Exploring the determinants of continuous intention in TikTok from the perspective of social influence: a mixed approach of SEM and fsQCA

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Abstract

Purpose – This study embraces the call for exploring the determinants of continuous intention in TikTok. Taking the perspective of social influence, this study not only tries to explore the contextual sources of two types of social influence but also aims to unveil the influence mechanism of how social influence affects TikTok viewers' continuous intention.

Design/methodology/approach – This study empirically analyzes how TikToker attractiveness, co-viewer participation, platform reputation and content appeal affect informative and normative social influence and then lead to the continuous intention of TikTok. Based on 547 valid survey data, this study adopts a mixed analytical approach for data analysis by integrating structural equation modeling (SEM) and fuzzy-set qualitative comparative analysis (fsQCA).

Findings – SEM results unveil that content appeal is the most critical antecedent of informational social influence, while the TikToker attractiveness and platform reputation have no effect on it. Differently, all four external sources positively lead to normative social influence. Among them, content appeal and co-viewer participation influence the most. The influences of both two types of social influence on continuous intention are demonstrated. FsQCA results reveal seven alternative configurations that are sufficient for influencing continuance intention and further complement and reinforce the SEM findings.

Originality/value – Addressing the critical contextual elements of TikTok, this study explores and confirms the sources which may engender social influence. The authors also demonstrate the critical role of social influence in affecting TikTok viewers' continuous intentions by the hybrid analytical approach, which contributes to existing academic literature and practitioners.

Keywords TikTok, Social influence theory, Continuous intention, SEM,
Fuzzy-set qualitative comparative analysis (fsQCA)

Paper type Research paper

1. Introduction

The torrents of TikTok have swept across the globe in recent years. The ascent of TikTok has made the number of its users double worldwide between 2019 and 2021 (291.4 million to 655.9 million) (Insider intelligence, 2022). As a short-form video-sharing social media app, TikTok penetrated social media users on this planet to record, edit and share videos. Among the 4.48

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billion active social media users, 22.32% of them are regular TikTok users (Blind, 2022). TikTok not only increased its first-time installs by almost 400% year-over-year but also consolidated its global users (Statista, 2022). It has one billion monthly active users and has become one of the most successful social media apps currently worldwide (CNBC, 2022; Wang, 2020).

In essence, the TikTok usage environment is composed of various social-related components that influence users' social experience. As the producer of short video content, TikToker uploads the video and interacts with viewers. The attractive TikToker with a charming appearance, friendly personality and enriched knowledge promotes viewers to indulge in watching, interacting and participating in TikTok activities (Lee & Watkins, 2016). With the advanced functions of commenting, clicking likes and sharing videos, viewers can interact with other co-viewers to exchange and share their opinions, information and knowledge actively (Tsai & Pai, 2013). Provided with various, attractive and exquisite video content (Cuesta-Valino, Gutierrez-Rodriguez, & Duran-Alamo, 2022), TikTok viewers can obtain pleasure and entertainment, acquire useful knowledge from others and get to know other people's lives, thoughts and opinions. An increasing number of viewers are inspired by this novel, reputable and interactive platform to seek information and interact with others (Scherr & Wang, 2021).

In such an interactive environment with abundant social cues, information exchanges and group association are both highly encouraged and facilitated in TikTok (Huang & Benyoucef, 2013). As a result, users' preferences, decisions and behaviors are likely to be influenced during their usage of TikTok (Amblee & Bui, 2011). Social influence is the result of an individual's interaction and refers to how an individual is influenced by others (Hu, Chen & Davidson, 2019). The various components of the social environment can be regarded as the external sources of social influence, which will influence individuals' beliefs during their interaction with the social environment (Li, 2013). Then, the individuals' beliefs will impact attitudes and lead to behavioral intention. In other words, individuals' behaviors are probably determined by influences generated by external sources (McFarland & Hamilton, 2006). Thus, the determinants and sources of influence can be interpreted by the particular components of TikTok (Liang & Turban, 2011).

In addition, the long-term value is more likely to be generated by the continuance usage of users, such as better customer relationships, more active social interaction and participation and higher business profits (Yang, 2021). Thus, the rapid development momentum of TikTok prompts researchers to explore TikTok users' continuous intentions (Song, Zhao, Yao, Ba, & Zhu, 2021). Considering the effect of social influence on users' knowledge, perception and behavior intention (Fu, Lu, Chen, & Farn, 2020), employing social influence theory to explore the external sources of social influence and its influence mechanism on TikTok viewers' decision-making process is a very enlightening research topic.

The development of TikTok is still in its infancy. It is generally considered that the investigation into TikTok began in 2020 (Cuesta-Valino *et al.*, 2022). Only a few studies attempt to adopt limited theoretical models to explore individuals' behavioral intentions in TikTok (e.g. purchase and adoption), including the uses and gratification (U&G) theory (Cuesta-Valino *et al.*, 2022; Meng & Leung, 2021; Scherr & Wang, 2021), affordance theory (Song *et al.*, 2021) and human–computer interaction theory (Wang, 2020), which mainly focus on the features of TikTok. For example, several researchers proposed TikTok affords several technological features such as live streaming, searching, meta-voicing (Song *et al.*, 2021), personalized recommendation algorithms and easy-to-use editing (Du, Liechty, Santos, & Park, 2020). Most prior studies investigated the social attributes of TikTok, such as interactivity (Zhang, Xu, & Ye, 2022), entertainment (Meng & Leung, 2021; Zhang *et al.*, 2022) and socially rewarding self-presentation (Scherr & Wang, 2021). These pioneering studies proposed that a social streaming app (Xu & Tayyab, 2021),

such as TikTok, can exert a strong influence on individual perception and motives for their usage (Song *et al.*, 2021), attachment (Wang, Yang, & Zhang, 2021), stickiness (Cuesta-Valino *et al.*, 2022) and purchase intention (Zhao & Wang, 2020). However, there is still a paucity of scientifically empirical studies to uncover the rationale behind users' perceptions, attitudes and behaviors towards TikTok. The enlightening role that social influence theory plays in determining viewers' behaviors has been ignored in existing studies investigating TikTok. It is still unclear what external sources of social influence and the underlying mechanisms may influence individuals' continuance use intention towards TikTok.

In addition, individuals' perceptions and behaviors are formed by integrating distinct factors into a whole. These factors are perceived in a holistic, integrated way, with complex interactions (Maier, Laumer, Joseph, Mattke, & Weitzel, 2021). Thus, TikTok viewers' perceptions and continuance usage intention may be driven by complex interactions of antecedents. However, there is a lack of knowledge regarding how critical external factors and distinct types of social influence can be combined differently to predict consequential behavioral decisions.

Employing the social influence theory, a research model is proposed to address the following research questions: (1) What are the sources of social influence in TikTok? (2) What is the mechanism of social influence affecting users' continuous usage of TikTok? and (3) What configurations of antecedents effectively determine viewers' continuance intention toward TikTok? In an effort to fill the research gaps, leveraging social influence theory, we developed a conceptual model that encompasses the sources of social influence in TikTok, the distinct types of social influence and TikTok users' continuous intention. Utilizing a mixed analytical approach, we conducted the data analysis by employing both structural equation modeling (SEM) and fuzzy-set qualitative comparative analysis (fsQCA) to verify the influence process of TikTok and further explore more different configurations based on the principle of set-theoretic configurational to validate and complement the SEM results.

