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Chapter

Dissimilar Social Settings Impact on User Motivations and Activities on Live-Streaming Digital Platforms

Kyeong Kang, Lifu Li and Fatuma Namisango

Abstract

This chapter delves into the motivations and activities of users within various social contexts on live digital platforms. It introduces an innovative research model that employs the well-established Achievement Motivation Theory to investigate how three fundamental needs relate to the motivation of live streamers during their live-streaming activities. The study aims to illuminate the underlying drivers that influence live streamers' engagement and behavior within the dynamic landscape of live digital content. Live-streaming digital platforms have become prominent channels for user engagement and content creation, enabling individuals to broadcast live videos and connect with audiences in real time. However, user motivations and behaviors on these platforms can significantly differ based on their social settings. This research explores the impact of diverse social backgrounds on user motivations and activities on live-streaming digital platforms, shedding light on the intricacies that shape user behavior across various contexts. Influence of Social Settings: Social settings encompass cultural norms, societal values, economic conditions, and technological infrastructure. These factors shape users' attitudes, preferences, and aspirations on live-streaming platforms, ultimately influencing their motivations and activities. Drawing on the Achievement Motivation Theory by McClelland, this chapter examines motivating factors for live-streaming activities, focusing on the need for achievement, power, and affiliation. The study employs variance-based structural equation modeling (SEM), specifically partial least squares (PLS), to analyze these elements. The findings highlight the positive impact of these factors on live streamers' motivation to create live-streaming content, offering theoretical insights and practical implications for scholars and practitioners engaged in live-streaming activities. This research aids in understanding the live-streamer community within the rapidly evolving landscape of live digital platforms.

Keywords: live digital platforms, live-streaming, user motivation, social setting, content creation

1. Introduction

In the realm of business digital platforms, a comprehensive comprehension of user motivations and behaviours within diverse social contexts on live digital platforms stands as a pivotal catalyst for the enhancement and augmentation of digital platform services. The intrinsic value of these services is profoundly influenced by the intricacies governing user engagement and activities in the digital landscape. As such, an in-depth exploration of these facets not only serves as an academic endeavour but also as a pragmatic pursuit with profound implications for businesses operating within the digital domain.

The contemporary business landscape is indelibly intertwined with the proliferation of digital platforms, where individuals harness the power of live-streaming technologies to engage with audiences in real time. However, the dynamics of user motivations and activities on these platforms exhibit significant variations contingent upon the social settings in which they operate. The amalgamation of cultural norms, societal values, economic conditions, and technological infrastructure collectively blends user attitudes, preferences, and aspirations, thereby exerting a profound influence on their interactions within live digital environments.

This chapter embarks on a scholarly exploration of this intricate terrain, invoking a synthesis of theoretical frameworks, empirical analyses, and methodological rigor to unravel the multifaceted dimensions of user motivation and behaviour. By shedding light on the dynamic interplay between social contexts and user engagement within the digital sphere, this inquiry aspires to proffer not only a deeper academic understanding but also a pragmatic roadmap for businesses aspiring to optimize their digital platform services.

In the ensuing pages, we embark on a journey that delves into the depths of user motivations and activities, navigating the complex terrain of live digital platforms and their profound implications for the contemporary business ecosystem.

A novel research model is proposed, which employs an existing Achievement Motivation Theory [1] to investigate the relationship between three fundamental needs and the motivation of live streamers during their live-streaming activities. The study aims to shed light on the underlying drivers influencing the live streamers' engagement and behavior in the dynamic realm of live digital content.

Live-streaming digital platforms have become a prominent medium for user engagement and content creation, allowing individuals to broadcast live videos and connect with audiences in real time. However, the motivations and activities of users on these platforms can vary significantly depending on the social settings in which they operate. This study explores how dissimilar social settings impact user motivations and activities on live-streaming digital platforms, shedding light on the nuances that influence user behavior in different contexts, such as the Influence of Social Settings, developed vs. less-developed regions, urban vs. rural communities, individualistic vs. collectivist cultures, technological accessibility and gender and social norms.

