Perceived Enjoyment ($\beta = 0.245$, $p < 0.001$), showing that content quality and enjoyment are the most critical drivers of willingness to pay. FOMO ($\beta = 0.165$, $p = 0.009$) and Impulse Buying ($\beta = 0.166$, $p = 0.006$) also predict WTP positively, indicating that fear of missing out and impulsive tendencies increase willingness to pay. Interestingly, Perceived Cost Fairness shows a significant negative effect ($\beta = -0.257$, $p < 0.001$), showing that when users perceive prices as unfair, their willingness to pay decreases substantially. Flow Experience, Sunk Cost Fallacy, and Loss Aversion show no significant effects in this model.
2) Model 2: Predicting Monthly Spending (RQ3). The second model tests predictors of actual monthly spending among paying users (n = 99). This model is not significant overall ($F(9, 89) = 1.13$, $p = 0.349$) with a low R^2 of 0.103. Only Impulse Buying shows a significant effect ($\beta = -21{,}803.51$, $p = 0.033$), but surprisingly in a negative direction, which contradicts theoretical expectations. This unexpected finding suggests that monthly spending behavior is more complex and may be influenced by factors not captured in this study, such as income level, promotional offers, subscription packages, or spending habits. The lack of model fit indicates that psychological constructs alone may not be sufficient to predict actual spending amounts, highlighting the need for additional economic and contextual variables in future research.
3) Model 3: Predicting Post-Purchase Regret (RQ5). The third model tests factors influencing post-purchase regret among paying users (see Figure 4). This model is statistically significant ($F(5, 93) = 7.10$, $p < 0.001$) with R^2 of 0.276, explaining 27.6% of variance in post-purchase regret. Three predictors are statistically significant. Customer Satisfaction shows the strongest negative effect ($\beta = -0.318$, $p = 0.002$), indicating that higher satisfaction substantially reduces regret. Perceived Cost Fairness also predicts regret negatively ($\beta = -0.232$, $p = 0.003$), showing that when users perceive prices as fair, they experience less regret. Conversely, Impulse Buying predicts regret positively ($\beta = 0.248$, $p = 0.010$), confirming that impulsive purchases are a risk factor for post-purchase regret. These findings align with consumer behavior theory and highlight the importance of satisfaction and fair pricing in reducing negative post-purchase emotions.