This study contributes to both existing literature and practice. First, this study represents an early attempt to adopt the perspective of social influence to explore how TikTok influences users' behavioral intentions. Considering that the context of TikTok creates a social environment that enables users' social interaction, employing social influence theory can not only address the social nature of TikTok but also expand the application of social influence theory in a novel research context. Second, this study carefully clarifies the contextual sources of social influence in TikTok. Addressing the key elements that form the TikTok usage environment, this study comprehensively incorporates and examines the sources which may engender social influence in TikTok. It provides a holistic perspective to deepen the understanding of TikTok's influence on users. Third, by dissecting social influence into normative and informational aspects, this study extends the research on social influence and contributes to the investigation of social influence mechanisms in TikTok by exploring, examining and interpreting each of them in detail. A more detailed exploration of social influence provides useful knowledge of the influence mechanisms, routes and processes of TikTok. Fourth, this study provides methodological contributions to existing research by applying the hybrid analytical approach of partial least square structural equation modeling (PLS-SEM) and fsQCA, which unveils the viewers' continuance intention in TikTok from the perspective of complex, nonlinear and synergistic analysis. Moreover, the results provide valuable suggestions, information and opportunities for TikTok and other social streaming practitioners to investigate and develop strategies for attracting, maintaining and retaining users.

This study is unfolded as follows. First, it begins with a literature review related to TikTok and social influence theory to establish a theoretical foundation in Section 2. Then, in Section 3 and Section 4, this study constructs a research model, develops the measurement and collects empirical data for analysis. In Section 5, the mixed analytical approach including

SEM and fsQCA analysis was conducted for data analysis. Subsequently, the discussion of the results is presented in Section 6. Finally, this study concludes with both theoretical and practical implications and limitations in the remaining sections.

2. Research background

2.1 Related work in TikTok

As one of the most popular short-form video apps, TikTok provides a user-focused platform that enables users to record, edit and share videos. It not only offers more entertaining viewing experiences but also supports viewers' high levels of interaction through keeping in touch with old friends and making new ones (Du *et al.*, 2020). Various social features are embedded in TikTok, creating a diversified environment that enables viewers' social interaction, which exerts a great extant influence on viewers' perceptions and decision-making process. For example, TikTok focuses on short-form videos which are more vivid and easier to approach, eliciting a stronger influence on users' attitudes and behavioral intentions (Song *et al.*, 2021). Dynamic videos also provide viewers' with more intuitive understanding of the TikTokers' appearance, personality and personal style, attracting them more to engaging in the interaction with TikTokers.

The environment of TikTok is composed of a variety of contextual components (Scherr & Wang, 2021). In general, four unique and critical aspects are involved in the TikTok usage environment: the TikToker, the co-viewer, the video content and the TikTok platform (Lee & Watkins, 2016; Wu & Tian, 2021; Wu & Chen, 2017). These four indispensable aspects of TikTok form an interactive social environment, address the fundamental nature of TikTok usage as a social experience and act as the driving force for influencing users' thoughts, attitudes and behaviors (Tsai & Pai, 2013).

A TikToker is a person who produces and uploads videos for the platform (Meng & Leung, 2021). Most TikTokers have appealing features such as attractive physical appearances, friendly personalities, fantastic shooting styles and rich knowledge (McCroskey, Hamilton, & Weiner, 2010). Through watching, following and interacting with attractive TikTokers, viewers will acquire, accept and be influenced by the advice, recommendations and other related information conveyed by these appealing TikTokers (Meng & Leung, 2021).

The social interaction process with co-viewers is an indispensable part of TikTok usage. It allows people to connect and interact with other viewers by commenting, sending messages, clicking likes and sharing videos (Wang *et al.*, 2021). The instant responses, attentiveness and mutual focus of attention of co-viewers enhance users' sense of belonging and create intimate group interaction (Kim, Kim, Oh, & Ryu, 2010). Viewers are likely to gain social support and be influenced by active co-viewer participation in TikTok activities (Xu, Luo, Wu, & Zhao, 2021; Tsai & Pai, 2013).

Next in line is the content of the TikTok video. TikTok is specialized in offering short videos and provides content in various modalities such as pictures, text, audio and videos. The content of TikTok videos is rich, personalized and eye-catching, which focuses on recording peoples' lives, showing talents and sharing knowledge by incorporating special effects, fancy video clips and diverse pop songs (Montag, Yang, & Elhai, 2021). These attractive, exquisite and well-organized contents aim to capture and attract the attention of users and influence consumers' watching experience (Scherr & Wang, 2021).

Finally, the innovation of the TikTok platform amplifies the characteristics of traditional social media. It not only gathers a large number of short videos with their comprehensive and valuable content but also reforms individuals' recreational activities and transforms the traditional way of social interaction. Promoted by the increasing user groups and widespread videos, TikTok has become one of the most influential and reputable platforms that influence users' perceptions, beliefs and decisions (Meng & Leung, 2021).

The above four critical components of TikTok have offered its users a social environment with rich social cues which enhances diverse social interaction (Scherr & Wang, 2021). Engaging in the interaction in TikTok, viewers' perceptions, decision-making and behaviors will be influenced by these various components embedded in TikTok. Thus, they can be regarded as the important drivers of users' continuance usage, leading to the significance of exploring how TikTok users are influenced socially in using TikTok continually (Wu & Chen, 2017).

To better understand how prior studies explore TikTok, this study endeavors to scrutinize the existing literature following the guidelines proposed by Okoli and Schabram (2010). We searched the related work in the core database of the "Web of Science" with the topic of "TikTok" and "Douyin". The searching process identifies only 17 qualified and relevant papers about TikTok in the recent five years (2018–2022). Given the relative novelty of TikTok, little research has been undertaken on this research context to date, and few studies scientifically develop a research model or theoretical framework to explore the emerging context. Of the limited literature, most studies investigated why people use TikTok, drawing upon the U&G theory to explore what features of TikTok were related, gratified and motivated to individuals' behavioral intentions (Meng & Leung, 2021; Scherr & Wang, 2021; Cuesta-Valino *et al.*, 2022). For example, applying the U&G theory, Scherr and Wang (2021) took the gratification approach and explored how distinct gratifications could motivate TikTok usages, such as socially rewarding self-presentation and escapist addiction. Meng and Leung (2021) extended the U&G theory to explore the unique technological gratifications of TikTok in navigability, interactivity and modality. Cuesta-Valino *et al.* (2022) regarded users as heavily motivated to stick to TikTok by the gratifications inherited in TikTok such as video sharing and creation capabilities. Moreover, employing the lens of the affordance theory, Song *et al.* (2021) identified live streaming, searching, meta-voicing and recommendation as four technological features afforded by TikTok and exerting influence on user experience. Based on the human–computer interaction (HCI) theories, Wang (2020) also demonstrated the influence of TikTok videos' humor and camera view on improving user experience and technology-adoption intention.