The influence of social settings: Social settings encompass a range of factors, including cultural norms, societal values, economic conditions, and technological infrastructure. These elements can shape users' attitudes, preferences, and aspirations on live-streaming platforms, ultimately affecting their motivations and activities.

Developed vs. less-developed regions: In more economically developed regions, users may be driven by achievement-oriented motivations, seeking recognition and success through high-quality content and large viewer bases. On the other hand, in less-developed areas, users might prioritize affiliation-oriented motivations, aiming

to build close-knit communities and foster meaningful connections with their audiences.

Urban vs. rural communities: Users from urban areas may be more inclined to explore diverse content creation opportunities, embracing technology to its fullest potential. In contrast, users from rural communities may focus on content that reflects their local culture and traditions, emphasizing a strong sense of belonging and identity.

Individualistic vs. collectivist cultures: Users may be motivated by personal aspirations to stand out and showcase their unique talents in individualistic cultures. In contrast, users from collectivist cultures may prioritize group harmony and cooperation, leading to collaborative and community-centered content.

Technological accessibility: The availability and accessibility of technology can significantly impact user motivations and activities. In regions with advanced technical infrastructure, users may be more likely to engage in live-streaming for professional purposes. At the same time, those with limited access may primarily use it for social interaction and entertainment.

Gender and social norms: Social norms and expectations surrounding gender roles can also shape user motivations and activities. In some settings, there might be specific expectations or limitations on what content male and female users are encouraged or allowed to produce.

With the rapid development of live-streaming digital platforms, online users are willing to engage in live-streaming activities and create unique content. Drawing on the McClelland achievement motivation theory, this chapter discusses the motivating factors for live-streaming activities from three perspectives: the need for achievement, the need for power, and the need for affiliation. We analyzed the above elements using a variance-based structural equation modeling (SEM) technique, partial least squares (PLS). All factors positively affect live streamers' motivation to produce live-streaming content. Our findings present theoretical and practical implications for scholars and practitioners in live-streaming activities. The research results are helpful for related scholars and departments to understand the live-streamer group and pay more attention to live-streaming activities.

2. Introduction of investigation

A study examines how the three core achievement needs, affiliation, and power influence live streamers' motivation on live digital platforms. By reading this relationship, we seek to provide insights into the factors that inspire and sustain live-streaming engagement among content creators.

Live digital platforms have witnessed a remarkable surge in popularity, with live-streaming emerging as a dominant mode of communication and content creation. With various live-streaming options, understanding the motivations driving live streamers becomes crucial for platform providers and content creators. The present research delves into the psychological underpinnings of live-streaming motivation to address this gap, employing the McClelland Achievement Motivation Theory as the theoretical framework.

Live-streaming is an online activity that allows live streamers to reach and interact with online viewers over the Internet [2]. Unlike traditional social media platforms, the main advantage of live-streaming is that live streamers can get real-time feedback. With the improvement of live-streaming technology and the popularity

of smartphones, more and more online users consume and actively produce information, aiming to enhance their social influence and develop the e-business [3]. Meanwhile, live-streaming platforms are gradually replacing traditional social media platforms and attracting many user groups. For example, the number of active live-streaming users in China has increased from 230 to 330 million between 2018 and 2019, and 27% of online shoppers claim they will purchase products directly through live-streaming platforms [4, 5]. Given the technical convenience and huge user base, more and more Chinese users are willing to engage in live-streaming activities on live-streaming platforms.

