Short Videos, Big Decisions: A Preliminary Study of Tik Tok's Role in E-Commerce Consumer Behaviour

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ABSTRACT

This study aims to investigate the effects of short videos on consumers' purchase intention using the Stimulus-Organism-Response (SOR) model. Specifically, the study examined the impact of three stimulus variables - price level, quality, and commodity practicability - on consumers' sense of trust, pleasure, and virtual touch, which in turn influence their purchase intention. Quantitative survey questionnaires via online platforms to reach a total of 103 Tik Tok users. One-Way Analysis of Variance (ANOVA) was used to test the significance of the hypotheses. The study’s findings revealed that consumers are more likely to trust and be satisfied with short videos that have high picture quality (p-value = 0.001). However, the lower price level of the product did not necessarily lead to greater trust and satisfaction (p-value = 0.635). The usefulness of the product did not significantly influence consumers’ sense of pleasure (p-value = 0.052). These findings have important practical implications for marketers seeking to use short videos to promote their products. The study’s results suggest that high-quality videos can help build trust and increase consumer satisfaction, but lowering prices may not necessarily have the same effect. Therefore, marketers should be cautious when using price discounts to increase consumers' trust and satisfaction.

Keywords: Buying Behavior, E-Commerce, Price Level, Quality, Short Video.

I. INTRODUCTION

With the continuous development of the Internet, short videos have become a major means for people to obtain content information. In particular, due to the outstanding characteristics of strong connectivity and low threshold, it has become an essential social language and popular culture in development. This allows people to browse short videos and obtain relevant information in fragmented time (Zhang, 2022). Through the continuous development of short videos, traffic value is also continually updated from pure entertainment to product delivery. One of the current trends is to produce quality short video content for more dividends and business opportunities (Zhang, 2021). Short video is a crucial marketing tool for enterprises. In-depth analysis of the influence of short video content marketing on consumers' purchase intention can further help enterprises to plan and optimize marketing strategies for the near future. Short videos mainly refer to videos that are counted in seconds. Through the use of mobile phone Internet terminals to create new types of videos, the captured content can be beautified and edited. The captured content can be uploaded and shared on social networking platforms anytime, anywhere (Lu & Lu, 2019).

II. REVIEW OF THE LITERATURE

Yang et al. (2019) stated that most netizens prefer relatively rich, interesting, and short videos. At this stage of development, short videos can better meet the actual needs of users. According to them, short videos are fun, fast, and exciting. It can give the audience an intuitive feeling and can effectively meet the audience's communicative and entertainment needs. In recent years, short videos have developed rapidly in Malaysia, have a large audience, and also have high commercial value. While Zhou (2021) highlighted that short video content marketing is spreading through the Internet, the rapid development of today's mobile Internet technology enables people to browse the web anytime, anywhere through mobile phones, tablets and other devices. He further elaborated that the time and money invested in short video content marketing are relatively small, mainly through the production of micro-videos for products or brands through short video platforms to achieve the purpose of promotion, so that more users can notice that the company's products or brands have a deeper understanding, thereby guiding users to consume.

Now with the continuous development of mobile networks and the Internet, the popularity of smart phones is constantly increasing. Consumers can directly use their mobile phones to access relevant video content, which greatly reduces the
cost of publicity. Compared with the page limit of paper media and the time limit of TV media, E-commerce short videos can be continuously played on the Internet. This greatly reduces its marketing costs, and the corresponding product prices will also be cheaper, and attracting more consumers (Dwivedi et al., 2021). They argued that E-commerce short videos have made significant breakthroughs, with a strong sense of design and strong sensory stimulation from the audience, which can attract more audiences. E-commerce short videos allow consumers to purchase products at any time and can be used for online and offline promotions. The short video platform can be used to effectively interact with users. The number of users on the short video platform is very high. For example, Tik Tok, which is often used, has numerous entertainers interacting with self-made videos, attracting a large number of users and being able to interact well with users. Many people have also been fascinated by the relatively modern video format. Short video users have tens of millions of fans, making many video creators into Internet celebrities in the Internet era (Yang, 2020).

E-commerce short videos build an effective link between advertisements and product purchases. When the audience is interested in the content of the short video, they only need to click on the content marketing page of the short video. This will enable them to make a direct purchase. Not only that, but it is also very convenient to search. The merchant's short video content encourages users to follow and become fans. When the merchant updates the content of the short video, it will appear in the fan interface. Fans can get information by “sharing”. This greatly reduces the time users spend searching, and also effectively reduces the cost of promotion. The speed of e-commerce short video content marketing is very fast. Using the mobile Internet is the primary method of e-commerce video content marketing. Register an account on a smart terminal, and then shoot, beautify, edit, and upload the content (Zhou, 2021).