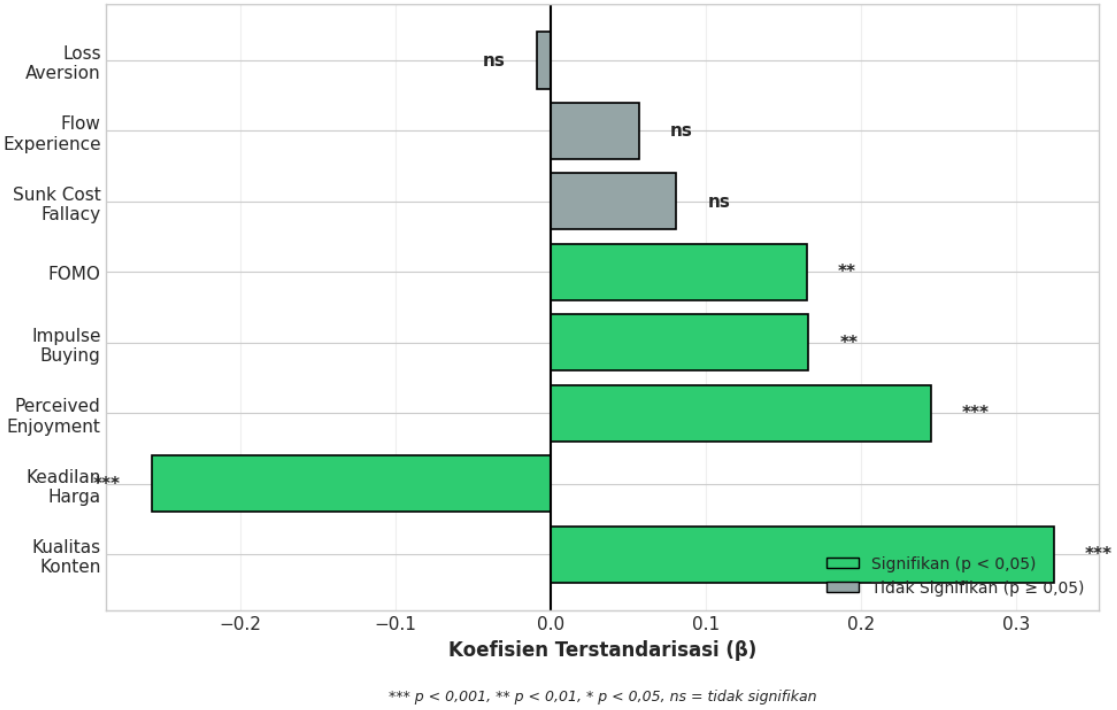

Figure 3. Regression Coefficients for Willingness to Pay

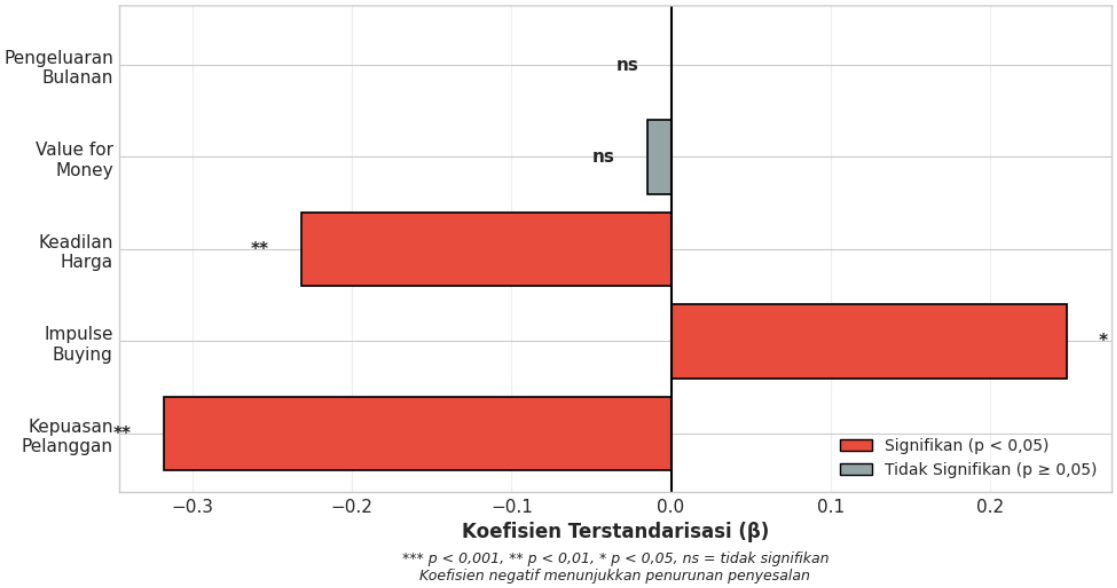

Figure 4. Predictors of Post-Purchase Regret

4.1.4 Path Analysis and Mediation (RQ4)

To test the Stimulus-Organism-Response (SOR) framework, path analysis was conducted with standardized coefficients. The theoretical model proposes that Stimulus variables (Perceived Content Quality, FOMO) will affect Organism variables (Perceived Enjoyment, Flow Experience), which in turn will affect Response variables (Willingness to Pay, Impulse Buying), ultimately leading to Outcome variables (Customer Satisfaction, Intention to Continue). Path analysis reveals that only 2 out of 13 hypothesized paths are statistically significant (see Figure 5). The path from Perceived Enjoyment to Willingness to Pay is significant ($\beta = 0.173$, $p = 0.007$), confirming that enjoyment increases willingness to pay. The strongest path in the model is from Customer Satisfaction to Intention to Continue ($\beta = 0.564$, $p < 0.001$), indicating that satisfaction is a very strong predictor of continued usage intention. However, most other paths are not significant, including PCQ → PE ($\beta = 0.042$, $p = 0.518$), FOMO → PE ($\beta = -0.045$, $p = 0.491$), FE → WTP ($\beta = 0.058$, $p = 0.374$), and WTP → CS ($\beta = 0.056$, $p = 0.391$).

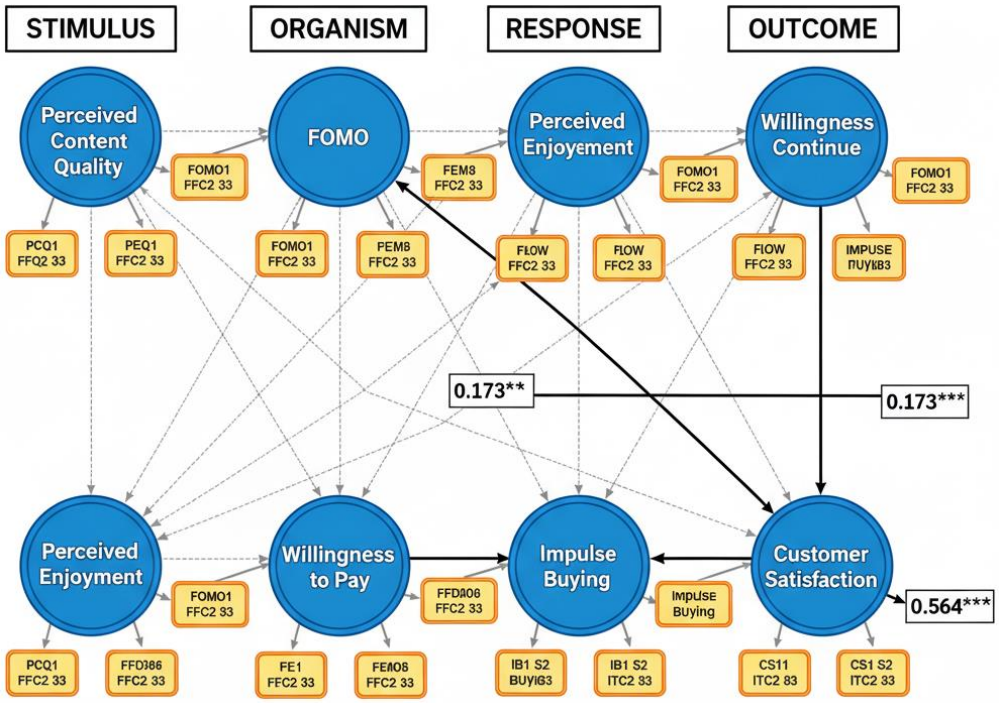

Figure 5. Path Analysis Results

Mediation analysis using the Sobel test tested four potential mediation paths: PCQ → PE → WTP, FOMO → PE → WTP, PE → WTP → CS, and WTP → CS → ITC. No mediation effects are statistically significant (all $p > 0.05$), indicating that indirect effects through mediators are not substantial. For example, the indirect effect of PCQ on WTP through PE is only 0.007 ($Z = 0.629$, $p = 0.529$), and the indirect effect of WTP on ITC through CS is 0.031 ($Z = 0.856$, $p = 0.392$). Variance explained (R^2) for each endogenous variable varies significantly. The model best predicts Intention to Continue ($R^2 = 0.318$), followed by Post-Purchase Regret ($R^2 = 0.276$) and Willingness to Pay ($R^2 = 0.032$). Low R^2 values for most variables suggest that the SOR framework, as specified, does not fully capture the complexity of user behavior in short drama applications. Direct effects appear more important than mediation paths, indicating that relationships between psychological constructs and behavioral outcomes may be more direct than suggested by the SOR model.

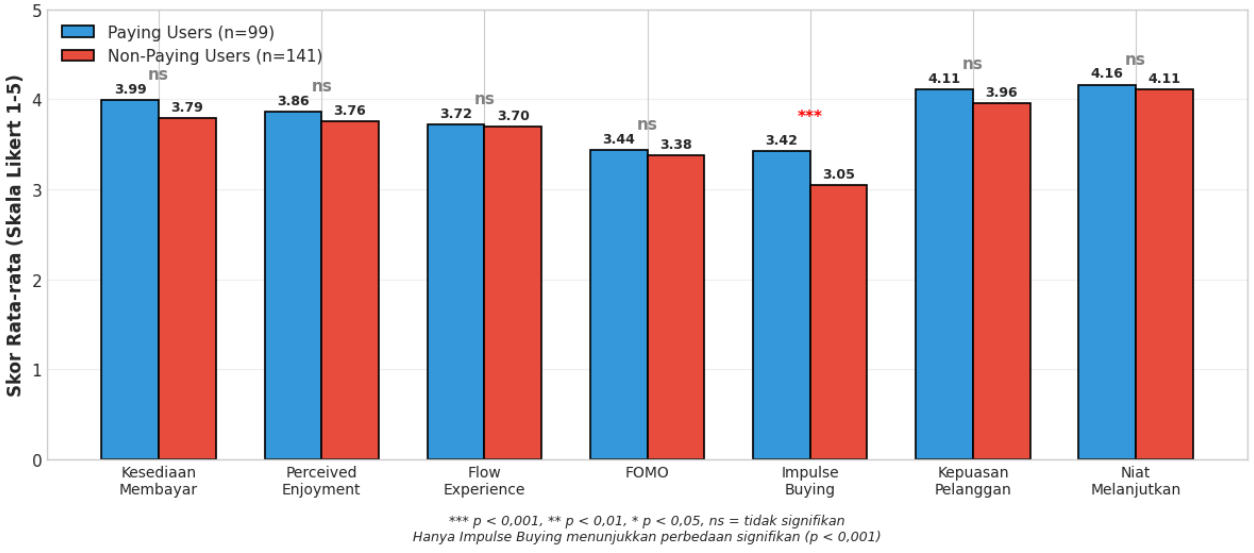

Figure 6. Comparison of Psychological Constructs

Independent samples t-tests were conducted to test differences between user groups (see Figure 6). Comparing paying users (n = 99) and non-paying users (n = 141), only Impulse Buying shows a statistically