Previous studies have identified the importance of live-streaming functions and analyzed online users' watching motivation on live-streaming platforms [6–8]. However, insufficient focus on live streamer groups and discussing their live-streaming motivation. Unlike online viewers, live streamers have specific needs to create live-streaming content, such as meeting their financial needs and enhancing social value [3]. Specifically, young entrepreneurs establish business activities on live-streaming platforms to reduce investment costs, and ethnic minority group users produce cultural content to promote cultural diversity and build their careers [9–12]. Different live streamer groups have unique goals for developing live-streaming content. Still, limited scholars focus on this specific phenomenon. Considering this, the main research question is: What *factors affect live streamers' motivation to produce live-streaming content?*

Based on the research question, this chapter draws on the McClelland achievement motivation theory, also known as the three needs theory, to design specific influencing factors and explore live streamers' live-streaming motivation [1]. The approach can be applied to discover and predict behavior and performance based on an individual's needs [13]. According to the McClelland achievement motivation theory, personal motivation can be influenced by the needs for achievement, affiliation, and power [1]. However, previous research [14–16] applied the McClelland achievement motivation theory to analyze individuals' and organizational behaviors, almost none of them applied it to focus on live-streaming activities and discuss live streamers' live-streaming motivation. Considering the sense of accomplishment, the live-streaming activity can bring, using the theory could provide some theoretical support for the framework exploration. The study proposes a research model and specific hypotheses which apply the McClelland achievement motivation theory to analyze the relationship between three needs and live streamers' live-streaming motivation.

The McClelland Achievement Motivation Theory [1] posits that individuals are driven by three primary needs: achievement, affiliation, and power. Achievement refers to the desire for excellence, the aspiration to accomplish challenging tasks, and the pursuit of success. Affiliation entails the need for social interactions, forming connections, and fostering positive relationships. Power reflects the yearning for control, influence, and authority over others.

3. Study background

3.1 Live-streaming motivation

"Live-streaming" can be defined as a synchronous function, and live streamers on live-streaming platforms can create live videos and interact in real time with online viewers [17]. Visual interaction is integral to the live-streaming engagement field [18]. Convenient functions provided by live-streaming platforms have unique

attractiveness for live streamers, such as real-time video interaction, Danmuku, virtual gift-sending systems, and online store functions [19, 20]. Because of the advanced peer-to-peer technology, online users can be not only receivers of information but also creators of information, known as live streamers. For instance, young live streamers can produce novel content to make online friends, and online merchants tend to build trust with online consumers and advertise their products [21]. Different needs of live streamers can be met through live-streaming activities. The significance of the current study is to focus on live streamers' live-streaming motivation based on the McClelland achievement motivation theory.

3.2 McClelland achievement motivation theory

The achievement motivation theory can be applied to explain and predict motivation based on an individual's need for achievement, power, and affiliation [22]. It has been widely adopted in many academic areas, such as distance learning and entrepreneurial persistence[23, 24]. Limited studies apply it to analyze individual live-streaming activities, i.e., live-streaming motivation. It supports that personal motives are related to achievement, affiliation, and power motives. The need for achievement refers to live streamers' success in competition with some standard of excellence, such as building their fan group and establishing their own careers [16]. The need for power means live streamers prefer to influence online viewers and seek positions of authority [25].

Regarding affiliation needs, it refers to live streamers' needs to develop, maintain, and restore warm personal relationships with online viewers [25]. Based on the McClelland achievement motivation theory, three different needs significantly link individuals' motivation. Considering that limited scholars apply the approach to discuss live-streaming motivation, this paper needs to examine the relationship between three needs and live streamers' live-streaming motivation.

4. Hypothesis development

Based on the McClelland achievement motivation theory [1], we argue that three needs, including achievement, affiliation, and power, significantly affect live-streaming motivation. This chapter proposes three hypotheses to explore the motivators for live-streaming, as shown in **Figure 1** below.