Wang et al. (2019) stated that the short video platform has the characteristics of openness and inclusiveness. This means that short videos for product promotion on the platform can be quickly disseminated. A short video content marketing campaign can provide consumers with a quick overview of a company, its products, and its brand. This is very helpful for companies to establish their own image and improve their popularity, which will also have an impact on consumers' purchasing behaviour. Corresponding stimulus. Besides that, E-commerce short videos are highly interactive. By using short video content marketing, they can interact in real-time. It is no longer limited to merchants and consumers, but also between consumers. The form of interaction can be one-to-one or one-to-many, breaking through the constraints of time and place. At the same time, merchants can better communicate with consumers as listeners. They can then promote their products and brand information so that consumers can trust merchants more and finally reach a deal. Because of its utility, reliability, and ease of access, using the Internet has become part of the daily life of today's generation. This is whether for education, business, news updates, or entertainment. It contains almost all the information a person might want to know or need because it is considered one of the easiest tools to communicate with others (Zhang, 2020).

Businesses operated by Hyundai, regardless of size, use short videos as part of their promotional activities and marketing strategies. This is to introduce or promote their brand or identity to the market. If the duration is short, video advertising is considered effective. Most users no longer have the patience to watch long videos to master the content. In addition, attention spans are now so brief that watching on phones and gadgets creates a lot of distraction. Video is believed to be the most shared content on social media. If people understand the message of the video, they will share it. As a result, the opportunity to reach a wider audience and potential customers is enhanced. It will be easier to get those videos to target markets (Zhang, 2020). Oztamur and Karakadilar (2014) in their research also found that when certain industries work harder on social media than traditional industries, it obviously affects their number of customer followers. Therefore, the study found that companies must plan to use social media as a competitive marketing tool. In addition, they should spend time creating rich content on social media accounts to attract the attention of target customers. In addition, they should communicate with target customers in a more sincere, friendly, and fast way. Through the research by Liu et al. (2019), they found that when interesting content appears in short videos, consumers can have a scene experience and users can have more opportunities to participate in the creation and imitation of short videos. In this way, consumers can have a positive impact on brand attitude, enhance their cognition of the brand, and increase consumer recognition of the brand. According to Salamin and Hassan (2016), consumers make numerous decisions in their daily lives, including purchasing decisions, and there is a positive correlation between price and consumer purchase behaviour. Pandey and Parmar's (2019) study on “Factors Affecting Consumer’s Online Shopping Buying Behaviour” found that perceived usefulness impacts how consumers shop online. Specifically, the study provides a review of factors that influence consumers' online buying behaviour.

III. THEORY/MODEL

This research adopts both the theory of “use and gratification” and the SOR model to examine the effects of mass communication on individuals. The "Use and Gratification” theory focuses on the audience's standpoint and analyses the psychological and behavioural impacts of mass communication on human beings by examining the audience's motivation for engaging with the media and satisfying their needs (Vinney, 2019). This theory regards audience members as individuals with specific needs and views their media exposure activities as a process of “using” media depending on specific needs and actions in order to satisfy these needs. Therefore, it suggests that the audience restricts the process of media communication through their positive effects on the media. In this sense, the theory highlights the idea that the use of media is entirely based on individual needs and desires. Mechorabian and Russell's (1974) SOR model, based on ecological psychology, proposed that external environmental stimuli (“S”) can influence an individual's internal psychological state (“O”),
which can, in turn, impact their attitudes or behavioural responses (“R”). Specifically, the SOR model posits that external factors affect the internal psychological state of the body, which ultimately influences an individual's attitude and behaviour. In the present study, the short video of the product is used as an external environmental stimulus, with emotions and perceptions serving as the internal psychological state (“O”). The objective is to investigate how the short video impacts consumers' willingness to purchase (Harappa, 2020).

This study employs the SOR model to explore the influencing factors of e-commerce short videos on consumers’ purchase intentions. Specifically, the price level of e-commerce short videos, the quality of short videos, and perceived usefulness serve as stimulus variables, while consumers’ trust, pleasure, satisfaction, and virtual touch function as body variables, with purchase intentions as the response. In light of the above, when compared to physical stores, online shopping can attract certain consumers due to the price factor. Therefore, consumers may receive more discounts in certain environments due to the relatively low price of goods. Moreover, given the increased risk of authenticity and counterfeiting, consumers may experience fewer losses, which may encourage them to make a purchase (Hsiao et al., 2021).

H1: Consumers exhibit higher levels of trust and satisfaction in product videos with lower prices, leading to increased purchase likelihood.

