

Advertisement on Tik Tok as a Pioneer in New Advertising Era: Exploring Its Persuasive Elements in the Development of Positive Attitudes in Consumers

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ABSTRACT. Tik Tok is the most prosperous short video platform with a great power of advertising in China. This study aims to develop provide insight into the scale items of consumers' attitudes toward the advertisements on Tik Tok and to theorize the consumers' attitudinal behavior. To undertake this study, the researcher interviewed 900 people about their preference to platforms' advertisements and summarize the reasons that they embrace the ads on Tik Tok. Then the researcher conducted an empirical study among the members identified in the quantitative study that holds positive attitudes towards ads on Tik Tok. A total of 396 questionnaires were distributed to them and 339 valid responses were collected. By validating the scale items and their underlying constructs, it could be concluded that the positive attitudes in consumers are persuaded by entertainment motivation (EM), User-Friendly (UF), Customer-Build (CB), Reliability and Authenticity (RA), and User Interaction (UI).

KEYWORDS: Advertisement, Tik tok, Consumer attitude, Behavioral attitude, Persuasive

1. Introduction

Nowadays, short video is one of the most prosperous industries in China. Within the short video industry, Tik Tok, launched in September 2016, rapidly became the most popular app among young people within 1 year. As of January 5, 2020, the number of daily active users of Tik Tok has exceeded 400 million. At present, Tik Tok is a very prominent platform for various advertisers and marketers. Today thousands of people are attracted to Tik Tok business due to its incredible power of liquidity. Why are marketers and vloggers able to rake in big bucks by advertisements? Commonly, most people do not like to spend time watching advertisements. According to research, "around 30% of all internet users now use ad blockers" [1]. However, people do not hate the advertisements on Tik Tok, they are even motivated to make purchases. This question has not been solved until now. Anticipating the future of digital advertising by observing Facebook, YouTube, and Instagram is not functional anymore, at least in China. Chinese researchers have noticed the astounding aggressiveness of Tik Tok in mass communication and have focused on the causes of Tik Tok's popularity but seldom pay attention to detecting its advertising strategies.

This study aims at exploring the new advertising strategy inspired by the advertisements on Tik Tok by identifying the persuasive elements that influence consumers' attitudes and behaviors. According to Gorman and McLean [2], inspired by propaganda and behavioral psychology, advertising strategy shifts from simply providing information to creating the needs of consumers. However, the consumer response model [3] [4] proposes that consumers respond in various ways to promotional messages such as advertisements. This research derives some driving forces which attract and motivate Tik Tok users to be positive towards product-related information instead of being adverse to it. Through the use of scale items, this study effectively summarizes the crucial elements to influence consumers' attitudes and perceptions towards advertisements, which provide literature for marketers and advertisers to reference and launch favorable advertisements.

2. Literature Review

2.1 Short Video Advertising

Lee, Ham, and Kim [5] from the perspective of interpersonal communication motives scale (ICM) [6] and the theory of reasoned action [7] examined why people pass along online video advertising. They identified the six

distinct outcomes that consumers expect from passing along online video advertisements: pleasure, affection, inclusion, escape, relaxation, and control. As Lee, Ham, and Kim [5] pointed, “when advertisers create and use online video ads for their campaigns to trigger consumers’ pass-along behaviors, they need to focus on consumers’ attitudes toward passing along online video ads first and then consider the influence of their reference groups (subjective norm).” This is theoretical evidence of five constructs hypothesized in this research.

2.2 Entertainment Motivation

Mir [8], in “Impact of Entertainment Motivation Drivers on User Acceptance of Online Social Network Banner Advertising”, defined emotion entertainment. According to Mir [8], entertainment motivation for using social network sites a multidimensional (SNSs) construct consisting of enjoyment, social escapism, relaxation and pass time factors. This is consistent with the conclusion drawn by Lee Ham, and Kim [5]. Furthermore, the results exhibit that SNSs entertainment motivation partially impacts user acceptance of social network advertising. Besides, Mir stated that social media has phenomenally changed the communication landscape. In Particular social network sites become popular and acceptable widely. “The business model of many social network sites based on advertising”[8].