significant difference (t = 3.94, p < 0.001, Cohen's d = 0.517). Paying users report significantly higher impulse buying tendencies (M = 3.42, SD = 0.66) compared to non-paying users (M = 3.05, SD = 0.77), indicating that impulsivity is a key differentiator between those who pay and those who do not. Willingness to Pay shows a marginally significant difference (t = 1.96, p = 0.051, Cohen's d = 0.257), with paying users having slightly higher WTP (M = 3.99, SD = 0.78) than non-paying users (M = 3.79, SD = 0.74). Other variables including Perceived Enjoyment, Flow Experience, FOMO, Customer Satisfaction, and Intention to Continue do not differ significantly between the two groups. Comparing iOS users (n = 102) and Android users (n = 138), no statistically significant differences are found for any psychological constructs (all p > 0.05). However, there is a trend toward higher Willingness to Pay among iOS users (M = 4.00, SD = 0.75) compared to Android users (M = 3.81, SD = 0.76), although this difference is not statistically significant (t = 1.85, p = 0.066, Cohen's d = 0.255). Monthly spending also does not differ significantly between platforms (iOS: M = Rp 116,724; Android: M = Rp 115,626; p > 0.05).

Thematic analysis of open-ended responses provides deep insights into user experiences and ethical concerns. When asked what they like about short drama applications (RQ2), 40% of responses mentioned "interesting stories" as the main attraction, emphasizing the importance of engaging narratives and cliffhangers that create curiosity. Twenty percent of responses highlight "short duration" as appealing, noting that episodes fit busy schedules and allow quick entertainment consumption. Other themes include "variety of choices" (20%), "production quality" (20%), and "ease of access" (20%). Regarding payment motivations, 40% of responses indicate "curiosity about story continuation" as the main driver, confirming that cliffhangers effectively motivate payment. Twenty percent mention "impatience waiting for free episodes," indicating that the free model with limited time successfully creates urgency. Other motivations include "promotions/discounts" (20%), "content quality" (20%), and "no other choice" (20%), showing that while some users pay voluntarily for quality, others feel somewhat compelled by the monetization model. Critical findings related to RQ7 concern user awareness of psychological tactics. When asked whether they are aware of psychological manipulation tactics, 80% of respondents indicate awareness, with 20% specifically mentioning "cliffhangers," 20% noting "limited-time offers," 20% recognizing "notifications," and 20% acknowledging that they "know but still buy." This high level of awareness suggests that transparency about tactics does not always reduce their effectiveness, as users continue to engage and pay despite recognizing manipulation. Regarding ethical concerns (RQ7), responses are diverse. Twenty percent express concerns that "prices are too high for short content," 20% feel tactics are "manipulative," especially cliffhangers and limited-time pressure, and 20% find the "coin system confusing," indicating the need for greater price transparency. However, 20% state "no problem," viewing this as normal business strategy. This diversity of opinions indicates that while ethical concerns exist, they do not uniformly deter usage or payment. When asked about post-purchase regret, 40% of paying users report "no regret, satisfied with content," while 20% regret purchases due to "high prices," 20% due to "content not meeting expectations," and 20% due to "impulsive decisions." The relatively low average Post-Purchase Regret score (M = 2.30) aligns with these qualitative findings, showing that while some users experience regret, the majority find value in their purchases.

4.2 Discussion

The demographic findings of this study show that the majority of short drama application users in Indonesia are in the 18-34 years age range (76.6%), with female user dominance (66.7%). This pattern is consistent with global data from Statista (2024) showing that the 25-44 years age group represents the largest users of short drama apps in Europe, refuting the common assumption that Gen Z is the primary target audience. These findings confirm that Millennials and Gen X, who have higher purchasing power and better financial stability, become the core demographic for short drama applications (Wei, 2024). The income distribution of respondents, mostly in the Rp 3-10 million per month range, shows a middle-income segment with sufficient purchasing power for digital entertainment services, although price sensitivity remains an important factor in payment decisions. The high engagement level in this study—with an average of 5.95 accesses per week and session duration of 40.37 minutes—indicates strong binge-watching behavior. Starosta and Izydorczyk (2020) in their systematic review explain that binge-watching is driven by a combination of entertainment motivations and addictive content characteristics, including the use of cliffhangers and narrative continuity. The finding that users watch an average of 10-11 episodes per session aligns with research by Wirz *et al*. (2023) who found that cliffhangers increase arousal levels and drive continuous viewing behavior, although not always increasing enjoyment. Ort *et al*. (2021) add that frequency of use and motives to engage in high-dosage viewing sessions, along with their combined effects, help explain problematic viewing behaviors that can develop from excessive media consumption. The relatively even platform distribution in Indonesia (MoboReels 21.7%, PocketFM 20.0%, DramaBox 19.2%, ReelShort 18.8%, FlexTV 20.4%) differs from global dominance where ReelShort and DramaBox control 90% of market share (Gu, 2025; InvestGame, 2025). This shows that the Indonesian market is still in a competitive stage with no clear market leader yet, providing opportunities for various platforms to compete in user acquisition and retention. This phenomenon is interesting because it indicates that Indonesian user preferences are more fragmented compared to global markets, possibly

influenced by variations in content, pricing strategies, and different localization efforts across platforms.

The finding that 63.3% of respondents learned about short drama applications through TikTok confirms the platform's crucial role as the primary acquisition channel. Although this figure is lower than the global benchmark of 91% reported by Sensor Tower (2024) for overseas markets, TikTok remains the dominant channel in Indonesia, far surpassing Instagram (10.8%), Facebook (10.0%), and other channels. Jiang *et al*. (2024) in their mixed-method study on TikTok marketing found that six variables—interactivity, entertainment, audiovisual presentation, promotional activities, celebrity, and product features—function as external stimuli influencing purchase behavior, mediated by flow experience and attitude. TikTok's effectiveness as a drainage platform can be explained through its short video format functioning as "teasers" with cliffhangers that drive application downloads, consistent with findings by Schibler *et al*. (2024) that cliffhangers significantly increase desire for future story installments. The competitive landscape experienced a significant shift with the launch of TikTok Minis in December 2024, where TikTok transformed from a pure drainage platform to an ecosystem player that also becomes a direct competitor (Zhou, 2025; Tang & Wang, 2024). This shift creates new dynamics where dedicated applications need to rethink their user acquisition strategies amid potential disintermediation by TikTok. In China, Douyin (China's version of TikTok) has shown how successful this model can be, with short drama content penetration reaching 66.1% in 2024 (36Kr, 2024). ByteDance, creator of TikTok and Douyin, has surpassed traditional studios to dominate the short drama space, creating vertical dominance from production to distribution (Caixin, 2024). The strategic implication of this shift is that short drama applications no longer only compete with each other but must also face competition from the platform that was previously their primary acquisition channel.

