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The Effects of Online Reviews, Ratings, and Live Streaming on Purchase Decisions: Evidence from 3Second Consumers on TikTok Shop

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ABSTRACT

The growth of social commerce has transformed how consumers obtain information and make purchase decisions. TikTok Shop provides consumers with several information features, including online reviews, ratings, and live streaming, which may influence product evaluation and purchasing behavior. This study examines the effects of online reviews, ratings, and live streaming on purchase decisions for 3Second products on TikTok Shop. A quantitative associative research design was employed. Data were collected through an online questionnaire using a five-point Likert scale. The population consisted of 144 eighth-semester undergraduate students at IBM ASMI, from which 60 respondents were included in the study. Data were analyzed using validity and reliability tests, classical assumption tests, and multiple linear regression analysis with IBM SPSS Statistics version 27. The findings indicate that online reviews, ratings, and live streaming each have a positive and significant effect on purchase decisions. Online reviews produced a regression coefficient of 0.329 ($p = 0.038$), ratings produced a coefficient of 0.421 ($p = 0.013$), and live streaming produced a coefficient of 0.348 ($p = 0.003$). The overall regression model was statistically significant ($F = 32.805$, $p < 0.001$) and explained 63.7% of the variation in purchase decisions. Ratings and live streaming demonstrated relatively stronger standardized effects than online reviews. The findings suggest that consumer-generated information, aggregated evaluations, and interactive real-time content can complement one another in supporting consumer purchase decisions in the social commerce environment

INTRODUCTION

The development of digital technology has substantially changed the way consumers search for information, evaluate products, and make purchasing decisions. E-commerce has evolved beyond conventional online transactions into more interactive forms of digital commerce that integrate social interaction, content creation, and commercial activities. This development has contributed to the emergence and growth of social commerce, where consumers can discover products, interact with sellers, access user-generated information, and complete transactions within the same digital environment.

TikTok Shop represents one example of this increasingly interactive commerce environment. The platform enables consumers to access product information through various features, including written reviews, numerical ratings, short-form videos, and live streaming. These features provide consumers with different forms of information before making a purchase decision.

Online shopping differs from conventional shopping because consumers cannot always directly inspect or experience products before purchasing them. Consequently, consumers may rely on digital information cues to reduce uncertainty and evaluate product alternatives. Consumer-generated reviews,

numerical ratings, and interactive live streaming may therefore play important roles in supporting the decision-making process.

Online reviews provide prospective consumers with information based on the experiences and evaluations of previous buyers. Such information can help consumers assess product quality, identify potential advantages or disadvantages, and compare available alternatives. Previous research has demonstrated the importance of online customer reviews in influencing consumer purchasing behavior (Ardianti & Widiartanto, 2019; Latief & Ayustira, 2020; Verma et al., 2023).

Ratings represent another important source of information in digital commerce. Unlike written reviews, ratings provide a concise numerical representation of consumers' overall evaluations. Consumers may use ratings as a quick signal when evaluating product quality or comparing several alternatives. Research has shown that online customer ratings can contribute to consumer purchase decisions, particularly within marketplace environments where consumers are exposed to a large number of products and sellers (De Langhe et al., 2016; Lumansik & Kusuma, 2023).

In addition to consumer-generated evaluations, live streaming has become an important feature of social commerce. Live streaming enables sellers or hosts to demonstrate products and communicate with consumers in real time. Consumers can observe product characteristics, ask questions, and receive immediate responses. The interactive nature of live streaming may therefore provide richer product information and reduce uncertainty during the purchasing process (Qing & Jin, 2022; Liu et al., 2022).

Previous studies have examined the effects of online reviews, ratings, and live streaming on consumer behavior. Several studies have reported positive relationships between these social commerce features and purchase decisions (Khairul & Trianita, 2023; Salvati et al., 2025). However, the relative role of these information features may vary across research contexts, product categories, and consumer groups. Moreover, previous studies have often examined only some of these variables or have incorporated additional variables, such as trust, purchase intention, or promotional factors.

Accordingly, further evidence is needed regarding the simultaneous examination of online reviews, ratings, and live streaming within a specific social commerce context. These three features represent different forms of information available to consumers: online reviews provide experiential information from previous buyers, ratings provide aggregated evaluative signals, and live streaming provides interactive and real-time product information.

This study focuses on purchase decisions for 3Second products through TikTok Shop among eighth-semester undergraduate students at IBM ASMI. The study aims to examine the effects of online reviews, ratings, and live streaming on purchase decisions. By examining these three factors simultaneously, this study provides empirical evidence regarding the role of different social commerce information features in consumer decision-making.

Applications for Practice

The findings of this study offer practical implications for businesses operating through TikTok Shop.