2.3 Personalized Advertising

Stein [9] define cognitive demand as “the kind and level of thinking required of students to successfully engage with and solve the task.” Bang and Wojdyski [10] based on task cognitive demand tracked users visual attention and responses to personalized advertising. By using eye-tracking, Bang and Wojdyski [10] found that personalized banner ads attracted significantly longer and more attention than non-personalized ads. Tik Tok is a platform that provides personalized advertisement for consumers. Referencing the literature of personalized advertising, adducing customer-build as a component that influences consumers’ attitudes is reasonable.

3. Research Methodology

The purpose of this research is to analyze consumer’ opinions towards advertisements on Tik Tok through exploratory research. The whole research involved four steps (see Figure. 1). This methodology included: 1) randomly interviewing nine hundred people’s preference to advertisements on given platforms; 2) an empirical study that is conducted to establish the scale items to examine the constructs of favorable attitudes toward advertisements on Tik Tok. To make the results effective and universal, the quantitative sample of this research comprises people from more than four provinces in China.

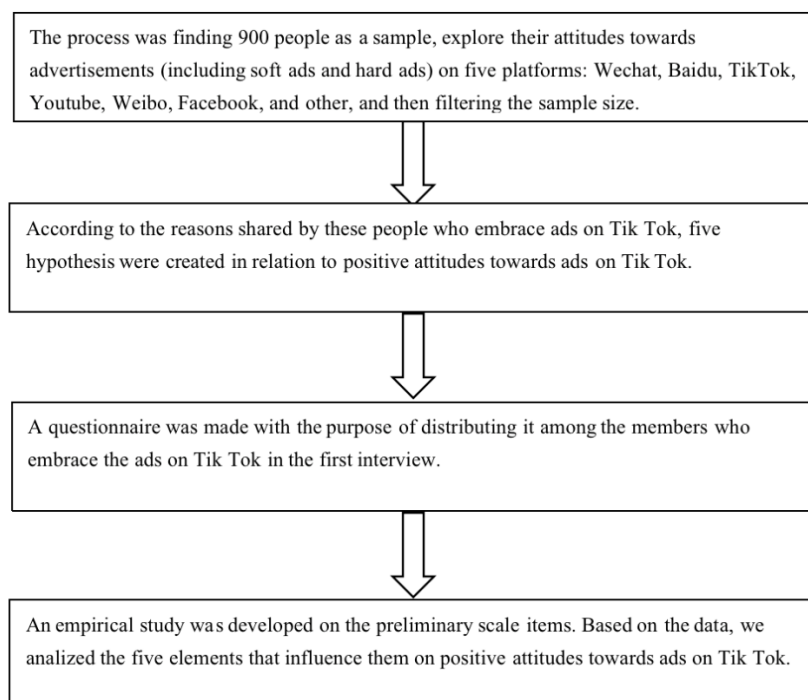


Fig. 1 Flow chart of the research

3.1 Quantitative Study

This research interviewed in total 900 people from more than 4 provinces in China. This research asked 900 people to choose one platform that they like to watch advertisements on that best among Baidu, Wechat, Weibo, Facebook, YouTube, Tik Tok, and others. By calculating the number of people that enjoy their selected advertisement platforms, it is evident to find that 396 people prefer the advertisements on Tik Tok (see table. 1 and Figure. 2).

Table 1 Interview Results

Platform	Frequency
Baidu	58
Wechat	227
Weibo	77
Facebook	40
Youtube	53
Tik Tok	396
Other	49

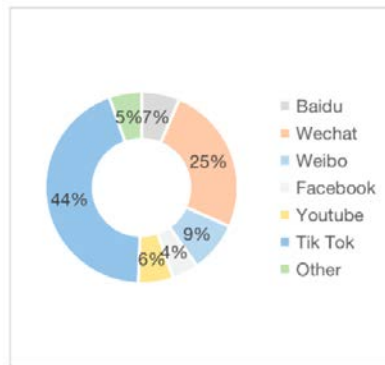


Fig.2 Interview Results

In the interview, the majority of respondents have expressed the reasons behind choosing Tik Tok. By collecting and summarizing the causes they provided, this research hypothesizes five main forces to influence the development of consumers’ positive attitudes: entertainment motivation (EM), reliability and authenticity (RA), customer-build (CB), users’ interaction (UI), and user friendly (UF). The questionnaire questions about the attitudes were referencing the existing literature about advertisements [11] [12] [13].