4.1 Need for achievement

As defined by Moore et al. [16], the need for achievement refers to the drive for success and excellence compared to a particular standard. In the context of live-streaming platforms, live streamers can fulfill this need through technical convenience, which allows them to attain social recognition and economic status by creating distinctive content or establishing online start-ups, as pointed out by Li and Kang [26]. A prime example of this phenomenon is live-streaming commerce, where the barriers to entry for starting a business are reduced, enabling live streamers to easily engage with online consumers and discuss product information directly on live-streaming platforms [27, 28]. This symbiotic relationship between live streamers and consumers facilitates the fulfillment of the need for achievement, as live streamers can achieve success and excellence by effectively reaching and engaging with their audience, leading to greater social value and economic opportunities.
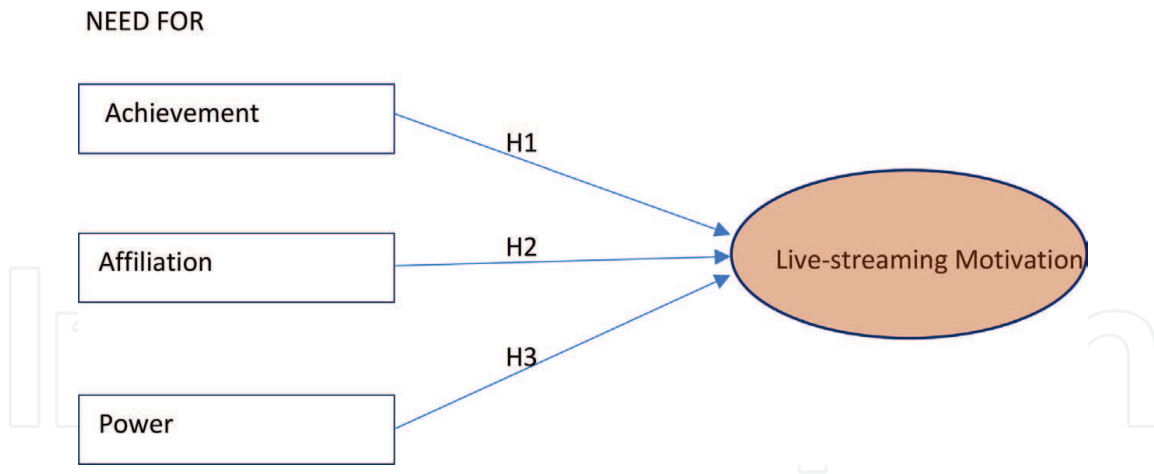
NEED FOR

Figure 1.
Research model.

The new business model would help live streamers achieve higher economic status and implement their career goals. Thus, we hypothesize that:

Hypothesis 1: The need for achievement positively affects live streamers' live-streaming motivation.

4.2 Need for power

Based on the definition proposed by Lussier and Achua [25], the need for power means live streamers tend to influence online viewers and seek positions of authority through live-streaming Fields [25]. By creating unique live-streaming content, live streamers can attract online viewers' attention and build trust with them [29]. The trust created with online viewers helps live streamers pass on personal ideas and influence viewers' judgment [4, 30]. This process can satisfy live streamers' need for power, and hence we hypothesize that:

Hypothesis 2: The need for power positively affects live streamers' live-streaming motivation.

4.3 Need for affiliation

Affiliation need relates to live streamers' needs to develop, maintain, and restore warm personal relationships with others [25]. Because of the real-time interactive technology and convenient online communication functions, it is simple for live streamers to understand online viewers' experiences and narrow the emotional distance from them [31]. Meanwhile, other convenient functions, such as group chat, gift-sending system, and fan group functions, can be helpful for live streamers to communicate with online viewers and maintain a strong relationship with them [9, 32]. Therefore, we hypothesize that:

Hypothesis 3: The need for affiliation positively affects live streamers' live-streaming motivation.

4.4 Live-streaming motivation

Live-streaming motivation refers to the driving factors that inspire individuals to engage in live-streaming activities on digital platforms. Live-streaming has become

a popular medium for content creators to broadcast real-time videos and interact with their audience dynamically and interactively. Understanding the motivations behind live-streaming is crucial to comprehend why individuals participate in content creation and communication. Motivations for live-streaming can vary widely among different individuals and content creators.