First, businesses should encourage customers to provide informative and credible online reviews. Reviews can provide prospective consumers with information based on actual purchasing experiences and may help reduce uncertainty during product evaluation.

Second, businesses should maintain product and service quality to support favorable customer ratings. Ratings provide a concise evaluative signal that may influence consumers when comparing products.

Third, businesses should strengthen their live-streaming activities by providing clear product demonstrations, relevant information, interactive communication, and responsive engagement with potential customers. These activities may help

consumers better understand products before making a purchase decision.

METHODS

Research Design

This study employed a quantitative research approach with an associative design. The research was conducted to examine the effects of online reviews, ratings, and live streaming on purchase decisions.

The independent variables consisted of online review (X1), rating (X2), and live streaming (X3). Purchase decision served as the dependent variable (Y).

Population and Sample

The population consisted of 144 eighth-semester undergraduate students at IBM ASMI. The study involved 60 respondents. The sample size was determined using the Slovin formula with a margin of error of 10%.

The respondents were selected from the study population to provide information regarding purchase decisions for 3Second products through TikTok Shop.

Data Collection

Primary data were collected through an online questionnaire distributed using Google Forms. The questionnaire used a five-point Likert scale ranging from strongly disagree to strongly agree.

Secondary data were used to support the development of the research background and literature review.

Variables and Measurement

The study examined four variables: online review, rating, live streaming, and purchase decision.

Table 1. Variables and Measurement

Variable	Indicators	Measurement Scale
Online Review	Awareness, frequency, comparison, influence	Likert 1–5
Rating	Average rating, number of ratings, positive ratings, rating distribution	Likert 1–5
Live Streaming	Frequency, interactivity, content richness, enjoyment, host expertise	Likert 1–5
Purchase Decision	Purchase intention, actual purchase, recommendation, repeat purchase	Likert 1–5

Data Analysis

The data were analyzed using IBM SPSS Statistics version 27. The analytical procedures included descriptive statistics, validity testing, reliability testing, classical assumption tests, and multiple linear regression analysis.

The regression model was expressed as follows:

[PD = \beta_0 + \beta_1OR + \beta_2RA + \beta_3LS + \varepsilon]

Where:

- PD = Purchase Decision
- OR = Online Review
- RA = Rating
- LS = Live Streaming
- ε = Error term

Hypotheses were tested using the t-test for individual regression coefficients. The overall significance of the regression model was assessed using the F-test, while the coefficient of determination was used to evaluate the explanatory power of the model.

RESULTS AND DISCUSSION

Respondent Characteristics

The study involved 60 respondents.

Table 2. Respondent Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	20	33.3%
	Female	40	66.7%
Age	<21 years	3	5.0%
	21–22 years	30	50.0%
	23–24 years	25	41.7%
	>24 years	2	3.3%
Academic Program	Business Administration	24	40.0%
	Accounting	3	5.0%
	Management	29	48.3%
	Information Systems	4	6.7%

The respondent profile indicates that most participants were female and between 21 and 24 years of age. The largest proportion of respondents came from the Management program.

Measurement Assessment

The validity test indicated that all questionnaire items met the required validity criteria. The reliability results also demonstrated acceptable internal consistency for all constructs.

Table 3. Reliability Results

Variable	Number of Items	Cronbach's Alpha
Online Review	8	0.776
Rating	8	0.771
Live Streaming	10	0.719
Purchase Decision	8	0.851

All constructs demonstrated acceptable reliability.

Classical Assumption Testing

The regression model was evaluated using normality, multicollinearity, and heteroscedasticity tests.

The normality test produced a significance value of 0.200, indicating that the residuals satisfied the normality assumption. The multicollinearity test showed acceptable tolerance and VIF values, with VIF values ranging from 1.666 to 2.528. The heteroscedasticity test did not indicate a systematic pattern suggesting heteroscedasticity.

Therefore, the regression model was considered appropriate for hypothesis testing.

Hypothesis Testing

Table 4. Multiple Linear Regression and Hypothesis Testing

Hypothesis	Relationship	B	Standardized β	t-value	p-value	Decision
H1	Online Review ⟶ Purchase Decision	0.329	0.271	2.121	0.038	Supported
H2	Rating ⟶ Purchase Decision	0.421	0.322	2.557	0.013	Supported
H3	Live Streaming ⟶ Purchase Decision	0.348	0.322	3.101	0.003	Supported

The regression analysis indicates that all three independent variables had positive and statistically significant effects on purchase decisions.