3.2 Empirical Study

We distributed the questionnaire to those people who claimed they were glad to watch the advertisements on Tik Tok and 339 respondents were received. Besides using a 5-point Likert Scale to explore the measurement items in the questionnaire ranging from 1 (strongly disagree) to 5 (strongly agree) (see table. 2).

It is worth to mention that the focus group comprises children and adults come from diverse backgrounds, such as different income family, degree of education, and gender, hence, the results of the study would be less partial. Since the contact information was collected in the quantitative study, the questionnaire was then distributed among respondents who embrace the advertisements on Tik Tok through phone calls, Wechat, or email.

Table 2 Construct of Attitude Toward Advertisement

Construct	Number of Measuring Items
Attitude toward Advertisement on Tik Tok (AA)	5
Entertainment Motivation (EM)	5
User Friendly (UF)	5

Customer-Build (CB)	5
Reliability and Authenticity (RA)	5
User Interaction (UI)	4

4. Data Analysis

4.1 Reliability Analysis

Reliability refers to the stability and consistency of the results measured by the test or scale tool. Cronbach's alpha [14] coefficients were computed to assess the internal reliability of the measures used in this study, which range from 0 to 1. It is generally considered that the value of a coefficient needs to be greater than 0.70.

Table 3 Reliability Test (Cronbach's Alpha)

	Cronbach's alpha	N
EM	.887	5
UF	.857	5
CB	0.884	5
RA	0.887	5
UI	0.883	4
overall	0.919	24

The table above (see table. 3) shows that the Cronbach's alpha [14] coefficients of the whole questionnaire, EM, UF, CB, RA, and UI are all greater than 0.80, which indicates that the questionnaire as a whole and each variable have good reliability.

4.2 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is conducted to verify the validity of the measurement items in this questionnaire. SPSS is used to detect the Kaiser-Meyer-Olkin (KMO) [15] [16] of the questionnaire and the Bartlett's test is used to examine the fitness of the factor analysis of the questionnaire. Kaiser [15] argued that the KMO value ranges from 0-1. If the KMO value of the questionnaire is greater than 0.70 and the P-value is less than 0.05, the factor analysis is appropriate.

In this study, EFA uses the principal component analysis as the extraction method and varimax rotation as the rotation method. The breaks-in-Eigen values criterion (>1) is used to determine the number of factors to retain. The specific measurement items under each construct are eliminated in accordance to the following four criteria: 1) the loadings on factors are less than 0.50; 2) communalities are less than 0.45; 3) both two factor loadings are greater than 0.45; (4) duplicate items or the content of items are not consistent with the constructs.

Table 4 Validity Test (Kmo & Bartlett's Test)

Kaiser-Meyer-Olkin Measure of Sampling		0.910
Bartlett's Test of Sphericity	Approx. Chi-Square	5474.865
	df.	406
	Sig.	.000

From the table above (see Table. 4), the KMO [15] [16] test value of the whole questionnaire is 0.910, which is much greater than 0.70. The approximate chi-square value is 5474.865 and the significance probability Sig. <0.001 , indicating that the questionnaire is fit for factor analysis.

By Varimax rotation, a stable and clear dimensional structure is obtained. There are in total 6 constructs; within these, 29 measurement items have breaks-in-Eigen values that are greater than 1, independent factor loadings that are greater than 0.50, and communalities greater than 0.45. The results are as follows:

The table (see Table. 5) shows that 6 common components have been extracted. After rotation, the factor loading of each component is greater than 0.50, which indicates that these measurement items are well fit in the

corresponding constructs. Also, the common factor extraction rate of each item is greater than 0.45, which indicates that the extracted item can explain more than 45% of each construct, so the extracted factor is appropriate.