It is essential to recognize that motivations for live-streaming can be multifaceted and may evolve. Individuals may have a combination of motivations that drive them to engage in live-streaming activities. Understanding these motivations helps platforms, marketers, and content creators tailor their strategies to meet streamers' and viewers' needs and expectations, leading to a more vibrant and engaging live-streaming community.

5. Research approach

To achieve the research objectives, the study adopted a quantitative approach as Evans and Mathur's [33] field study. First, a comprehensive literature review was conducted to establish the theoretical foundation and gather relevant insights from previous studies. Subsequently, quantitative data was collected through an online survey from a diverse sample of live streamers comprising different content categories and platforms. The survey comprised validated scales to measure achievement motivation, affiliation motivation, power motivation, and live-streaming motivation.

We collected data from a diverse sample of live streamers across different digital platforms to examine the motivating factors for live-streaming activities. A well-structured survey instrument was developed, incorporating validated scales to assess the need for achievement, power, and affiliation. The survey also included measures of live-streaming motivation. With the aid of variance-based structural equation modeling, namely partial least squares (PLS), we analyzed the relationships among these variables.

It is suitable for researchers to collect data during the COVID-19 pandemic, as identified by previous studies [26]. Furthermore, the study chooses Chinese live streamers as research samples because the development of live-streaming platforms is fast in China. For instance, as China's most popular live-streaming platform, TikTok (Douyin) has attracted more than 500 million active users and has become the third most downloaded app [34, 35]. Considering the rapid development of live-streaming platforms in China, this study selects the Chinese live-streaming environment as the research context.

5.1 Measurement items

All constructs measured in this study are based on existing literature. For instance, according to the research proposed by Schönbrodt and Gerstenberg [36], the need for achievement, power, and affiliation have been measured by three question items, respectively. Meanwhile, based on three questions Field, live-streaming motivation is examined [37]. Except for basic information statistics, such as gender, age, EMG background, and living regions, major question items are shown in **Table 1**. The paper utilizes the Likert 7-point scale with a range from the lowest score = 1 to the highest score = 7 to measure participants' answers [38].

Variable	Item	Measurement	Adopted from
Need for achievement	NA1 NA2 NA3	Continuously engage in new, exciting, and challenging goals and projects. I am attracted to situations that allow me to test my abilities. My goal is to do at least a little bit more than anyone else has done before	Schönbrodt and Gerstenberg [36]
Need for power	NP1 NP2 NP3	I like to have the final say. I would like to be an executive with power over others. I feel confident when directing the activities of others.	Schönbrodt and Gerstenberg [36]
Need for affiliation	NF1 NF2 NF3	Engage in a lot of activities with other people. Encounters with other people make me happy. I like to make as many friends as I can.	Schönbrodt and Gerstenberg [36]
Live-streaming motivation	LS1 LS2 LS3	I am ready to do anything to be a live streamer. I will make every effort to start live-streaming. I have the firm intention to create live-streaming content someday.	Ho and Yang [37]

Table 1.
Questionnaire items.

5.2 Data collection

The current study used the questionnaire design platform wjx.cn because the online questionnaire is distributed on Chinese social media platforms. Its academic functions and the Chinese language option are comfortable for Chinese users to fill in. Filtering questions have been designed before the formal questionnaire, including their live-streaming platform using experience and live-streaming content-producing experience. From October 2022 to November 2022, online questionnaires were distributed on Chinese social media platforms like WeChat, Sina Weibo, and QQ. One hundred fifty-four replies have been received, and inappropriate responses have been deleted, including incomplete answers and the same IP address. Finally, 130 questionnaires are valid for this study, and the rate of the valid questionnaire is 84.42%.