Notably, the evidence arising from both academic research and industrial practices indicates that TikTok is a niche social streaming app with rich social elements to influence viewers' usage experience (Wang, 2020; Scherr & Wang, 2021; Song *et al.*, 2021). It is natural to assume that social influence may exert significant impacts on viewers' perception and decision-making processes in the TikTok context. However, to the best of our knowledge, existing studies merely focus on the features of TikTok to explore what and how these features influence users' experience, decisions and behaviors. Importantly, researchers have indicated that users' continuance intention is critical in the field of information systems (IS) research for its success and sustainability. Bhattacherjee (2001a) defined IS continuance intention as an individual's intention to continue using an information system. Similarly, in our research context, we defined the continuance intention as TikTok viewers' intention to continue using TikTok. Though social influence theory has provided an enlightening perspective to explore the users' continuance use intention of TikTok, little research has adopted it to provide contributions and meaningful extensions to the academic literature on TikTok.

2.2 Social influence theory

Social influence occurs when an individual's actions, feelings or attitudes are affected by the behaviors or words of others in the social network (Venkatesh & Brown, 2001). Social influence theory explains how social influences are developed and translated into action during people's interactions with others. As one of the dominant streams, social influences are divided into two types by Deutsch and Gerard (1955). The first type is informational social

influence, which refers to the "influence to accept information obtained from another as evidence about reality". The other type is the normative social influence which refers to "the influence to conform to the expectations of another person to group". These two types of social influence are conceptually different and used to interpret distinguished situations (Hu *et al.*, 2019). Informational social influence is related to an individual's desire to make informed decisions based on their acceptance of the information, knowledge, experience and evidence from others (Kaplan & Miller, 1987), while normative social influence occurs when a person adjusts his\her action to conform to the expectations of others to achieve desirable results (Fu *et al.*, 2020).

In social streaming apps, such as TikTok, several external sources may cause the occurrence of informational social influences. For instance, viewers may absorb and digest the information during their interaction with TikToker and understand the information generated in the process as proof of reality and thus develop their understandings based on the obtained information. As an example, individual viewers may choose a travel destination based on recommendations from TikTokers. In addition, video content can be the most prominent influencer. By watching the person explaining the life tips, product experience and professional interpretations of policy and laws presented in the video, viewers tend to accept the information. Informational social influence plays a critical role especially when individuals are faced with decision-making difficulties, perceive high uncertainty of the decision results or are unable to make decisions independently (Lee, Shi, Cheung, Lim, & Sia, 2011).

As refer to normative social influence, it is suggested that normative social influence can perform a far-reaching impact in the context of social media, since social media platform enables large and influential social associations (Kwahk & Kim, 2017). In the broad social circle created by TikTok, TikTokers and co-viewers are all important members of this virtual social community. It is natural that individuals comply with the opinions, values and commonly accepted social behaviors in such a community, and he\she may also perceive whether the group members approve of certain actions. TikTok is an influential platform attracting tens of millions of users. As more and more users are engaged, the TikTok community can convey more mainstream views. Consequently, individual users may be more inclined to comply with others' opinions and make behavioral decisions based on them. For example, an individual may imitate the behaviors in popular activities, such as the ice bucket challenge or night running.

Social influence theory has been examined in a variety of contexts, such as users' behavior changes (Chung & Han, 2017), satisfaction (Sedera, Lokuge, Atapattu, & Gretzel, 2017), continuous content contribution (Liu, Min, & Han, 2020) and purchase intention (Fu *et al.*, 2020; Hu *et al.*, 2019; Filieri, McLeay, Tsui, & Lin, 2018). Though researchers have applied social influence theory while investigating social network, social streaming apps has many unique features that are different from general social network sites, such as the elements of live streaming, short videos and simultaneous response in live videos. To the best of our knowledge, the effect of how the different social influences may impact social streaming app usage has not been tested. Importantly, prior studies have indicated that different sources of social influence, and combinations of these sources, will affect users' choices and decisions (Li, 2013). Thus, it is critical to identify the contextual sources of social influence based on the unique features of the specific context of TikTok and explore how the different sources and their combination may influence different types of social influence and the following behavioral intentions.

3. Research model and hypothesis development

This study develops a research model to explore how TikTok usage is impacted by two distinct types of social influences which are determined by four sources (i.e. TikToker attractiveness, co-viewer participation, platform reputation and content appeal). The research model is presented in Figure 1.

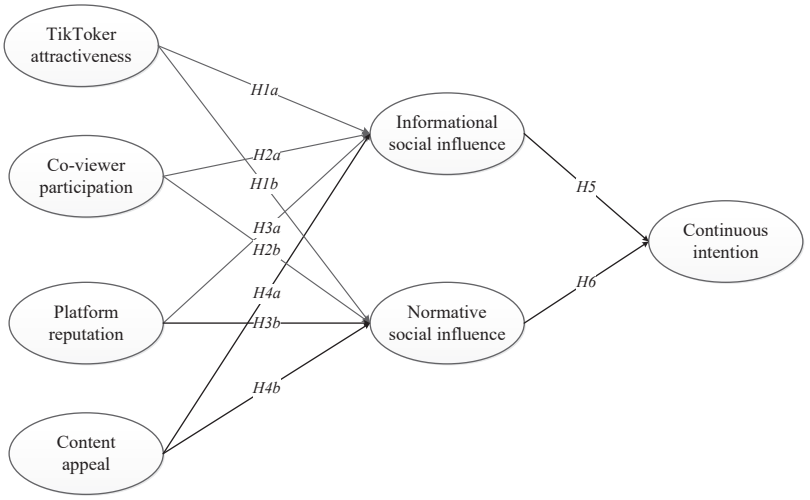


Figure 1.
Research model

The concept of attractiveness was originally proposed by interpersonal communication scholars to measure the "tendency of one person to evaluate another person or his symbol in a positive (or negative) way". In this study, we define TikToker attractiveness as the personality, appearance and talent the viewers perceive regarding the TikToker while watching TikTok videos (Xu, Wu, & Li, 2020). Viewers may find a TikToker attractive when he\she is physically attractive (McCroskey *et al.*, 2010) and has task-related abilities (e.g. the ability to make impressive videos) or social abilities (e.g. the ability to conduct positive interactions with viewers) (Fang, 2014; McCroskey *et al.*, 2010).

Attractiveness is adopted frequently to explain why people initiate, develop and maintain public relations with other entities and is believed, by many researchers, to predict people's attitudes and behaviors (Dwyer, Schurr, & Oh, 1987; Fang, 2014). When viewers perceive a TikToker as attractive, they may watch and follow more videos made by the TikToker and engage in more intensive interaction with the TikToker. Moreover, when the viewers find the TikToker's video useful and helpful for them, such as life tips and professional suggestions (e.g. interpretation of laws and photographic skills), they are more inclined to believe that the information and viewpoints offered by the TikToker are trustworthy (McCroskey *et al.*, 2010). As viewers develop positive affection and emotion towards the TikToker, they may obey the TikToker's expectations naturally and are more inclined to accept the TikToker's suggestions subconsciously (Lee & Watkins, 2016; Sokolova & Kefi, 2020). In this way, the attractive TikToker are more likely to exert informational and normative social influence on their viewers, since they can develop social connections with their viewers more easily and convince them of their reliability. The following hypotheses are developed:

H1a. Perceived TikToker attractiveness is associated with informational social influence positively.