Table 5 the Results of Varimax Rotation

Component	1	2	3	4	5	6	communalities
RA5	0.859						0.777
RA2	0.79						0.732
RA3	0.786						0.681
RA1	0.785						0.685
EM1	0.784						0.637
EM2		0.845					0.659
EM3		0.819					0.569
EM4		0.8					0.7
EM5		0.766					0.648
CB1		0.76					0.661
CB4			0.814				0.738
CB5			0.804				0.638
CB2			0.777				0.638
CB3			0.764				0.761
UF5			0.735				0.688
UF3				0.784			0.683
UF1				0.781			0.671
UF4				0.781			0.657
UF2				0.781			0.681
AA4				0.716			0.807
AA5					0.787		0.658
AA3					0.746		0.697
AA2					0.727		0.676
AA1					0.717		0.657
UI3					0.674		0.624
UI4						0.801	0.708
UI1						0.793	0.707
UI2						0.774	0.773
Breaks-in-Eigen						0.774	0.708
%of Variance	9.023	2.792	2.63	2.227	1.913	1.336	0.777
Contribution	12.404	12.24	12.061	11.507	11.066	9.415	0.732
rate	12.404	24.645	36.706	48.213	59.279	68.694	0.681

There are 6 common factors with eigenvalues greater than 1, and the cumulative variance contribution rate of the first 6 principal components reaches 68.694%, which is greater than 60%, indicating that the 6 common components extracted in this study can effectively explain the 29 items the questionnaire, successfully achieving the purpose of dimensionality reduction.

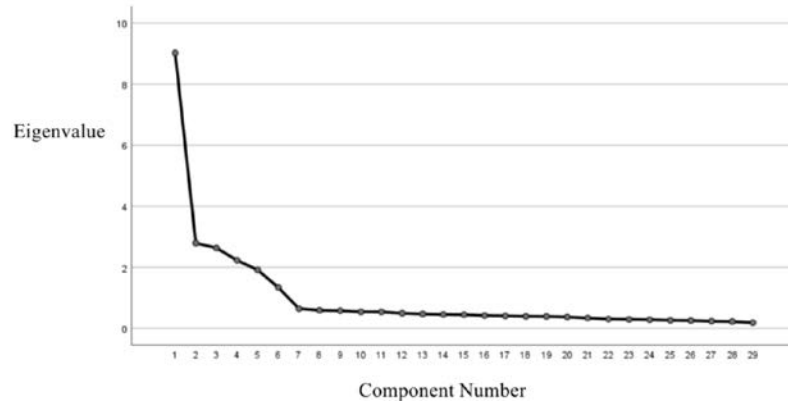


Fig.3 Scree Plot

According to the Scree Plot (Figure. 3), from the seventh component onwards, the slope of the line becomes very smooth and the eigenvalue is less than 1, which indicates that there are no extra components need to be extracted. In other words, it is appropriate to retain 6 components, which is consistent with the results of EFA.

Through EFA, the questionnaire is (still present tense) initially confirmed to have a 6-component structure that comprises of 29 measurement items.

4.3 Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was conducted here to finalize the reliability and validity of the scale items of the constructs with two facets: 1) the reflection the paths among the factors by the correlations of factors and the loadings of factors; 2) the values of fit measures from the path analysis.

This study conducts CFA to evaluate the applicability of the model. The common fit measures are: 1) Chi-square (χ^2) and χ^2/df . If χ^2/df is less than 3, the model fits well; 2) the root mean square error of approximation (RMSEA). If the RMSEA is less than 0.08, the model fits well; 3) goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), comparative fit index (CFI), and incremental fit index (IFI) should all be greater than 0.9, which indicates that the model fits well [13, 17-20].

Construct validity “refers to the degree to which inferences can legitimately be made from the operationalizations in your study to the theoretical constructs on which those operationalizations were based” [21]. In this study, factor analysis is conducted to examine the construct, which is further tested by convergent validity and discriminant validity [22]. In this research, the convergent validity is confirmed, as the retained scale items for each construct has average variance extracted (AVE) for each factor and measuring items of at least 0.50 [13] [23]. Discriminant validity among the five constructs is verified as the largest shared variance between these factors is lower than the least AVE value for each factor and its measures [13] [24]. It is indicated that all factors have a good validity.