6. Data analysis

The variance-based Structural Equation Modeling (SEM) and partial least squares (PLS) path modeling is applied to examine the research model and analyze hypotheses [39, 40]. The measurement and structural model analysis is conducted through the SmartPLS 3, which fits the research purpose. Meanwhile, implementing PLS-SEM analysis on SmartPLS can better understand the research model, and it has relaxed data requirements, which has been identified by previous studies [41, 42].

6.1 Descriptive statistics

Among these 130 respondents (**Table 2**), 46.15% are female, and 53.85% are male. Regarding their age, 49.23% are between 21 and 30, and 34.62% are between 31 and 40. Regarding participants' platform-using experiences, 46.15% have 2–3 years of user experience, and 39.23% have 1–2 years of user experience, as shown in **Table 2**.

Demographic variables	Category	Frequency	Percentage (%)
Gender	Female	60	46.15
	Male	70	53.85
Age	≤20	12	9.23
	21–30	64	49.23
	31–40	45	34.62
	≥40	9	6.92
Platform using experience	Less than half-year	9	6.92
	1–2 year	51	39.23
	2–3 year	60	46.15
	Above 3 years	10	7.69

Table 2.
The basic information of respondents (N = 130).

6.2 Measurement model

The study must involve reliability, convergent validity, and discriminant validity evaluations to check the measurement model [43]. Firstly, as per the previous research [40], three criteria, including average variance extracted (AVE), composite reliability (CR), and Cronbach's Alpha, need to be utilized to evaluate the reliability of the research model. In detail, AVE should be greater than 0.50, CR should be higher than 0.70, and Cronbach's Alpha should be more incredible than 0.70 [44]. **Table 3** shows that all data results meet the requirements, meaning acceptable reliabilities.

The convergent validity and discriminant validity were evaluated. As **Table 3** presents, the factor loadings within their intended constructs are highly correlated,

Item	Indicator	Loading	AVE	Composite reliability	Cronbach's Alpha
LS	LS1	0.850	0.766	0.907	0.847
	LS2	0.913			
	LS3	0.860			
NA	NA1	0.904	0.779	0.914	0.857
	NA2	0.919			
	NA3	0.823			
NF	NF1	0.836	0.749	0.899	0.832
	NF2	0.900			
	NF3	0.858			
NP	NP1	0.861	0.794	0.920	0.869
	NP2	0.942			
	NP3	0.867			

Table 3.
The results of factor loadings, AVE, CR, and Cronbach's Alpha.

presenting that the measurement model meets the requirement of convergent validity and discriminant validity [45–47]. The range of marked items shown in **Table 3** is from 0.823 to 0.942, which is higher than 0.708, indicating that the model meets the convergent validity [44]. Meanwhile, AVE can be used to analyze convergent validity. As **Table 3** shows, the AVE results are higher than the proposed AVE value of 0.50, demonstrating the convergent validity of this research model [48].

In addition to the convergent validity, the discriminant validity should be tested by checking the Fornell-Larcker criterion. The AVE square root on the diagonals (**Table 4**) can be utilized to evaluate whether the discriminant validity of the model is acceptable [46, 49]. As per this criterion, a key condition is that the square root of the average variance extracted by a particular construct should exceed the correlation between that construct and any other constructs within the model. As shown in **Table 4**, the AVE square root on the diagonals is significantly higher than other correlations, claiming that the discriminant validity meets related requirements. Meanwhile, values of the HTMT ratio remain lower than 0.90, as recommended in the literature for discriminant validity confirmation [44]. Hence, all constructs get discriminant validity.

In **Table 4**, the bold values represent correlations between constructs. Specifically, the bold numbers in the upper part of the table (Fornell-Larcker criterion) represent correlations between constructs, while the bold values in the lower part of the table (HTMT criterion) also indicate correlations but follow a different measurement criterion. These bold values are significant because they reveal the strength and direction of the relationships between the various constructs being studied. Researchers often highlight these bold values to draw attention to key findings and to assess discriminant validity between constructs.