H1b. Perceived TikToker attractiveness is associated with normative social influence positively.

TikTok is a social streaming app; thus, the co-viewers are the cardinal member of this virtual social community (Xu & Tayyab, 2021). Member participation often presents the extent to

which the members are engaged in the interaction in the social community (Burgoon *et al.*, 1999) and suggests that the community members have devoted time, effort and other resources to initiating, developing and maintaining group relationships (Tsai & Pai, 2013). For example, when the viewers leave comments or ask questions, they may receive quick responses from other co-viewers. The participation of other co-viewers also creates an enthusiastic atmosphere and strong social presence. It has been well acknowledged that others in a social community can exert significant influences on the individual members (Coker & Burgoon, 1987; Tsai & Pai, 2013; Xu *et al.*, 2021) because individuals believe in the "wisdom of crowds" and that community members provide valuable information highly related to them. What is more, due to the social interactions, trustworthy interpersonal connections and common value perceptions in a TikTok community, such as the follower community of a TikToker (e.g. KOL of fashion) or specific channel (e.g. China geography), individuals are also more inclined to comply to certain values collectively held in a community (Huang & Chen, 2006), such as the concept of environment and animal protection and the understanding of fashion and trend. Hence, the co-viewers participation is a critical source generating informational and normative social influence. The following hypotheses are developed:

H2a. Co-viewer participation is associated with informational social influence positively.

H2b. Co-viewer participation is associated with normative social influence positively.

Reputation refers to the overall evaluation of a company or a brand as time goes on (Foroudi, Melewar, & Gupta, 2014). If the reputation of a company is perceived as successful and famous by customers, their recognition of the said company will also be greatly enhanced (Foroudi, 2017). Thus, the platform's reputation plays a vital role in determining users' attitudes toward the platform and their potential behaviors (Wu & Chen, 2017). In this study, the platform's reputation reflects the viewers' evaluation of TikTok. A good platform reputation not only implies the high quality and diversity of videos but also suggests the popularity and large user base. Therefore, viewers are more inclined to trust the platform and consider the information distributed on TikTok reliable. In addition, since a large user base of a reputable platform may also represent the mainstream value and viewpoints, the said platform may further make the audience accept expectations or hints to cater to the social community. The following hypotheses are developed:

H3a. Platform reputation is associated with informational social influence positively.

H3b. Platform reputation is associated with normative social influence positively.

The attractiveness of the content represents the core competitiveness of the platform relying on user-generated content (Lai & Liu, 2020). The content appeal in this study refers to the degree of attractiveness the viewers perceive towards the TikTok videos. When the viewers perceive the video content as attractive, it is natural for them to spend more time watching the videos, thereby absorbing and accepting the information presented in the video more easily. Moreover, with the advantage of appealing content, TikTok can attract a large number of users and thus reflect the mainstream, core values and viewpoints of society. To conclude, the content appeal can not only attract the users to engage in TikTok wherein they become influenced by the information provided but also increase the probability of the audience accepting the values, suggestions and expectations conveyed in the videos. The following hypotheses are developed:

H4a. Content appeal is associated with informational social influence positively.

H4b. Content appeal is associated with normative social influence positively.

Continuous intention refers to viewers' intention to continuously use TikTok after they have adopted TikTok for the first time (Bhattacherjee, 2001b). Regardless of their previous or current attitude or perceptions towards a specific behavior, the individuals affected by normative social influence are more likely to feel the social pressure towards adopting or not adopting this behavior (Henningsen & Henningsen, 2003). In other words, if viewers experience more normative social influence towards their continuous use of TikTok, they are more likely to submit to the forces and continuously use TikTok. Such submission may bring benefits to individual users, such as having more chances to involve in the interaction with other TikTok members (Li, 2013).

In addition, informational social influence often exerts significant effects when the individual desire to make a better decision (Henningsen & Henningsen, 2003). The more information an individual obtains, the greater confidence he or she will acquire in future performance and behaviors (Chou, Wang, & Tang, 2015; Lee, Cheung, Sia, & Lim, 2006). Hence, the viewers' tendency to actively seek, acquire and accept the information provided by TikTok are likely to be enhanced when they are under strong informational social influence. Further, they will estimate the value and benefits of obtaining the information and eventually develop a strong intention to use TikTok continuously. The following hypotheses are developed:

H5. Informational social influence positively is associated with continuous intention.

H6. Normative social influence positively is associated with continuous intention.

4. Methodology

4.1 Measurement development

The scales measuring the constructs were developed based on existing literature. TikToker attractiveness (TA) was mainly adopted from the study of Xu *et al.* (2021) and Ha and Lam (2017). The measurements of co-viewer participation (CP) and platform reputation (PR) were extracted from Xu *et al.* (2021) and Tsai and Pai (2013), along with Zhou (2020). Content appeal (CA) was measured using the scale from Lai and Liu (2020). In addition, the measurements of informative social influence (ISI) and normative social influence (NSI) were adopted from Henningsen and Henningsen (2003) and Li (2013). The scales of continuous intention (CI) were obtained from the works of Chen (2014). Based on our research context, we modified the items slightly to better suit our research scope. This study incorporated the variables of gender, age and educational background as the control variables. Five-point Likert scale was adopted, ranging from (1) strongly disagree to (5) strongly agree. All of the constructs used in this research are reflective constructs. The measurement items and references for each construct are presented in Table A1.

To ensure the accuracy of the content, guarantee linguistic equivalence and improve the readability of the questionnaire, we conducted expert interviews and a small-scale pilot test. Based on their feedback and the advice from the experts, we modified the wording, expression and understandability of the questions to ensure the quality of our questionnaire. In addition, we conducted the pretest by inviting 68 TikTok users to answer the questions. Several modifications of wording and phrases were conducted to ensure the clarity and suitability of the questions. At last, the formal questionnaire consists of three main parts, including a motivation letter, a confidentiality statement regarding the respondents' information and the items measuring the constructs and background information.

4.2 Data collection

We applied a leading web-survey website (https://www.sojump.com/) to distribute questionnaires randomly and collect the empirical data from February 10th to 20th, 2022.

To ensure the quality and validity of the answers, we set a pre-screening question at the beginning of the questionnaire to ensure the respondents are TikTok users. Only the respondents who provided affirmative answers to the question "Did you have used TikTok?" can be permitted to answer the following questionnaire. Respondents who failed to pass the attention check questions were excluded. Through the detailed and careful screening process, we finally collected 537 valid responses for the formal empirical data analysis.

The demographic information of the respondents is shown in Table 1. As for the distribution of gender, female accounts for 79.33% and 20.67% are male (Du *et al.*, 2020). Over 95% of the respondents are between 19 and 40 years old. Notably, TikTok has introduced age restrictions to protect minors using the platform, which limits their usage. Our sample with only three minors also reflects this policy. In addition, most of the respondents have a higher education degree. In terms of usage frequency, about 40.60% of the respondents are daily users of TikTok and use it many times a day.

5. Data analysis

5.1 A mixed analytical approach

Individuals' decision-making process is inherently complex since their intention is driven by integrating different factors into a whole. The various external factors embedded in the environment and distinct social influences will interact and configure dynamically to influence behavioral decisions (Maier *et al.*, 2021).