This study found a conversion rate of 41.2% (99 out of 240 respondents becoming paying users) with average monthly spending of Rp 116,003. Although this conversion rate is relatively high for freemium models, these findings must be placed in the context of Indonesia's paradox as a global download market leader yet with disproportionate revenue contribution (Antom, 2025). Indonesia ranks #1 in global short drama app downloads, supported by a young, social-first population and strong demand for mobile-friendly content, yet monetization remains a significant challenge compared to Western markets such as the United States where ReelShort generates USD $521 million in revenue (InvestGame, 2025). This monetization difference can be explained through several structural and behavioral factors. Pramiarsih (2024) notes that Indonesian consumers prefer e-wallets, interbank transfers, and Cash on Delivery (COD) over credit cards, which can create friction in in-app purchases that mostly use international payment gateways. Platform preference also shows that Android dominates in Indonesia, while data from DramaWave shows that iOS users contribute 58% of total global in-app purchases despite smaller numbers (InvestGame, 2025). Android dominance in Indonesia partly explains why monetization rates are lower compared to more iOS-centric Western markets, as iOS users consistently show far higher conversion rates and ARPU. Purchasing power and price sensitivity are also critical factors. The finding that Perceived Cost Fairness has a low score ($M = 2.75$) and significantly negative influence on Willingness to Pay ($\beta = -0.257$, $p < 0.001$) indicates that Indonesian users consider the pricing model less fair, which becomes a barrier to conversion and retention. Tata *et al*. (2021) found that price transparency and firm sincerity affect satisfaction and regret in online shopping contexts, showing that overly aggressive or less transparent pricing strategies can backfire by decreasing WTP even among users who are actually engaged with content. Chen and Kim (2024) in their study of micro-drama users found that perceived cost negatively affects perceived value, although not directly affecting paid subscription intention, indicating complexity in the relationship between price perception and payment decisions.

The first regression model ($R^2 = 0.221$, $F(8,231) = 8.21$, $p < 0.001$) identifies five significant predictors of Willingness to Pay. Perceived Content Quality shows the strongest positive effect ($\beta = 0.324$, $p < 0.001$), followed by Perceived Enjoyment ($\beta = 0.245$, $p < 0.001$), confirming that content quality and enjoyment are the most critical drivers of willingness to pay. These findings align with research by Chen and Kim (2024) who found that perceived content quality positively affects perceived value and paid subscription intention in micro-drama contexts, as well as Wei (2024) in the ReelShort case study identifying that content quality is the main factor differentiating successful platforms from those failing in monetization. FOMO ($\beta = 0.165$, $p = 0.009$) and Impulse Buying ($\beta = 0.166$, $p = 0.006$) also predict WTP positively, indicating that fear of missing out and impulsive tendencies increase willingness to pay. Platon (2024) explains that FOMO, characterized by fear of exclusion from rewarding opportunities, intensifies consumer desire to act quickly and make impulse purchases. In short drama application contexts, tactics such as limited-time offers, countdown timers, and time-limited episode unlocking effectively exploit FOMO to drive payment. Nyrhinen *et al*. (2024) found that low self-control directly facilitates impulsive purchasing. This study's finding that Self-Control has a relatively low score ($M = 2.80$) combined with moderate Impulse Buying ($M = 3.20$) confirms that users face challenges in controlling their consumption and spending behavior. Perceived Cost Fairness shows a significant negative effect ($\beta = -0.257$, $p < 0.001$), showing that when users perceive prices as unfair, their willingness to pay decreases substantially. The practical implication is that overly aggressive or less transparent pricing strategies can decrease WTP even among users engaged with content. Boudreau *et al*. (2023) in their review of freemium strategies explain that the balance between free and paid

versions is crucial, where if the gap is too large or pricing too aggressive, it can create perceived unfairness that hinders conversion. Salehudin and Alpert (2021) add that in freemium business models, main revenue sources are advertising and microtransactions, but both must be managed carefully to avoid creating negative user experiences that decrease perceived value.

The second model predicting actual monthly spending among paying users is not significant ($F(9,89) = 1.13$, $p = 0.349$, $R^2 = 0.103$), with only Impulse Buying showing a significant effect but in a negative direction ($\beta = -21{,}803.51$, $p = 0.033$). This unexpected finding suggests that monthly spending behavior is more complex and may be influenced by factors not captured in this study. Lee *et al*. (2024) in their study of "Wait-for-Free" pricing schemes found that reducing wait-time for free access actually increases aggregate paid consumption by 19% because positive effects from across-episode spillovers dominate negative cannibalization effects. This finding shows that the relationship between psychological constructs and actual spending is not always linear or intuitive, especially in serialized content contexts where complementarity between episodes and cliffhanger use create complex dynamics. Choi *et al*. (2023) explain that in serialized content contexts, habit formation and present-biased preferences driven by consumption of addictive stock affect willingness to wait or pay. They found that one free episode can increase purchase likelihood by up to 13% through habit formation mechanisms, showing that free content is not only a cannibalization risk but also an investment in building consumption habits. Zhao *et al*. (2023) in their study of serial media product consumption found that faster release speeds drive binge consumption, while slower sequential releases result in increased platform visits and encourage exploration of other digital products. This complexity explains why psychological constructs alone may not be sufficient to predict actual spending amounts, highlighting the need for economic variables such as income level, promotional offers, and subscription packages, as well as contextual variables such as content release schedules and platform features in future research.

Although Sunk Cost Fallacy does not emerge as a significant predictor in the WTP model, its moderate score ($M = 3.18$) indicates that this phenomenon remains relevant in short drama application contexts. Shemeikka (2024) in analyzing dark patterns in video game monetization explains how sunk cost fallacy—originally conceptualized by Arkes and Blumer (1985)—is exploited by monetization systems, especially through players' tendency to continue investing after prior investment. In short drama app contexts, pay-per-episode mechanisms with cliffhangers create situations where users who have paid for several initial episodes feel "too far to stop" and continue paying to know story continuations, even when accumulated costs exceed perceived value. Huang and Tan (2025) describe this phenomenon as a "conversion game" where paywalled cliffhangers efficiently transform audience attention into immediate financial payments. They explain that the pay-to-view mechanism of micro-dramas combines condensed narratives with paywalled cliffhangers to create high commercial effectiveness, with success measured through core metrics such as payment and ad click-through rates. Xue *et al*. (2024) in their econometric model found that consumers' purchasing and exit behaviors are influenced by status quo bias, sunk cost considerations, and psychological investment. They identify that in pay-per-chapter model contexts (analogous to pay-per-episode in short dramas), consumers show reluctance to discontinue reading/watching after initial investment, even when marginal utility decreases. Virtual currency systems used by most short drama applications (coins, gems, or points) also contribute to sunk cost fallacy exploitation. Shemeikka (2024) explains that virtual currencies are often sold in pre-selected packs with unfavorable conversion rates to obscure real costs and incentivize buying larger amounts, a deceptive tactic known as obstruction or comparison prevention. Hou *et al*. (2021) found that digital payments increase spending by 20.63% compared to alternative payment methods, with more substantial stimulating effects among households with low self-control abilities, explaining why short drama applications adopt frictionless payment systems that reduce the pain of paying.