H2: The quality of a product's short video can significantly impact a consumer's trust and satisfaction, influencing their likelihood to make a purchase.

H3: A product's usefulness is closely linked to a consumer's sense of pleasure and satisfaction when viewing a short video on the product information display.

Fig. 1. Conceptual Framework of the Study.

IV. METHODOLOGY

This paper utilizes the questionnaire survey method to conduct research on the factors that influence consumers' purchases of e-commerce short videos. The questionnaire survey is a method used to gather relevant information and materials through pre-designed questions. The researchers provide a series of questions related to the purpose of the research in written form and asks the respondents to answer them. Relevant information is then obtained by collecting, sorting, and analyzing the answers to the questions. To ensure the quality of the questionnaire, the survey was released both online and offline, with a total of 103 questionnaires distributed. The questionnaire is designed with a six-point Likert scale, consisting of six options ranging from strongly disagree to strongly agree. It is divided into three parts: personal information of the respondents, factors influencing consumers' purchases of e-commerce short videos, and future prospects of e-commerce short videos. The first part collects demographic information such as gender, age, income level, and time spent watching short videos. The second part aims to understand the factors that influence consumers' purchases of e-commerce short videos, including price, quality, and practicality. The third part focuses on whether consumers are optimistic about the future prospects of e-commerce short videos. After collecting the survey data, the paper conducts quantitative research on the sample data to analyze the findings. The use of the questionnaire survey method allows for a comprehensive understanding of consumers' perceptions and preferences towards e-commerce short videos. It provides valuable insights into the factors that influence consumers' purchase behaviour, which can help e-commerce platforms tailor their marketing strategies to better meet the needs and preferences of their target audience (Chen & Wang, 2020; Li & Li, 2020; Liu & Hong, 2021).

V. DATA ANALYSIS AND RESULTS

A. Overview

The present study utilized the widely recognized statistical software, SPSS, to conduct an analysis of the empirical data collected. The reliability analysis of the item scale variables was conducted using Cronbach’s α, a commonly used measure for determining the internal consistency of a scale. As per the standard practice, a Cronbach’s α value of 0.6 or above indicates acceptable reliability, whereas a value above 0.8 indicates high reliability. The use of reliable measures is crucial in ensuring the validity of the results obtained from any study. By measuring the reliability of the variables used in this study, we have ensured that the results are robust and trustworthy. These findings, therefore, can serve as a valuable resource for researchers and practitioners’ alike, providing insights into the key factors influencing the phenomenon under investigation. In this study, the reliability of item scale variables was determined by measuring Cronbach’s α. The reliability analysis according to the standard shows that when Cronbach’s α is above 0.6, there is no problem with reliability, and when it is above 0.8, reliability is relatively high. The reliability analysis results of the measured variables are shown in Table I and II below.

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a. Listwise deletion based on all variables in the procedure.
B. Demographics of Respondents

The survey was administered both online and offline, and data collection took place from December 10 to 30, 2022. Following data cleaning and verification, a total of 103 valid responses were obtained, ensuring the robustness and reliability of the data. The use of both online and offline modes of administration allowed for a diverse and representative sample, enhancing the generalizability of the findings to the wider population of interest. The results obtained from the analysis of the collected data can be of great value to stakeholders such as e-commerce platforms, researchers, and policymakers in understanding consumer perceptions and preferences towards e-commerce short videos. To provide an overview of the characteristics of the sample, descriptive statistics have been presented in TABLE III the statistics include relevant measures of central tendency and dispersion, which aid in understanding the distribution of the sample's responses.

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<th>TABLE III: DEMOGRAPHICS OF RESPONDENTS</th>
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C. Descriptive Analysis

Fig. 2 depicts the results of the analysis, which indicate that 35.9% of users reported that they would continue watching e-commerce short videos as the information provided met their needs. Additionally, 21.4% of users were influenced by the quality of the video, while 16.5% remained engaged due to the authenticity of the information presented. Furthermore, 15.5% of users indicated that they continued watching the video because the content was well-written. Interestingly, the design of the webpage also played a significant role in motivating users to continue watching, with 10.7% of users indicating that they were motivated by the appeal of a well-designed and visually appealing page. These findings shed light on the various factors that influence users' engagement with e-commerce short videos. By understanding these factors, e-commerce platforms can tailor their video content and design to meet the needs and preferences of their target audience.