SEM analysis focuses on additive, linear and nonfinality effects. It regards the independent variables as competing to explain the variation of the dependent variables and estimates the net effect of predictors on dependent variables (Woodside, 2013). This assumption overly simplifies the underlying correlation and integration of antecedents driving the individual's decision-making mechanism (Pappas & Woodside, 2021). To overcome the limitation of SEM analysis and address the complexity of individuals' decision-making process, several pioneers endeavored to further employ fsQCA analysis as a complementary analytical technique to SEM analysis (Afonso, Silva, Goncalves, & Duarte, 2018; Kaya, Abubakar, Behravesh, Yildiz, & Mert, 2020).

As a comparative case-oriented analytical approach, fsQCA focuses on the set-theoretic associations among variables and highlights the combinatorial effects rather than net effects

Table 1. Demographics of respondents

Items		Frequency	Percentage (%)
Gender	Male	111	20.67
	Female	426	79.33
Age	Under 18	3	0.56
	19–25	458	85.29
	26–30	44	8.19
	31–40	24	4.47
	Above 40	8	1.49
Education level	Junior high school and below	9	1.68
	Senior High school	15	2.79
	Undergraduate or College	401	74.67
	Graduate and above	112	20.86
Frequency of using TikTok	Several times a day	218	40.60
	Once a day	76	14.15
	Several times a week	90	16.76
	Once a week	29	5.04
	Less than once a week	124	23.09

(Ragin, Strand, & Rubinson, 2008). Importantly, fsQCA addresses the complexity of the real-life consumption environment based on the asymmetric assumptions between independent and dependent variables. Thus, it captures multiple solutions that lead to the same outcome that cannot be identified through the main effects analysis (Pappas & Woodside, 2021). The combination of SEM and fsQCA draws a scientific, robust and complemented conclusion and better unveils the underlying influence mechanisms of TikTok on viewers' continuance intention.

Combining SEM and fsQCA analysis, this study employs a two-phase process in data analysis with a mixed analytical approach. Employing Smart PLS 3.0, this study first validates the measurement model and examines the hypotheses in the structural model using SEM. Second, we analyze the data using the fsQCA 3.0 to generate insights into more alternative configurations of continuance intention. SEM and fsQCA results enrich the understanding of how the key contextual elements of TikTok may engender social influence in TikTok and the antecedents of users' continuance intention.

5.2 PLS-SEM analysis

5.2.1 Measurement model analysis. First, we examined the quality of the proposed measurement model by testing both the reliability and validity of the data. We ensure reliability by examining the value of Cronbach's alpha and composite reliability (CR). As shown in Table 2, all of the values exceed 0.7, which indicated a satisfactory reliability level.

In addition, we examine both convergent validity and discriminant validity to ensure validity. The factor loadings of each construct should exceed the thresholds of 0.7 (Rajalahti & Kvalheim, 2011), and the values of AVE should be above 0.50 (Chin, 1998). The results of our study show satisfactory convergent validity, which is presented in Table 2

The discriminant validity of this study is texted by both the Fornell–Larcker criterion (Fornell & Larcker, 1981). The value of the Fornell–Larcker criterion is presented in Table 3, which shows all the inter-construct correlations are lower than the square root of AVE values. The results demonstrate satisfactory discriminant validity in our study.

5.2.2 Common method bias. Considering that this study has collected the empirical data with a cross-sectional, self-reported and single-source approach (Spector, 2006), common method bias (CMB) is likely to be a concern that influences the validity of data. We applied the Harmon one-factor test to examine CMB in our study. Employing SPSS, we conducted the principal components factor analysis of all the constructs. The result showed that the first factor explained 28.98% of the total variance, which is below the acceptable threshold of 50% and suggests that CMB is not a critical issue (Mackenzie & Podsakoff, 2012).

5.2.3 Structural model analysis. We tested the explanatory power of our structural model by examining the R^2 values and structural paths of constructs. The analytical results of the structural model are shown in Figure 2. As for the R^2 values, informative social influence, normative social influence and continuous intention are explained by variances of 31.21, 33.73 and 46.25%, respectively, which shows a substantial proportion of the variance. The results of R^2 indicate that the formation of the dependent variables is well explained and verify the explanatory power of our proposed research model. In addition, the analytical results indicate the control variables including gender, age and educational background did not statistically influence the independent variables significantly.

In addition, as shown in the results of path analysis (see Table 4), except for H1 (TikToker attractiveness → Informative social influence) and H5 (Platform reputation → Informative social influence), other hypothesized paths were significant. It indicates that perceived co-viewer participation and content appeal are both positively associated with informative social influence, while all of the four influence sources, namely, TikToker attractiveness, perceived co-viewer participation, content appeal and platform reputation, exert positive

Construct	Items	Factor loading	Cronbach's α	CR	AVE
TA	TA1	0.783	0.703	0.834	0.626
	TA2	0.761			
	TA3	0.828			
CP	CP1	0.819	0.817	0.875	0.636
	CP2	0.782			
	CP3	0.804			
	CP4	0.786			
PR	PR1	0.831	0.924	0.942	0.766
	PR2	0.888			
	PR3	0.861			
	PR4	0.900			
	PR5	0.892			
CA	CA1	0.810	0.845	0.896	0.682
	CA2	0.832			
	CA3	0.819			
	CA4	0.842			
ISI	ISI1	0.828	0.849	0.898	0.689
	ISI2	0.837			
	ISI3	0.872			
	ISI4	0.781			
NSI	NSI1	0.789	0.850	0.893	0.624
	NSI2	0.783			
	NSI3	0.800			
	NSI4	0.808			
	NSI5	0.770			
CI	CI1	0.907	0.935	0.950	0.793
	CI2	0.904			
	CI3	0.875			
	CI4	0.894			
	CI5	0.873			

Table 2.
Reliability and convergent validity analysis

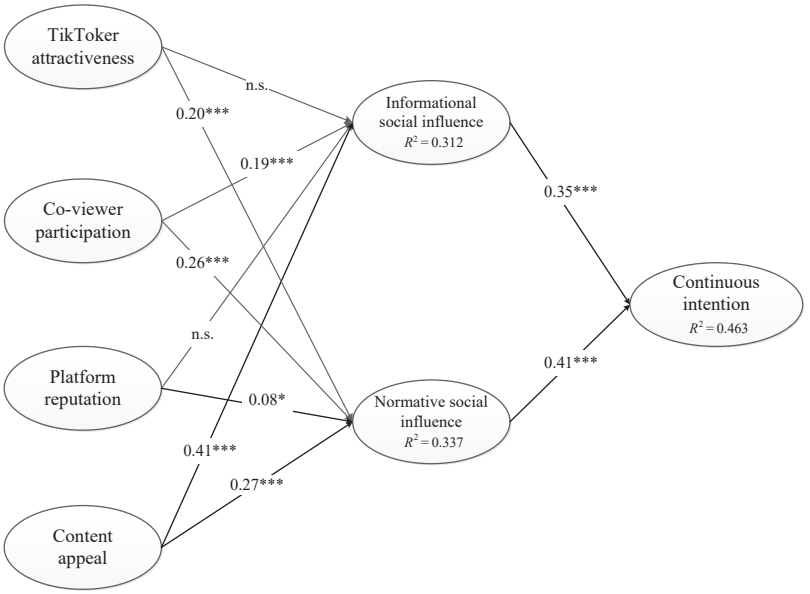
Construct	TA	CP	PR	CA	ISI	NSI	CI
TA	0.626						
CP	0.129	0.637					
PR	0.118	0.069	0.766				
CA	0.110	0.088	0.222	0.682			
ISI	0.077	0.124	0.112	0.267	0.689		
NSI	0.168	0.184	0.119	0.204	0.327	0.624	
CI	0.095	0.116	0.079	0.271	0.349	0.380	0.793

Note(s): Diagonal elements represent the square root of AVE

Table 3.
Discriminant validity analysis

influences on normative social influence. Moreover, both types of social influence (informative social influence and normative social influence) are found to positively affect users' continuous intention of TikTok.