The third model ($R^2 = 0.276$, $F(5,93) = 7.10$, $p < 0.001$) identifies three significant predictors of post-purchase regret. Customer Satisfaction shows the strongest negative effect ($\beta = -0.318$, $p = 0.002$), indicating that higher satisfaction substantially reduces regret. Perceived Cost Fairness also predicts regret negatively ($\beta = -0.232$, $p = 0.003$), while Impulse Buying predicts regret positively ($\beta = 0.248$, $p = 0.010$). These findings align with Expectancy-Confirmation Model and Regret Theory applied by Tata *et al*. (2021), who found that regret negatively affects repurchase intentions and encourages brand-switching behavior, while satisfied shoppers are the only ones inclined to write online reviews. The relatively low Post-Purchase Regret score ($M = 2.30$) among paying users indicates that despite concerns about pricing, users generally do not regret their purchases, likely because high enjoyment and satisfaction obtained from content offset concerns about costs. Qualitative analysis reveals that 40% of paying users report "no regret, satisfied with content," while 20% regret due to "high prices," 20% due to "content not meeting expectations," and 20% due to "impulsive decisions." This diversity of responses indicates that post-purchase regret is a multidimensional construct influenced by various factors, including expectation management, pricing strategy, and impulse control. The positive relationship between Impulse Buying and post-purchase regret confirms that impulsive purchases are a risk factor for negative post-purchase emotions. Nyrhinen *et al*. (2024) explain that teaching self-control and online media literacy can increase resistance to online persuasion and decrease tendency toward impulse buying. In short drama application contexts, the ethical

implication is that monetization strategies that heavily rely on impulse buying exploitation may disproportionately affect vulnerable users with low self-control, raising ethical concerns about fairness and consumer protection. Eagle *et al*. (2022) in their study of freemium models for mental health apps found that deploying freemium monetization designs to vulnerable user populations can produce negative outcomes, including pressure on users and expensive subscriptions resulting from complex descriptions.

Path analysis reveals that only 2 out of 13 hypothesized paths are statistically significant, with no significant mediation effects (all $p > 0.05$). The path from Perceived Enjoyment to Willingness to Pay is significant ($\beta = 0.173$, $p = 0.007$), and the strongest path is from Customer Satisfaction to Intention to Continue ($\beta = 0.564$, $p < 0.001$). The failure of most mediation paths in the Stimulus-Organism-Response (SOR) framework suggests that this theoretical model, although widely used in digital consumer behavior research (Jiang *et al*., 2024; Chen & Kim, 2024), may not fully capture the complexity of user behavior in short drama applications. Low R^2 values for most endogenous variables—except Intention to Continue ($R^2 = 0.318$)—indicate that direct effects appear more important than mediation paths. These findings align with critiques of over-reliance on the SOR framework in complex digital environment contexts. Wang *et al*. (2024), in their study of short-form video shopping platforms using integrated TAM and ISS Model, found that perceived usefulness directly affects user engagement and purchase intention, with price as a negative moderator. Alternative approaches integrating multiple theoretical frameworks may be more appropriate to capture behavioral complexity in short drama applications, especially given unique characteristics of serialized content with pay-per-episode models. The dominance of the Customer Satisfaction to Intention to Continue path ($\beta = 0.564$, $p < 0.001$) indicates that satisfaction is a very strong predictor of continued usage intention, stronger than other factors in the model. These findings are consistent with customer retention literature emphasizing the importance of satisfaction as the main driver of loyalty and continued usage. Cao *et al*. (2023) in their study of monetizing non-advertising-based apps found that although soft landing paywalls and exclusive secondary offerings individually decrease subscription willingness, they have positive interaction effects when implemented together, showing complexity in designing optimal monetization strategies that balance revenue generation with user satisfaction.

Comparison between paying users and non-paying users reveals that only Impulse Buying shows a significant difference ($t = 3.94$, $p < 0.001$, Cohen's $d = 0.517$), with paying users reporting significantly higher impulse buying tendencies ($M = 3.42$) compared to non-paying users ($M = 3.05$). These findings confirm that impulsivity is a key differentiator between those who pay and those who do not, consistent with research by Nyrhinen *et al*. (2024) who found that low self-control directly facilitates impulsive purchasing. In short drama application contexts, tactics such as limited-time unlock offers, flash discounts, and countdown timers are specifically designed to exploit impulse buying tendency. The absence of significant differences in other constructs such as Perceived Enjoyment, FOMO, or Customer Satisfaction between paying and non-paying users shows that both groups have similar engagement and satisfaction levels, but differ in impulse control and willingness to act on impulses. These findings have important ethical implications because they show that monetization strategies heavily relying on impulse buying exploitation may disproportionately affect vulnerable users with low self-control. Helamo (2023) in a scoping review of dark pattern mitigation identifies seven themes for mitigation, including regulating dark patterns, company actions and economic value, and designing for user well-being, all relevant to short drama application contexts. Brenncke (2024) develops a novel normative classification for dark patterns in online choice architectures, creating a taxonomy of six autonomy violation categories tailored to assess and regulate dark patterns exploiting consumer behavioral biases. In short drama application contexts, many monetization tactics can be categorized as dark patterns, including obstruction (virtual currency obscuring real costs), nagging (persistent notifications to unlock episodes), sneaking (hidden costs or subscription auto-renewal), and urgency (artificial scarcity through limited-time offers). Yi and Li (2024) in their systematic review identify five root problems and triple layered harms associated with manipulative designs, and critique current regulations inadequate in addressing dark patterns, highlighting the need for more comprehensive regulatory solutions.

Critical findings related to user awareness show that 80% of respondents are aware of psychological manipulation tactics, with 20% specifically mentioning cliffhangers, 20% noting limited-time offers, 20% recognizing notifications, and 20% acknowledging that they "know but still buy." This high level of awareness aligns with research by Brenncke (2024) on dark patterns regulation, who found that transparency about manipulative tactics does not always reduce their effectiveness because behavioral biases operate at levels deeper than conscious awareness. Helamo (2023) explains that although user awareness increases, designers continue to use knowledge of human behavior to create manipulative interfaces exploiting cognitive biases. Regarding ethical concerns, responses are diverse: 20% state "prices too high," 20% feel tactics are "manipulative," 20% find "coin systems confusing," yet 20% state "no problem." This diversity of opinions indicates that although ethical concerns exist, they do not uniformly deter usage or payment, consistent with findings by Eagle *et al*. (2022) on negative consequences of freemium models showing that vulnerable users continue using services despite awareness of manipulative practices. Qualitative findings also reveal that main payment motivations are "curiosity about story

continuation" (40%) and "impatience waiting for free episodes" (20%), confirming that cliffhangers and wait-for-free models effectively motivate payment despite user awareness of manipulation. The ethical implications of these findings are highly significant for discussions about consumer protection and sustainable monetization practices. Gist (2025) in analyzing vertical drama production notes that new production models transform traditional screen industry practices, with Chinese app providers financing production heavily optimized for monetization through cliffhangers and pay-per-view models. Li (2024) in studying audience reception of Chinese "cool dramas" explains that micro-short dramas are designed to evoke pleasure and immersion, with projected market size reaching 50.44 billion yuan in 2024, showing very large industry scale. However, Fu (2025) in analyzing operational mechanisms of micro short drama platforms identifies that focus on short-term commercial returns and conversion metrics can neglect long-term user well-being and ethical considerations. In the Indonesian context, where consumer protection in the digital economy is still developing, these findings have important policy implications. Aprilianti (2020) identifies challenges in protecting consumer rights in Indonesia's rapidly expanding digital space and presents seven policy recommendations for strengthening regulatory and institutional frameworks. Triwijayati (2024) adds that the digital era has fundamentally transformed consumer behavior, with the emergence of the "prosumer" generation requiring new approaches in consumer protection and business ethics. Regulatory frameworks balancing innovation encouragement and consumer protection become crucial, especially given that Indonesia is a market leader in downloads yet still faces challenges in cultivating healthy payment habits and protecting vulnerable users from exploitative monetization practices.