The regression equation is:

[PD = -7.144 + 0.329OR + 0.421RA + 0.348LS + \varepsilon]

Discussion

Online Reviews and Purchase Decisions

The results demonstrate that online reviews have a positive and significant effect on purchase decisions (B = 0.329, β = 0.271, p = 0.038). Therefore, H1 is supported.

This finding indicates that consumer-generated information contributes to the decision-making process of consumers purchasing 3Second products through TikTok Shop. Reviews provide prospective buyers with additional information regarding the experiences and evaluations of previous consumers. Such information may reduce uncertainty when consumers cannot directly inspect a product.

The finding is consistent with Ardianti and Widiartanto (2019) and Latief and Ayustira (2020), who found that online customer reviews influence consumer purchase decisions. It also supports the broader findings of Verma et al. (2023), who emphasized the importance of online reviews in shaping consumer purchase intentions.

However, online reviews demonstrated the lowest standardized coefficient among the three predictors. This suggests that, although consumer reviews remain important, consumers in this particular context may place relatively greater emphasis on easily accessible rating information and interactive product presentations.

Ratings and Purchase Decisions

Ratings have a positive and significant effect on purchase decisions (B = 0.421, β = 0.322, p = 0.013). Therefore, H2 is supported.

This finding suggests that ratings function as an important evaluative signal within the TikTok Shop environment. Consumers may use numerical ratings to quickly assess how previous buyers have evaluated a product. When consumers are faced with multiple alternatives, ratings can simplify the comparison and evaluation process.

The finding is consistent with De Langhe et al. (2016), who examined the role of online ratings in consumer judgment, and with Lumansik and Kusuma (2023), who investigated online customer ratings and purchase decisions in TikTok Shop.

Ratings demonstrated one of the highest standardized coefficients in the model. This result suggests that concise and easily interpretable evaluation signals may play an important role in supporting consumer decision-making.

Live Streaming and Purchase Decisions

Live streaming has a positive and significant effect on purchase decisions (B = 0.348, β = 0.322, p = 0.003). Therefore, H3 is supported.

Although ratings and live streaming had the same standardized coefficient, live streaming produced the highest t-value and the lowest significance value among the predictors. This result indicates a strong statistical relationship between live-streaming activities and purchase decisions in the research context.

The finding supports previous research on the role of live streaming in consumer behavior (Qing &

Jin, 2022; Liu et al., 2022). It is also consistent with Khairul and Trianita (2023), who examined the influence of live streaming on purchase decisions in TikTok Shop.

The result may be explained by the interactive characteristics of live streaming. Unlike written reviews or numerical ratings, live streaming allows consumers to observe products in real time and interact directly with sellers or hosts. For fashion products such as 3Second, this visual and interactive information may help consumers evaluate product characteristics before making a purchase.

Overall Model Results

Table 5. Model Summary

Statistic	**Value**
R	0.798
R^2	0.637
Adjusted R^2	0.618
F-value	32.805
Significance	<0.001

The overall regression model was statistically significant. The coefficient of determination indicates that online reviews, ratings, and live streaming collectively explained 63.7% of the variation in purchase decisions.

The remaining 36.3% of the variation may be associated with other factors not included in the model.

Overall, the findings indicate that the three variables represent complementary sources of consumer information. Online reviews provide information based on previous consumer experiences, ratings provide aggregated evaluative signals, and live streaming offers interactive and real-time product information.

CONCLUSION

This study examined the effects of online reviews, ratings, and live streaming on purchase decisions for 3Second products through TikTok Shop among eighth-semester undergraduate students at IBM ASMI.

The findings demonstrate that all three variables have positive and significant effects on purchase decisions. Online reviews significantly influence purchase decisions, indicating that consumer-generated information contributes to the evaluation process. Ratings also have a significant positive effect, suggesting that numerical evaluations serve as an important signal for consumers when assessing products. Live streaming likewise has a positive and significant effect, highlighting the importance of interactive and real-time information in social commerce.

The regression model explained 63.7% of the variation in purchase decisions. Among the predictors, ratings and live streaming demonstrated relatively stronger standardized effects than online reviews.

The findings contribute empirical evidence that different forms of social commerce information can complement one another in supporting consumer decision-making. Online reviews provide experiential information, ratings offer aggregated evaluations, and live streaming provides interactive product information.

From a practical perspective, businesses selling products through TikTok Shop should encourage informative consumer reviews, maintain product and service quality to support favorable ratings, and improve live-streaming activities through clear product demonstrations and interactive communication.

This study is limited by its sample size and specific respondent group. The study involved 60 respondents from a single educational institution and

focused on one product brand. Therefore, the findings should be interpreted within the context of the study.

Future research may involve larger and more diverse samples, examine different product categories or social commerce platforms, and incorporate additional variables that may influence purchase decisions.

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