5.2.4 Post-hoc analysis: multiple group analysis (MGA). To explore differences in perception and behavior among users with different usage experiences, we tried to provide empirical evidence regarding the moderating role of user experience in the TikTok influencing mechanism.



Note(s): *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$, n.s.: not significant

Figure 2.
Results of the structural model analysis

	Hypothesis	Coefficients	*T*-values	*p* values	Results
H1a	TikToker attractiveness → Informative social influence	0.046	0.988	n.s.	Not support
H1b	TikToker attractiveness → Normative social influence	0.201	4.536	$p < 0.001$	Supported
H2a	Co-viewer participation → Informative social influence	0.194	4.541	$p < 0.001$	Supported
H2b	Co-viewer participation → Normative social influence	0.255	6.347	$p < 0.001$	Supported
H3a	Platform reputation → Informative social influence	0.075	1.506	n.s.	Not support
H3b	Platform reputation → Normative social influence	0.080	1.863	$p < 0.05$	Supported
H4a	Content appeal → Informative social influence	0.409	8.559	$p < 0.001$	Supported
H4b	Content appeal → Normative social influence	0.271	6.449	$p < 0.001$	Supported
H5	Informative social influence → Continuous intention	0.354	7.502	$p < 0.001$	Supported
H6	Normative social influence → Continuous intention	0.414	9.065	$p < 0.001$	Supported

Constructs	R^2 (%)
Informative social influence	31.21
Normative social influence	33.73
Continuous intention	46.25

Note(s): ***$p < 0.001$, **$p < 0.01$ and *$p < 0.05$. n.s.: not significant

Table 4.
Hypotheses testing results

We divided all respondents into two groups, namely, experienced users and users with little experience. Multiple group analysis (MGA) was conducted by Smart PLS 3.0 to investigate and compare the differences between all path relationships in the two groups. The results of MGA, as presented in Table 5, unveil that there may exist a significant difference between the two groups in the impact of informative social influence and normative social influence on users' continuance intention.

The path coefficient between informative social influence and continuance intention is significantly larger in the experienced users than in the users with little experience (β-experienced user = 0.464, β-little experience = 0.269 and p-value = 0.012). As for the path coefficient between normative social influence and continuance intention, the user group with little experience is significantly larger than the experienced user group (β-experienced user = 0.269, β-little experience = 0.558 and p-value = 0.000). The empirical results revealed that new users are more inclined to comply with others' opinions and make continuance decisions based on them, while experienced users are more focused on the informative role of TikTok and continually use TikTok due to the rich information obtained from TikTok.

5.3 Fuzzy-set qualitative comparative analysis (FsQCA)

5.3.1 Analysis process. To run the fsQCA analysis, data calibration is required to transform all variables into fuzzy sets, with a value range of 0 to 1 (Ragin *et al.*, 2008). Based on the percentile of each construct, three qualitative thresholds of 95, 50 and 5th percentiles were applied to calibrate all the values to full membership, intermediate membership and full non-membership (Xie & Tsai, 2021; Ragin *et al.*, 2008). In addition, following the principles of Fiss (2011), we endeavored to avoid the cases exact on 0.5 by adding 0.001 to the values that are exact 0.50 after calibration, which is useful to overcome the difficulties of analyzing the conditions in the cases exactly on 0.5.

	Path coefficients		
	Experienced users	Users with little experience	Difference of path coefficients
Content appeal → Informative social influence	0.439***	0.363***	0.076
Content appeal → Normative social influence	0.276***	0.264***	0.012
Co-viewer participation → Informative social influence	0.204***	0.193***	0.011
Co-viewer participation → Normative social influence	0.255***	0.262***	−0.007
Informative social influence → Continuous intention	0.464***	0.247***	0.217***
Normative social influence → Continuous intention	0.269***	0.558***	−0.29***
Platform reputation → Informative social influence	−0.022	0.152	−0.173
Platform reputation → Normative social influence	0.057	0.100	−0.043
TikToker attractiveness → Informative social influence	0.016	0.086	−0.070
TikToker attractiveness → Normative social influence	0.149**	0.252***	−0.103

Table 5.
MGA analysis

Note(s): *** is significant at $p < 0.001$

After calibrating the data into fuzzy sets successfully, fsQCA analysis requires performing the necessity analysis. This study conducted the necessary conditions analysis for the presence and negation of continuance intention with a consistency benchmark of 0.90 (Ragin, 2008). As indicated in Table 6, all of the consistency values of each condition are below 0.90, which indicates that none of the variables can be considered the necessary condition to influence users' continuance intention when considered solely.

Then, this study analyzed sufficient conditions based on the truth table algorithm. Based on the instruction of Fiss (2011), the frequency threshold was set as 3 and the consistency threshold as 0.8. In addition, the proportional reduction in inconsistency (PRI) was applied with the score threshold of 0.7 to ensure the configuration does not simultaneously occur both in the cases of the presence of the outcome and the negation of the outcome (Pappas & Woodside, 2021). Finally, seven various configurations are generated. Following the prior notions, we presented the intermediate solution which is an optimal trade-off between the presentation of the complex and parsimonious solution (Fiss, 2011). Applying the conventional notations, we applied ● to indicate a condition is present and ⊗ to indicate the absence of a condition.

5.3.2 Analysis results. Table 7 illustrates seven configurations sufficient for continuance intention. Based on the consistency with the threshold of 0.75, all the solutions presented in Table 6 are consistent, which indicates theses seven solutions can explain TikTok viewers' continuance intention at a high level (Ragin, 2008). In addition, the results show an overall solution coverage of 0.759, which indicates that the seven configurations cover a substantial

	Continuance intention		~ Continuance intention	
Configurational elements	Consistency	Coverage	Consistency	Coverage
TikToker attractiveness	0.774	0.760	−0.508	3482382.25
~ TikToker attractiveness	0.534	0.655	0.726	0.331
Co-viewer participation	0.893	1.000	−0.670	−729909.06
~ Co-viewer participation	0.492	0.522	0.859	0.391
Platform reputation	0.762	0.712	−0.464	−3389677.00
~ Platform reputation	0.510	0.667	0.725	0.329
Content appeal	0.708	0.789	−0.478	837527.37
~ Content appeal	0.637	0.680	0.702	0.319
Informative social influence	0.748	0.776	−0.452	−835116.93
~ Informative social influence	0.585	0.671	0.756	0.344
Normative social influence	0.776	0.762	−0.483	−4417389.50
~ Normative social influence	0.524	0.641	0.746	0.339

Table 6. Necessary condition analysis

Configuration	1	2	3	4	5	6	7
TikToker attractiveness		●	●	⊗	⊗	●	
Co-viewer participation	●	●	●	●	●	●	●
Platform reputation		⊗	●		⊗	●	●
Content appeal	●		●				⊗
Informative social influence	●			●	⊗	⊗	⊗
Normative social influence		●	●	●	⊗	⊗	⊗
Raw coverage	0.58	0.35	0.52	0.25	0.37	0.33	0.33
Unique coverage	0.03	0.04	0.018	0.02	0.02	0.003	0.004
Consistency	1	1	1	1	1	1	1
Solution coverage				0.759			
Solution consistency				1			

Table 7. Configurations that lead to continuance intention

proportion of the paths that lead to continuous use intention. In addition, the overall solution consistency of 1 confirmed the high explanatory power of the results.