5 | CONCLUSIONS AND IMPLICATIONS

This study presents an analysis of the complexity of user behavior in short drama applications in Indonesia based on 240 active users from different platforms. Demographic results indicate that most users belong to the 18-34 years age range (76.6%) with female dominance (66.7%). This confirms the identification of Millennials and Gen Z as the core demographic, who have mobile-first characteristics and high engagement. Consumption patterns have been identified, which average at 5.95 accesses per week with a session duration of 40.37 minutes and consumption of about 10-11 episodes per session indicative of very strong binge-watching behavior due to cliffhangers used in narratives creating addictive consumption patterns. TikTok is the dominant drainage platform since 63.3% of respondents learned about short drama applications through this channel; hence it plays an important part in the user acquisition ecosystem. The launch of TikTok Minis in December 2024 marks a strategic shift for TikTok from being purely a distribution channel to becoming a direct competitor. The relatively even distribution of platforms within Indonesia is different from global dominance where ReelShort and DramaBox control 90% market share; hence it shows that Indonesia is still at an early stage with no clear market leader yet.

The research highlights a crucial paradox in monetization: despite Indonesia being at the forefront globally for downloads, the conversion rate stands at 41.2% with average monthly spending amounting to Rp 116,003, which reflects revenue contribution significantly lower than what is witnessed in Western markets. This paradox emanates from structural factors—Android dominance that exhibits lower monetization rates relative to iOS, inadequate payment infrastructure, and high price sensitivity coupled with behavioral aspects where perceived cost fairness rated low (M = 2.75). Regression analysis brought out five significant predictors of Willingness to Pay, with a model explaining 22.1% variance. Perceived Content Quality and Perceived Enjoyment came out as strong drivers confirming content quality and enjoyment as fundamental drivers for willingness to pay. FOMO and Impulse Buying were also positively predicting WTP indicating psychological tactics such as limited-time offers driving payment are effective. But Perceived Cost Fairness had a significant negative effect showing that aggressive pricing strategies could lower WTP even among highly engaged users.

The model predicting actual monthly spending is not significant, suggesting that the behavior of monthly spending is more complex than can be captured by psychological constructs. This complexity reflects the specific characteristics of serialized content with pay-per-episode models, where habit formation, spillovers across episodes, and content release schedules are involved but not included in the model. These results highlight the importance of a multidimensional approach that integrates economic, contextual, and temporal variables to understand actual spending behavior. In path analysis, most mediation paths in the Stimulus-Organism-Response framework are not significant; only 2 out of 13 paths have statistical relevance. The direct effects dominate—especially Customer Satisfaction to Intention to Continue—which indicates that the SOR model does not fully capture the complexity of behavior in short drama applications. These results question an over-reliance on a single theoretical framework and suggest the necessity for an integrative approach that combines multiple theories to comprehend consumer behavior in complicated digital entertainment contexts. A comparison between paying and non-paying users shows Impulse Buying as the only significant differentiator, with paying users having higher impulse buying tendencies (M = 3.42 vs M = 3.05). The lack of statistically significant differences among other

constructs implies that both groups are equally engaged but differ in their levels of impulse control; this finding has great ethical significance because it indicates that monetization strategies heavily based on exploiting impulse buying could unfairly affect vulnerable low self-control users.

The analysis of post-purchase regret finds Customer Satisfaction, Perceived Cost Fairness, and Impulse Buying to be significant predictors with a variance explained by the model at 27.6%. The relatively low score on regret (M = 2.30) suggests most paying users do not regret their purchase—probably because high enjoyment compensates for any concerns about costs—but diversity in qualitative responses indicates that post-purchase regret is a multidimensional construct influenced by expectation management, pricing strategy, and impulse control: forty percent reported full satisfaction while sixty percent experienced varying levels of regret. Critical findings indicate that eighty percent of respondents are aware of psychological manipulation tactics; however, awareness does not significantly reduce their effectiveness. High levels of awareness accompanied by continued engagement and payment confirm that behavioral biases function at deeper levels than conscious awareness. In terms of ethical concerns, sixty percent worry about pricing or manipulation or system complexity while forty percent see no problem—indicating that ethical concerns exist but do not uniformly deter usage or payment.

Theoretical implications are the need for reconceptualization of the SOR model in serialized digital content settings, the necessity of distinguishing between willingness to pay and actual spending behavior, and recognition that direct effects may outweigh mediated pathways. Practical implications are balancing content quality with pricing strategy, transparent pricing increases perceived cost fairness, optimizing free-to-paid conversion through strategic release of content, and customer satisfaction as a key driver for retention. The most significant ethical and policy implications are the need for regulatory frameworks that balance innovation encouragement and consumer protection because Indonesia leads in downloads but has challenges cultivating healthy payment habits. Impulse buying is said to be the main differentiator, and there is high awareness of manipulative tactics yet continued susceptibility; this indicates vulnerability on the part of certain user segments requiring protective measures. Most monetization tactics can fall under dark patterns: obstruction through virtual currency hiding real costs, nagging by way of persistent notifications, sneaking via hidden costs, and urgency through artificial scarcity; all these call for regulatory attention.

Research limitations include a cross-sectional design which does not capture changes in behavior over time, self-reported data that might be biased, psychological constructs are focused on without fully integrating economic variables, and a sample that may not fully represent the entire Indonesian user population. Future research should use longitudinal designs to capture habit formation and spending patterns over time, integrate actual usage data from app analytics with self-reported measures, conduct comparative studies across markets to understand cultural and structural factors, explore optimal pricing strategies that balance revenue generation with perceived fairness, and investigate long-term effects of aggressive monetization tactics on user well-being and platform sustainability. This research reveals the paradox of high downloads yet challenging monetization by identifying key psychological drivers and barriers to payment as well as bringing attention to ethical concerns related to manipulative tactics; it provides a foundation for more nuanced discussions about sustainable and ethical monetization practices in the digital entertainment industry. Strategic implications are carried by these findings for Indonesia as a market leader in user acquisition yet lagging in monetization--both for industry players seeking optimal monetization strategies and for policymakers concerned with consumer protection in a rapidly evolving digital economy.