Our findings, as presented in **Table 4**, reveal that the AVE square root values along the diagonal significantly surpass the correlations with other constructs. This observation strongly supports the assertion that our model indeed fulfills the prerequisites for discriminant validity as per the relevant criteria.

Furthermore, we ensure that our results align with the established recommendations in the literature by verifying that the values of the Heterotrait-Monotrait (HTMT) ratio consistently remain below the threshold of 0.90, as advised for

Fornell-Larcker criterion				
	LS	**NA**	**NF**	**NP**
LS	**0.875**			
NA	0.748	**0.883**		
NF	0.730	0.656	**0.865**	
NP	0.771	0.701	0.679	**0.891**
HTMT criterion				
	LS	**NA**	**NF**	**NP**
LS				
NA	0.877			
NF	0.867	0.772		
NP	0.888	0.808	0.797	

Table 4.
Discriminant validity is based on the Fornell-Larcker criterion and HTMT criterion.

Relationship	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/ STDEV|)	P values
NA- > LS	0.310	0.098	3.151	0.002
NF- > LS	0.279	0.092	3.027	0.003
NP- > LS	0.364	0.105	3.452	0.001

Table 5.
Hypotheses results.

confirming discriminant validity [44]. Consequently, we can confidently affirm that all constructs within our study unequivocally exhibit discriminant validity.

6.3 Structural model evaluation

When self-report questionnaires are applied to collect data simultaneously from the same participants, a standard method variance (CMV) can be problematic [50]. We tested CMV using the variance inflation factor (VIF) [44, 51]. The occurrence of a VIF higher than 3.3 can be proposed as an indication of pathological collinearity. Thus, the value of VIF must be below 3.3 to be free from the multicollinearity problem [44]. The data analysis shows that the VIF scores for all constructs are between 2.104 and 2.356, which are significantly lower than 3.3. Hence, the study can support that there are no collinearity problems detected.

6.4 Hypothesis testing

We assessed path significance and t-statistical test using the bootstrapping technique on SmartPLS 3 [52]. As **Table 5** presents, all hypotheses can be supported because t-statistics results are notably higher than 1.96 and P values are less than 0.01 [52]. Specifically, according to the data analysis in **Table 5**, the need for achievement positively affects live streamers' live-streaming motivation (β = 0.310, t = 3.151, p < 0.01), which supports H1. The need for power positively affects live streamers' live-streaming motivation (β = 0.364, t = 3.452, p < 0.001), supporting H2. Meanwhile, the need for affiliation positively affects live streamers' live-streaming motivation (β = 0.279, t = 3.027, p < 0.01), supporting H3.

7. Discussion of findings

We proposed three factors that motivate live-streaming activities for live streamers rather than online viewers, as often discussed in previous studies. Our hypotheses were based on the McClelland achievement motivation theory, which posits the need for achievement, affiliation, and power to influence individual engagement in activities. Our findings revealed that all three needs—achievement, affiliation, and power—positively affect live streamers' live-streaming motivation. Generally, our findings confirm McClelland's achievement motivation theory's relevance and usefulness in studying motivation for behavior in digital platforms.

While all three factors positively influence live-streaming motivation, our findings suggest that power could be a stronger motivator for live streamers, followed by achievement and affiliation. This observation aligns with Heser, Banse, and Imhoff

[53], who also noted that the need for power was a stronger motivator for social networking activities such as friending and uploading pictures. However, Alshaibani and Qusti [14] found the need for achievement to be a stronger motivator for using WhatsApp. The variation in findings across studies suggests that the three motivators could differ based on the online platform used. Such differences should be because different platforms are designed to support different needs and have presented several affordances.

Specifically, live streamers focus on their achievements, such as economic goals and social status, while producing live-streaming content. Meanwhile, interesting live-streaming content can attract a large fan base, potentially influencing their viewing interest and purchasing motivation. Thus, working in the live-streaming industry can satisfy live streamers' needs for power. Finally, because of live-streaming technology, live streamers can communicate with online reviewers in real time, meeting their social requirements. Therefore, the need for affiliation positively affects live streamers' live-streaming motivation.