Solution 1–4 have similar features, which all include the factors in external sources of social influence and social influence. These four paths indicate that only external sources or social influence are insufficient to trigger viewers' continuance intention. These two categories of factors should coexist. It is worth noting that co-viewer participation is a necessary factor in these four configurations, which unveils the significant role of co-viewer on viewers' experience and its effects on their attitudes and continuance usage intention.

Except for the role of co-viewer participation in all solutions, the first configuration revealed that continuance intention results from the content appeal and informative social influence, which highlights the role of information on viewers' continuance intention in TikTok. The second configuration focuses on the influence of TikToker, the co-viewer and the normative influence, which unveils the influence of the social community in social media on viewers' continuance intention. The third configuration includes all of the antecedents except informative social influence. This configuration weakens the role of informative social influence when other factors exist. The fourth configuration advised that the influence of two types of social influence and co-viewer are sufficient to cause users' continuance intention of TikTok.

Different from solutions 1–4, solutions 5–7 unveil the underlying configurations when two types of social influence are absent. Solution 5 indicates that the mere influence of co-viewer participation is sufficient to cause continuance intention. Solution 6 revealed that the combined influence of the TikToker, the co-viewer and the platform can lead to continuance intention while solution 7 weakened the role of the TikToker and indicated only the role of co-viewer and platform are sufficient. However, compared to solution 5, the raw coverage of solution 6 and solution 7 is higher than solution 5, which indicated that when the influence of other external sources exists except co-viewer, the influence and explanatory power of the solutions will become stronger.

6. Discussion and implications

6.1 Discussion

Employing a mixed analytical approach that combines SEM and fsQCA, we empirically examined the hypothesized influencing mechanism proposed in the research model and investigated how all antecedents may form a variety of configurations to interpret viewers' continuous intention in the context of TikTok.

Employing SEM analysis, we explored the impact of unique external sources in TikTok on two types of social influences including informational social influence and normative social influence. This study examined eight hypotheses to unveil the relationships between external influencing sources and different social influences and their associations with continuous intention in TikTok. Six of the hypotheses are supported by empirical data.

With regard to the four external sources of informational social influences, two of the four constructs are positively associated with informational social influence. Co-viewer participation and content appeal both exert statistically significant effects on informative social influence (H2a, H4a). The results of the supported hypotheses are in accordance with the conclusion in prior literature (Cuesta-Valino *et al.*, 2022; Wu & Chen, 2017). It can be implied that when other co-viewers devote more energy and effort to contribute to the TikTok community and interaction, individual viewers can obtain more information easily, thus enhancing the information influences. Importantly, the content appeal is the strongest antecedent of informational social influences in the context of TikTok. The result is in line with our observation of the phenomenon. Since the quality of the content and the perceived attractiveness of the videos play the most critical role in the social streaming platform

(McCroskey *et al.*, 2010; Xu & Tayyab, 2021), if the content is not attractive, users may not watch the video at all, let alone receiving the informational social influence conveyed in the video.

In addition, the effects of TikToker's attractiveness and platform reputation on informational social influence are not supported by the empirical data (H1a and H3a). Informational social influence represents an individual's cognitive response towards a phenomenon or reality, thus helping confirm and strengthen their thinking (Li, 2013). The attractiveness of TikToker often shows the attributes of the TikToker, such as his\her physical, task-related or social attractiveness (Fang, 2014). Information social influence is related to individuals' cognition. Influenced by the specific context, viewers will generate different perceptions and cognitions in different situations, such as watching different videos or comments. However, the TikToker attractiveness and platform reputation only represent the general image of the TikToker and Tiktok platform, respectively. The general image reflects the overall evaluation of the viewers, which is unlikely to change in different specific contexts. Thus, the general image of TikToker and the Tiktok platform exert limited influence statistically on viewers' perceptions of informativeness. Compared with the TikToker attractiveness and platform reputation, video content and co-viewer are both context-related and represent the main way users obtain information, which has a great impact on the audience's cognition and perceived information when they use TikTok.

Four external sources, namely, TikToker attractiveness, co-viewer participation, content appeal and platform reputation, all exert significant impacts on normative social influence. The significance of these external sources has been supported by prior studies (Wang *et al.*, 2021). Content appeal ($\beta = 0.27$***) and co-viewer participation ($\beta = 0.26$***) exert the strongest effects. The impact of TikToker attractiveness ($\beta = 0.20$***) is also statistically significant, while platform reputation only exerts a marginally significant effect ($\beta = 0.08$*). The results suggest that the appealing content is most likely to exert normative social influence. The result is in line with the observation of social streaming platforms. In addition, under normative influence, people are more inclined to maintain the harmonious relations and obtain a positive evaluation from the social community (Kaplan & Miller, 1987). Hence, it is a natural result suggesting that other co-viewers as important TikTok community members can exert the most significant effect on normative social influence.

As for the influence of continuous intention, rich results were provided by both the SEM and fsQCA. On the one hand, SEM analysis unveils that both informational ($\beta = 0.35$***) and normative social influence ($\beta = 0.41$***) exert a very strong effect on the continuous intention of TikTok (H5 and H6). Prior studies have indicated that social influences generated from interaction on social media can significantly enhance users' positive attitudes toward the platform and change their previous negative impressions (Wu & Chen, 2017). The persuasive social influences message can increase the viewers' interest in engaging in a variety of behaviors on the social media platform (Chou *et al.*, 2015; Lee *et al.*, 2006). As for the relative importance, the results suggest that normative social influence can have a stronger impact on continuous intention. This might be attributed to the nature of social media. The reason why people continue to use social media is not limited to obtaining useful information but also includes maintaining social relationships developed in the virtual community (Tsai & Pai, 2013).