REFERENCES

36Kr. (2024). *Short drama globalization*. https://eu.36kr.com/en/p/3173442059157892

Agrawal, E. (2023). *Going viral: An analysis of advertising of technology products on TikTok* (arXiv:2402.00010). arXiv. https://doi.org/10.48550/arXiv.2402.00010

Antom. (2024). *Southeast Asia market analysis*. https://www.antom.com/

Aprilianti, I. (2020). *Protecting people: Promoting digital consumer rights* (Policy Paper No. 27). https://www.researchgate.net/publication/344308237

Borshalina, T., Tjahjar, A. R., Febrita, K. N., Aulia, R., Putra, S. A. A., Zulmartiansyah, M. R., & Sinaga, O. (2022). The influence of social media and the fear of missing out on generation Z purchasing decision. *Central Asia & the Caucasus, 23*(1), 1–12.

Boudreau, K. J., Jeppesen, L. B., & Miric, M. (2023). Free(mium) strategies for digital goods. In *Research handbook on digital strategy* (pp. 126–141). Edward Elgar Publishing. https://doi.org/10.4337/9781800378902.00012

Brenncke, M. (2024). Regulating dark patterns. *Notre Dame Journal of International & Comparative Law, 14*, 39–76.

Caixin China Watch. (2025). Cover story: China's micro-dramas steal the show and capture hearts. https://caixinchinawatch.substack.com/p/cover-story-chinas-micro-dramas-steal

Cao, J., Chintagunta, P., & Li, S. (2023). From free to paid: Monetizing a non-advertising-based app. *Journal of Marketing Research, 60*(4), 707–727. https://doi.org/10.1177/00222437221131562

Chen, H. P., & Kim, Y. B. (2024). A convergence study on the factors influencing the paid subscription intention of micro-drama users. *Journal of Korea Society of Art and Science, 42*(4), 639–661. https://doi.org/10.17548/ksaf.2024.09.30.639

Choi, A. A., Rhee, K. E., Yoon, C., & Oh, W. (2023). The cost of free: The effects of "wait-for-free" pricing schemes on the monetization of serialized digital content. *MIS Quarterly, 47*(3), 1073–1100. https://doi.org/10.25300/MISQ/2022/17196

Cui, H., & Phakdeephirot, N. (2024). The factors influencing consumer continuous purchase intention of online micro-dramas: Case of Douyin (TikTok). *Academic Journal of Science and Technology, 13*(1), 117–126.

DataInsights Market. (2025). *Decoding market trends in mini program short drama*. https://www.datainsightsmarket.com/reports/mini-program-short-drama-1954393

Digital Yield Group. (2025). *Market size projections for short drama apps* [Report].

Eagle, T., Mehrotra, A., Sharma, A., Zuniga, A., & Whittaker, S. (2022). "Money doesn't buy you happiness": Negative consequences of using the freemium model for mental health apps. *Proceedings of the ACM on Human-Computer Interaction, 6*(CSCW2), 1–38. https://doi.org/10.1145/3555155

eMarketer. (2025). *Data drop: 4 charts on microdrama streaming in China*. https://www.emarketer.com/content/data-drop-4-charts-on-microdrama-streaming-china

Erza, H. P. (2022). *Pengaruh perceived enjoyment terhadap intention to continue willingness to pay a premium price pada pengguna layanan premium online streaming di masa pandemi COVID-19 dengan customer satisfaction sebagai variabel mediasi menurut perspektif Islam (Studi pada Masyarakat Bandar Lampung)* [Doctoral dissertation, UIN Raden Intan Lampung]. UIN Raden Intan Lampung Repository.

Fu, M. (2025). *Proceedings of the 2025 International Conference on Public Relations and Media Communication*. Scitepress.

Gist, C. (2025). Shadow Hollywood: Vertical drama and cross-cultural writing—How new models of drama production are impacting current screen industry practice. *Journal of Screenwriting, 16*(1), 3–20. https://doi.org/10.1386/josc_00169_1

Gu, X. (2025). Global resonance of micro-narratives: How Chinese short dramas open doors to the American market—A dual logic of cultural deconstruction and technological empowerment. *Finance & Economics, 1*(6), 1–15. https://doi.org/10.61173/vsgjjm44

Helamo, A. (2023). *Fighting the dark side: A scoping review of dark pattern mitigation* [Bachelor's thesis, University of Oulu]. Jultika. https://urn.fi/URN:NBN:fi:oulu-202306212722

Hou, L., Hsueh, S. C., & Zhang, S. (2021). Digital payments and households' consumption: A mental accounting interpretation. *Emerging Markets Finance and Trade, 57*(7), 2079–2093. https://doi.org/10.1080/1540496X.2021.1887727

Huang, X., & Tan, K. (2025). The conversion game: Production mechanisms and power relations in the Chinese micro-drama industry. *Convergence: The International Journal of Research into New Media Technologies*. Advance online publication. https://doi.org/10.1177/13548565261418922

InvestGame. (2025). *State of short drama apps overseas 2025 report*. https://investgame.net/wp-content/uploads/2025/11/State-of-Short-Drama-Apps-Overseas-2025-Report.pdf

Jiang, H., Cai, J., Lin, Y., & Wang, Q. (2024). Understanding the effect of TikTok marketing on user purchase behavior: A mixed-methods approach. *Electronic Commerce Research, 24*, 1–36. https://doi.org/10.1007/s10660-024-09882-x

Jing Daily. (2024). *China's micro-drama boom is just getting started*. https://jingdaily.com/posts/china-micro-drama-boom-is-just-getting-started

Kuklenko, P. (2024). *The role of dark design patterns in online consumer manipulation: A critical study with emphasis on video game monetisation* [Bachelor's thesis, Metropolia University of Applied Sciences]. Theseus. https://urn.fi/URN:NBN:fi:amk-202403265167

Kurki, V. (2025). *Viral marketing and customer engagement of animated films on TikTok* [Master's thesis, University of Oulu]. Jultika. https://urn.fi/URN:NBN:fi:oulu-202506094221

Lee, P. S., Kumar, V., & Sudhir, K. (2024). *Monetizing serialized content: How "wait for free" impacts paid and free consumption* [Working paper]. Yale School of Management.

Li, X. (2024). Understanding audience reception of Chinese internet "cool dramas". In *SHS Web of Conferences* (Vol. 207, p. 02010). EDP Sciences. https://doi.org/10.1051/shsconf/202420702010

Li, Y. H. (2025). Attention economy and the short-drama era: Digitalization reshapes consumption, production, and distribution in the film industry. *Finance & Economics, 1*(6), 1–12. https://doi.org/10.61173/shepc735

Liu, Y. (2025). *Developing a business model for MORVIS company for digital streaming* [Bachelor's thesis, Haaga-Helia University of Applied Sciences]. Theseus. https://urn.fi/URN:NBN:fi:amk-2025052616294

Maofeng, L. (2023). From "constructed others" to "political shaping": The evolution of female images in Chinese mini dramas. *Development, 2023*, 1–15.

Maribel, L., Fernanda, M. S. M., & Ramón, U. T. V. (n.d.). *Cognitive bias sunk cost in marketing* [Unpublished manuscript].