Fig. 3 reveals that a significant proportion of users (61.2%) are influenced by the low prices of e-commerce short video products when it comes to making purchase decisions. Furthermore, 17.5% of users indicated that the limited availability of products influenced their purchasing behaviour. Coupons were also found to be a motivating factor for 11.7% of users. Interestingly, a small gift was identified as a reason for purchase by 9.7% of users. These findings provide valuable insights into the factors that influence consumers' purchase behaviour towards e-commerce short videos. By understanding these factors, e-commerce platforms can better tailor their marketing strategies to meet the needs and preferences of their target audience.

Fig. 4 indicates that a substantial proportion of users prefer to place orders on the e-commerce short video platform that they are most fond of. Specifically, only 5.8% of participants strongly disagreed with this statement, while 2.9% disagreed. On the other hand, 24.3% slightly disagreed, 27.2% slightly agreed, 21.4% agreed, and 18.4% strongly agreed with the statement. These findings provide valuable insights into the preferences of consumers regarding e-commerce short videos and their purchasing behaviour.

Fig. 5 suggests that when e-commerce short videos contain rich and informative content, participants are more inclined to stay, browse and even place an order. Specifically, only 1.9% of participants strongly disagreed with this statement, while 3.9% disagreed. On the other hand, 20.4% slightly disagreed, 28.2% slightly agreed, 26.2% agreed, and 19.4% strongly agreed with the statement. These findings provide valuable insights into the factors that influence consumers' engagement and purchasing behaviour towards e-commerce short videos. By understanding these factors, e-commerce platforms can better tailor their marketing strategies to meet the needs and preferences of their target audience.
Fig. 2. Reasons why Tik Tok Users choose to view short videos.

Fig. 3. Marketing activities that attract Tik Tok users to purchase.

Fig. 4. Prefer to place an order in the e-commerce short video released by my favorite platform.

Fig. 5. Users willing to stay, browse or even place an order for short video that are rich in content.
Fig. 6 presents evidence that participants have a more comprehensive understanding of products through e-commerce short videos. The data shows that only a small proportion of participants, 1.9% and 3.9%, strongly disagreed and disagreed with this statement, respectively. In contrast, a majority of participants either slightly agreed (33%), agreed (17.5%), or strongly agreed (29.1%) that e-commerce short videos provide a more comprehensive understanding of products. Nevertheless, 14.6% of participants slightly disagreed with the statement. These results highlight the importance of e-commerce short videos in conveying product information to potential customers. They demonstrate that short videos are an effective medium for providing consumers with a more detailed understanding of products, which in turn can influence their purchasing behaviour. E-commerce platforms can utilize this information to design and optimize their marketing strategies, with a view to better meet the needs and preferences of their target audience.

Fig. 7 displays the responses of participants regarding the impact of high-quality e-commerce short video content on their purchasing behaviour. The data reveals that a small proportion of participants, 1.9% and 1.9%, strongly disagreed and disagreed with this statement, respectively. In contrast, a majority of participants either slightly agreed (34%), agreed (27.2%), or strongly agreed (18.4%) that high-quality short video content can prompt them to place an order. However, 16.5% of participants slightly disagreed with the statement. These findings emphasize the importance of producing high-quality e-commerce short videos that can capture the attention of potential customers and motivate them to make a purchase.

Fig 8 presents the responses of participants on whether their preference for e-commerce short videos is influenced by their favorite video bloggers. The data indicates that only a small proportion of participants, 4.9% and 2.9%, strongly disagreed and disagreed with this statement, respectively. On the other hand, a considerable number of participants slightly agreed (25.2%), agreed (23.3%), or strongly agreed (27.2%) that their preference for short e-commerce videos has increased due to the influence of their favorite video bloggers. However, 16.5% of participants slightly disagreed with this statement. These findings highlight the impact of social media influencers, such as video bloggers, on consumer behaviour in the e-commerce sector. The results suggest that partnering with popular video bloggers could be an effective marketing strategy for e-commerce platforms to increase the visibility and popularity of their products. By leveraging the influence of video bloggers, e-commerce platforms can reach a wider audience and potentially increase their customer base.

Fig. 9 presents the influence of blogger professionalism on purchasing behaviour in e-commerce short videos. The results indicate that blogger professionalism has a significant impact on purchasing behaviour, with only 2.9% of participants strongly disagreeing and 3.9% disagreeing. In contrast, 24.3% of participants strongly agree, and 24.3% agree that blogger professionalism has a positive influence on their purchasing behaviour. Furthermore, 16.5% slightly disagree and 28.2% slightly agree with the statement.
Fig. 8. Favorite video bloggers do influence the users favorably by increasing their viewing of e-commerce short videos.

Fig. 9. The professionalism of bloggers in e-commerce short videos has a great influence on users purchasing decisions.

Fig. 10. Users Are More Willing to Place Orders Because of the Value-Added Services

Fig. 11. Whenever there is an exclusive limited packaging, it will attract users to buy.