On the other hand, based on the combination of all of the antecedents of continuance intention, fsQCA results unveil the seven alternative solutions that are equally capable of explaining TikTok users' continuance intention. Several findings can be drawn from the results. First, the results indicate that there is no single factor that is itself necessary to explain continuance intention, which also confirms the theoretical model that no single external source itself is a necessary or sufficient factor to achieve the outcome. It reveals that users' continuance intention of TikTok results from a mix of several factors. Second, as

indicated by the fsQCA results, co-viewer participation assumes particular importance as it is present in all configurations. While it is interesting to notice that the effects of content appeal on both informative and normative social influence are stronger than co-viewer participation in the SEM net effect analysis, exclusively positive or negative relations between single variables concluded by SEM results provide an incomplete picture of the phenomenon (Woodside, 2013). The results of fsQCA further complement SEM results. Third, solutions 5–7 of the fsQCA results indicated that social influence is not necessary in leading to users' continuance intention. However, although solutions 5–7 indicate only external sources of social influence are sufficient to lead to continuance intention, compared to solutions 1–4, the raw coverage and the unique coverage value of solutions 1–4 are higher than solutions 5–7. The differences indicate the solutions with the social influence factors are stronger than those without such factors. The results not only validated the research model that external factors further affect the users' continuance intention through their social influence but also highlighted the role of social influence in users' decision-making process.

6.2 Theoretical implications

This study endeavors to offer several implications to the relevant literature. This research is one of the early attempts to extend social influence theory in the domain of TikTok study. Although researchers have called for investigating viewers' decision-making process of TikTok users (Cuesta-Valino *et al.*, 2022), only a few studies have addressed this topic to date (Meng & Leung, 2021). This study confirms the explanatory power of social influence theory in interpreting TikTok viewers' continuous intention and sheds light on the two types of social influences, including informational and normative social influences with empirical evidence. Hence, on the one hand, this study adds new insight into the literature on viewers' behavior on social streaming platforms such as TikTok and on the other hand, extends the scope of social influence theory in a novel context and thus contributing to the literature of social influence theory.

This study endeavors to explore the different sources of social influences in a novel context, and examines how the combinations of these sources will eventually affect viewers' behavioral decisions in TikTok. This study comprehensively explored four different external sources of social influence to represent the unique elements of this specific context. The research results unveil that the different external sources can generate distinct effects on two different social influences. Specifically speaking, only two sources related to content and co-viewer may lead to informational social influence, while all four sources may predict normative social influences in TikTok. Hence, this study offers useful knowledge to the literature focusing on the antecedents of social influences in an emerging context.

Finally, the application of a mixed analytical method offered a holistic and comprehensive view to understand viewers' decision-making mechanisms in more detail. The SEM allowed examination of the correlations proposed in the research model, which revealed a possible underlying influencing mechanism on viewers' continuance usage intentions in TikTok. Configuring the antecedents identified based on the social influence, the results of fsQCA offered seven alternative solutions for interpreting viewers' continuance intention toward TikTok, confirming the critical role of social influence in viewers' continuance intention and validating the influence mechanism of TikTok.

This approach revealed new insights (such as mediating effects) and offered in-depth interpretations of the SEM empirical results toward the research model. The fsQCA also verified and compensated the SEM results in the previous stages with a comprehensive list of solutions for determining coping behaviors. Moreover, this analytical approach indicated the complexity of determinants and solutions for predicting viewers' continuance intention in TikTok.

6.3 Practical implications

This study offers several practical implications to practitioners, managers and platform developers. First, the research results show that TikToker attractiveness has a significant impact on the continuous intention of TikTok users through normative social influence. Thus, the TikTok platform should arrange more resources to support the development of the TikTokers. The platform can officially launch a series of comprehensive tutorials to help TikTokers to improve their attractiveness, such as task-related skills (shooting skills, video editing and material selection), social interaction skills, etc. The platform can also launch a survey to better understand their viewers' preferences towards TikTokers, thus training them to better satisfy their viewers.

The results show that the perceived co-viewer participation has a significant impact on the continuous intention of TikTok through both informative and normative social influence. Therefore, the platform should enhance social functions, such as the functions of publishing updates, viewing friends' updates, posting comments and interacting with friends. In addition, the platform should increase the opportunities for the viewers to interact with other co-viewers sharing a similar interest with them, such as adopting effective recommendation algorithms, artificial intelligence and other advanced technologies to design more effective mechanisms. In addition, the platform should also dedicate to developing a high-quality virtual community to attract more users and motivate meaningful communications among co-viewers.

At last, the content appeal has a significant impact on the continuous intention of TikTok through the informative and normative social influence. Thus, the platform should design an effective mechanism to encourage the users to create more high-quality and attractive videos, such as reward points, grades and fans' rewards. In addition, the platform may optimize the mechanism to collect high-quality videos while recommending them to their viewers, thus enabling the users to obtain useful information and beneficial viewpoints by watching these videos.

6.4 Limitations and future research

This study has to acknowledge the limitations, which offer opportunities for future research. First, this study employed a cross-sectional survey to collect empirical data to investigate behavioral intention at the one-time point. Thus, future studies may employ longitudinal research methods and data capture the actual behavior to offer more reliable results. Second, since the sample data were collected in mainland China only, researchers should be cautious while applying the results to other cultures or regions. Third, though this study endeavors to offer a comprehensive result on the external sources of social influences, it does not offer a complete list of the possible factors. Future studies may explore other factors from different perspectives, such as the internal factors related to individual features. In addition, since informational social influence is distinct from normative social influence, it is reasonable to consider the different influencing factors of these two types of social influence. Thus, the future study may further explore the different antecedents of distinct social influences to provide a more underlying understanding of the users' decision-making mechanism.

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Appendix

Construct	Measurement item	References
TikToker attractiveness (TA)	I think the TikToker has an attractive style	Xu *et al.* (2021)
	I think the personality of the TikToker is attractive to me	Ha and Lam (2017)
	I think the TikToker has a very attractive appearance	
Co-viewer participation (CP)	Other co-viewers of TikTok seem to find the conversation stimulating	Xu *et al.* (2021)
	The community of TikTok showed enthusiasm while talking	Tsai and Pai (2013)
	The community of TikTok is intensively involved in video watching	
	I was very impressed by the community's high responsiveness in replying to comments	
Platform reputation (PR)	TikTok platform is famous	Zhou (2020)
	TikTok platform is well-known	
	TikTok has been widely used by many people	
	TikTok has been recognized widely compared to other short-video platforms	
	TikTok has a reputation for providing interesting short videos	
Content appeal (CA)	I think the video content on TikTok is attractive	Lai and Liu (2020)
	I think the video content on TikTok is valuable	Wang and Li (2014)
	I think the video content on TikTok is wonderful	
	I think the video content on TikTok is impressive	

(*continued*)

Table A1. Measurement items

Construct	Measurement item	References
Informational social influence (ISI)	I think there has some information to sway my decisions on TikTok	Henningsen and Henningsen (2003)
	I think there has some information to change my mind on TikTok	
	I may ask the community for suggestions to solve my problems	
	I often consult others to help me make the best decisions	
Normative social influence (NSI)	People's opinions in TikTok may change my behaviors or thinking	Li (2013)
	My behavior may be guided by a desire of the TikTok community	
	It is important what the TikTok community think about how I think	
	What the TikTok community considers important matters are also important to me	
	I watch some videos to fulfill the expectations of the TikTok community	
Continuous intention (CI)	Using TikTok is something I would like to do	Chen (2014)
	I intend to continue using TikTok	
	If I could, I would like to continue using TikTok as much as possible	
	I will maintain my TikTok use frequency in the future	
	I tend to use TikTok rather than other short video apps in the future	

Table A1.

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