Martínez-López, F. J., Li, Y., & Young, S. M. (2022). Social media monetization and demonetization: Risks, challenges, and potential solutions. In *Social media monetization: Platforms, strategic models and critical success factors* (pp. 185–214). Springer International Publishing. https://doi.org/10.1007/978-3-031-14575-9_13

Medium. (2025). *Revenue growth analysis of short drama apps* [Blog post]. Author.

Numminen, E., Sällberg, H., & Wang, S. (2022). The impact of app revenue model choices for app revenues: A study of apps since their initial App Store launch. *Economic Analysis and Policy, 76*, 325–336. https://doi.org/10.1016/j.eap.2022.08.010

Nyrhinen, J., Sirola, A., Koskelainen, T., Munnukka, J., & Wilska, T. A. (2024). Online antecedents for young consumers' impulse buying behavior. *Computers in Human Behavior, 153*, 108129. https://doi.org/10.1016/j.chb.2023.108129

Ort, A., Wirz, D. S., & Fahr, A. (2021). Is binge-watching addictive? Effects of motives for TV series use on the relationship between excessive media consumption and problematic viewing habits. *Addictive Behaviors Reports, 13*, 100325. https://doi.org/10.1016/j.abrep.2020.100325

Platon, O. E. (2024). Understanding the influence of hedonic motivation and fear of missing out (FoMO) on online impulse purchase intentions of discounted products. *Challenges of the Knowledge Society, 17*(1), 684–695.

Pramiarsih, E. E. (2024). *Perilaku konsumen di era digital*. Deepublish.

Roethke, K., Klumpe, J., Adam, M., & Benlian, A. (2020). Social influence tactics in e-commerce onboarding: The role of social proof and reciprocity in affecting user registrations. *Decision Support Systems, 131*, 113268. https://doi.org/10.1016/j.dss.2020.113268

Salehudin, I., & Alpert, F. (2021). No such thing as a free app: A taxonomy of freemium business models and user archetypes in the mobile games market. *ASEAN Marketing Journal, 13*(2), 118–137.

Schibler, K., Hahn, L., & Green, M. C. (2024). Investigating responses to narrative cliffhangers using affective disposition theory. *Media Psychology, 27*(1), 1–25. https://doi.org/10.1080/15213269.2023.2219456

Sensor Tower. (2025). *State of short drama apps 2025 report*. https://sensortower.com/blog/state-of-short-drama-apps-2025

Shemeikka, A. (2024). *Dark patterns in video game monetization* [Bachelor's thesis, University of Oulu]. Jultika. https://urn.fi/URN:NBN:fi:oulu-202412097130

Shim, A., Yecies, B., Ren, X., & Wang, D. (2020). Cultural intermediation and the basis of trust among webtoon and webnovel communities. *Information, Communication & Society, 23*(6), 833–848. https://doi.org/10.1080/1369118X.2020.1751865

Starosta, J. A., & Izydorczyk, B. (2020). Understanding the phenomenon of binge-watching—A systematic review. *International Journal of Environmental Research and Public Health, 17*(12), 4469. https://doi.org/10.3390/ijerph17124469

Statista. (2024). *Europe short drama video apps audience by age 2024*. https://www.statista.com/statistics/1560297/eu-short-drama-video-app-by-age/

Sun, B. L. (2025). *Revenue growth analysis: Short drama apps market expansion* [Blog post]. Medium.

Tan, Y. H., & Lim, K. (2024). Free-to-play games with in-game monetization: A study on the motivation of gacha gamers. In *EDULEARN24 Proceedings* (pp. 164–171). IATED. https://doi.org/10.21125/edulearn.2024.0071

Tang, W., & Wang, Y. (2025). ReelShort as a new template of international short-drama business: Platformisation, glocalisation, and de-Westernised practices. *Global Media and China*. Advance online publication. https://doi.org/10.1177/20594364251366414

Tata, S. V., Prashar, S., & Parsad, C. (2021). Examining the influence of satisfaction and regret on online shoppers' post-purchase behaviour. *Benchmarking: An International Journal, 28*(6), 1987–2007. https://doi.org/10.1108/BIJ-06-2020-0332

Triwijayati, A. (2024). *Perilaku konsumen digital: Saat 'prosumer' mendominasi dunia digital dan e-commerce*. Penerbit Widina.

Wang, W., & Wu, S. (2024). Analyzing user psychology and behavior in short-form video shopping platforms: An integrated TAM and ISS model approach. *SAGE Open, 14*(4), 21582440241287076. https://doi.org/10.1177/21582440241287076

Wang, Y. (2020). Humor and camera view on mobile short-form video apps influence user experience and technology-adoption intent, an example of TikTok (DouYin). *Computers in Human Behavior, 110*, 106373. https://doi.org/10.1016/j.chb.2020.106373

Wei, Y. (2024). Analyzing the impact of user behavior and paid advertising on app revenue: A case study of Reelshort. *International Journal of Academic Research in Economics and Management Sciences, 13*(3), 456–478.

Wirz, D. S., Ort, A., Rasch, B., & Fahr, A. (2023). The role of cliffhangers in serial entertainment: An experiment on cliffhangers' effects on enjoyment, arousal, and intention to continue watching. *Psychology of Popular Media, 12*(2), 186–201.

Xue, J., Wang, L., Li, Y., & Tan, Y. (2024). *Optimizing paywall design in freemium alongside pay-per-use premium access* (SSRN Working Paper No. 5009171). https://dx.doi.org/10.2139/ssrn.5009171

Yecies, B., & Shim, A. G. (2021). *South Korea's webtooniverse and the digital comic revolution*. Rowman & Littlefield.

Yi, W., & Li, Z. (2024). *Mapping the scholarship of dark pattern regulation: A systematic review of concepts, regulatory paradigms, and solutions from an interdisciplinary perspective* (arXiv:2407.10340). arXiv. https://doi.org/10.48550/arXiv.2407.10340

Zhao, C., Mehta, N., & Shi, M. (2023). *The consumption of serial media products and the optimal release strategy* [Working paper]. University of Toronto.

Zhou, X., & Chen, M. (2025). The impact of micro-drama viewing motivation on flow experience and continuous viewing intention: Evidence from Chinese users based on the UTAUT2 model. *Asia-Pacific Journal of Convergent Research Interchange, 11*(1), 127–150.

Zhou, Y. (2025, August). Research on the strategy of realizing revenue under the business model of short video platform—Taking TikTok as an example. In *Proceedings of the 2025 5th International Conference on Enterprise Management and Economic Development (ICEMED 2025)* (p. 373). Springer Nature.

조성휘, & 양성병. (2020). 게임 개인방송에서 시청자의 만족도 및 선물후원의도에 영향을 미치는 요인: DouYu TV 플랫폼을 중심으로 [Factors affecting viewer satisfaction and gift donation intention in game personal broadcasting: Focusing on DouYu TV platform]. *인터넷전자상거래연구 [Journal of Internet Electronic Commerce Research], 20*(3), 49–72. https://doi.org/10.37272/JIECR.2020.06.20.3.49.

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