Fig. 10 indicate that the provision of additional services confers a greater degree of appeal to potential customers, as evidenced by their increased willingness to place orders. Specifically, the data reveals that 1.9% of participants express a strong disagreement with this proposition, while 2.9% indicate their disagreement. Meanwhile, 16.5% slightly disagree, 36.9% slightly agree, 19.4% agree, and 22.3% express strong agreement.

Fig. 11 presents data regarding the influence of exclusive limited packaging on participants' purchasing behaviour. The results reveal that 3.9% of participants hold a strong disagreement, while 4.9% express disagreement. Additionally, 21.4% of participants slightly disagree, and a slight majority of 27.2% agree with the proposition. Furthermore, 23.3% of participants indicate their agreement, and 19.4% express a strong agreement.
Fig. 12. Users will be more willing to buy when the products in short videos provide better after-sales-service.

The data presented in Fig. 14 suggests that 35% of participants believe that one of the main advantages of e-commerce short videos is to raise consumer awareness of product characteristics and quality. In addition, 23.3% of users consider the highly interactive nature of such videos to be a key advantage. Another 19.4% of users believe that e-commerce short videos are useful in making consumers more impressed. Moreover, 17.5% of users consider the innovative content design of short videos to be a major advantage. Finally, a small proportion of users, 4.9%, believe that the biggest advantage of e-commerce short videos lies in other elements not covered by the above options.

D. Hypothesis Testing

H1: Consumers exhibit higher levels of trust and satisfaction in product videos with lower prices, leading to increased purchase likelihood.

In order to test the hypothesis, One-Way ANOVA was employed. This statistical method is commonly used to compare the means of two or more independent groups and to determine whether there is significant evidence indicating that the associated population means differ significantly.
The results of the hypothesis testing conducted in the first hypothesis are reported as follows: $F=0.686$, $\text{Sig}=0.635$. Based on these results, Table IV indicates that the alternative hypothesis is not supported.

**H2**: The quality of a product's short video can significantly impact a consumer's trust and satisfaction, influencing their likelihood to make a purchase.

For this hypothesis, the $p$-value was found to be less than 0.001. As shown in Table V, this indicates that the alternative hypothesis is supported, suggesting that there is sufficient evidence to conclude that there is a statistically significant difference between the means of the groups being compared. Specifically, the results obtained from the second hypothesis indicate that $F = 12.137$ and $\text{Sig} = 0.001$.

**H3**: A product's usefulness is closely linked to a consumer's sense of pleasure and satisfaction when viewing a short video on the product information display.

For this hypothesis, the $p$-value was found to be 0.052. This suggests that the hypothesis made by the researcher is not supported by the data as shown in Table VI.

The results obtained from this hypothesis indicate that $F=2.288$ and $\text{Sig}=0.052$.

**VI. DISCUSSION AND CONCLUSION**

This paper investigates the factors influencing consumers' purchase intention for commodity short videos using the SOR model (Eroglu et al., 2005). A questionnaire survey was conducted to draw the following conclusions: in the sample, the price level of short videos and positive reactions to practicality were observed. It was found that users are more likely to purchase products featured in short videos if they are inexpensive and practical, as it prompts them to buy.

The study found that Instagram, Facebook, TikTok, and Xiao Hong Shu were the most popular short video platforms, accounting for 92.3% of the mainstream (Huang & Li, 2020). High-traffic platforms were shown to increase consumer trust. However, research revealed that consumers spend more time purchasing through Facebook and Taobao (Chiang & Huang, 2020). The study hypothesizes that people are attracted to a particular product on a certain short video platform but may switch to another platform to place an order because of the price. This hypothesis was supported by 61.2% of the sample who were willing to buy due to price needs. Furthermore, the study found that 35.9% of participants will continue to watch and purchase e-commerce short videos that meet their needs. This finding confirms the hypothesis that consumers will be attracted to short videos that meet their needs. The study also found that consumers are optimistic about the future development of the short video field. Merchants should focus on improving their service quality as product short videos are not just products, but also the embodiment of content (Gao, 2021). Traffic platforms should prioritize content that is social and interactive, as it attracts more consumers. The study emphasizes the importance of paying attention to product reviews and evaluations before purchasing (Cheung & Lee, 2012). The immersive atmosphere created by short product videos can easily trigger consumption impulses, and consumer experiences can provide a real reference. In summary, this study highlights the factors that influence consumers' purchase intention for commodity short videos and provides useful insights for merchants and consumers alike.

**CONFLICT OF INTEREST**

Authors declare that they do not have any conflict of interest.
REFERENCES