8. Theoretical and practical implications

Although previous research applied the McClelland achievement motivation theory to analyze individuals' and organizational behaviors [15, 16], almost none discussed live streamers' motivation to produce live-streaming content. With the rapid development of the live-streaming industry, more and more online users are willing to share information through live-streaming platforms and engage in live-streaming activities. Meanwhile, based on the McClelland achievement motivation theory, the study combines it with live-streaming backgrounds and proposes specific hypotheses. It is helpful for future studies to systematically analyze the live-streaming phenomenon and discover live streamers' live-streaming motivation.

Regarding the practical implications, the study results are helpful for related scholars and departments to understand the live streamer group. For instance, engaging in live-streaming activities can help live streamers build a close relationship with online viewers and satisfy their needs for affiliation. Real-time interaction with online viewers is beneficial for live streamers to meet new friends and build online communities, for instance, during the COVID-19 pandemic and the strict quarantine policies. Engaging in live-streaming activities could meet live streamers' affiliation and achievement needs and release anxiety during the pandemic. Consequently, focusing on the live-streaming industry could be fruitful because its development can promote economic development and meet online users' spiritual needs. Given the similarities between live-streaming motivation and other online activities motivation, the findings could also be used to focus on some specific research areas, such as online marketing and distance teaching activities.

9. Discussion, study limitations

The survey analysis results indicated the need for achievement, power, and affiliation significantly and positively influence live streamers' motivation to engage in live-streaming activities and produce content. Live streamers with a higher need for achievement were more driven to create challenging and exceptional content. In comparison, those with a higher need for power exhibited a greater desire to take charge

of their content creation process and influence their audience. Additionally, streamers with a higher need for affiliation focused on building strong bonds with their viewers and creating a sense of community.

Although the research model has been established based on the McClelland achievement motivation theory, several details should be improved in future studies. Firstly, the McClelland achievement motivation theory must fully explain the motivation process and display how it occurs in various activities. Hence, related scholars should consider its limitation and combine it with other behavior research theories, that is, the stimulus-organism-response (S-O-R) theory. Meanwhile, the multi-group analysis should be developed in future studies based on live streamers' genders, ages, and educational backgrounds. Different groups could focus on different needs.

Moreover, the data is collected from Chinese users. However, influenced by social and cultural backgrounds, there would be some differences between Eastern and Western users. The cultural differences should be analyzed in future studies, and more influencing factors related to the social and cultural backgrounds should be discussed, including uncertainty-avoidance thinking, power distance, and collectivism [54, 55]. Finally, the online questionnaire participants are from the TikTok platform, and they could pay more attention to the need for affiliation rather than achievement. This is because the TikTok platform is designed based on entertainment, which differs from the Taobao Live platform which focuses on live-streaming commerce. Future studies should present the uniqueness of platforms and discover the specific behavior of users from different platforms.

10. Conclusion

This chapter highlights the importance of McClelland's [1] achievement motivation theory in understanding the motivating factors behind live-streaming activities. Using variance-based structural equation modeling, our study reveals that the need for achievement, power, and affiliation positively impact live streamers' motivation to create live-streaming content. The implications of these findings extend to scholars and practitioners alike, emphasizing the significance of live-streaming activities in the digital realm and underscoring the need for further research and attention to this dynamic and evolving domain.

The study draws on the McClelland achievement motivation theory to analyze live streamers' live-streaming motivation. Unlike existing research, it designs influencing factors from three aspects, including the need for achievement, the need for power, and the need for affiliation. Through the data analysis, all of them positively affect live streamers' motivation to produce live-streaming content. The research results are helpful for related scholars and departments to understand the live-streamer group and pay more attention to the live-streaming activities.

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