Final reduced six factors confirmatory factor analysis (CFA) model as below (see figure. 4 and table. 6).

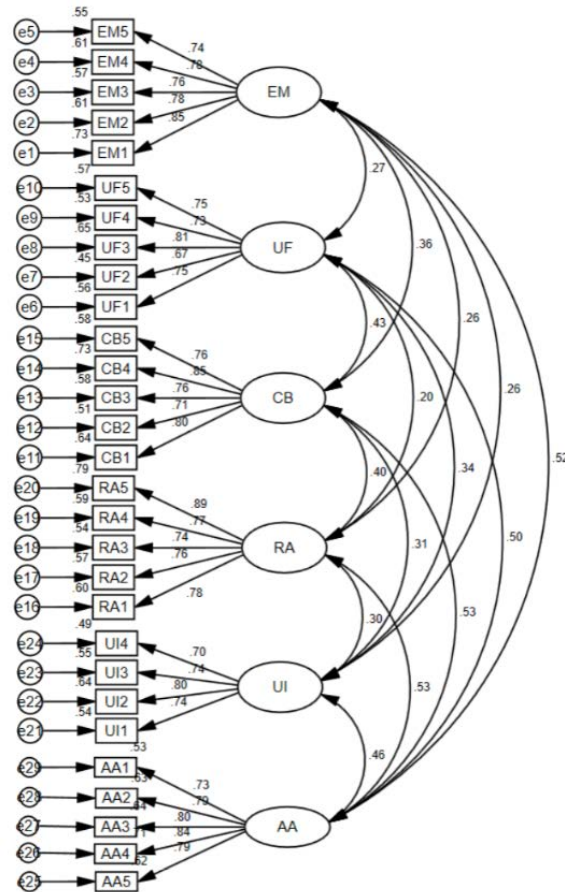


Fig.4 Path Analyses

Table 6 Fit Measures from Path Analysis

Fit measures	Recommended Values	Attitude toward advertisement
χ^2		446.692
df.		362
RMSEA	≤ 0.08	0.026
NFI	≥ 0.90	0.919
GFI	≥ 0.90	0.903
AGFI	≥ 0.90	0.921
RFI	≥ 0.90	0.911
IFI	≥ 0.90	0.984
TLI	≥ 0.90	0.982
CFI	≥ 0.90	0.984
PGFI	≥ 0.50	0.765
PNFI	≥ 0.50	0.821
GFI	≥ 0.50	0.877
χ^2/df	≤ 2.00	1.234

Table 7 Convergent Validity and Composite Reliability

			Estimate	S.E.	C.R.	P	loading	CR	AVE
EM1	<---	EM	1				0.854	0.889	0.615
EM2	<---	EM	1.003	0.063	15.892	***	0.779		

EM3	<---	EM	0.901	0.057	15.902	***	0.758		
EM4	<---	EM	0.918	0.055	16.555	***	0.782		
EM5	<---	EM	0.921	0.059	15.673	***	0.744		
UF1	<---	UF	1				0.751	0.861	0.554
UF2	<---	UF	0.782	0.066	11.867	***	0.671		
UF3	<---	UF	0.964	0.068	14.216	***	0.807		
UF4	<---	UF	0.743	0.057	12.956	***	0.73		
UF5	<---	UF	0.794	0.06	13.304	***	0.755		
CB1	<---	CB	1				0.8	0.886	0.608
CB2	<---	CB	0.917	0.066	13.975	***	0.711		
CB3	<---	CB	0.961	0.066	14.583	***	0.765		
CB4	<---	CB	0.992	0.06	16.575	***	0.854		
CB5	<---	CB	1.009	0.067	15.102	***	0.763		
RA1	<---	RA	1				0.777	0.891	0.622
RA2	<---	RA	0.996	0.068	14.544	***	0.757		
RA3	<---	RA	1.04	0.074	14.015	***	0.738		
RA4	<---	RA	0.923	0.062	14.847	***	0.771		
RA5	<---	RA	1.062	0.061	17.426	***	0.891		
UI1	<---	UI	1				0.735	0.832	0.555
UI2	<---	UI	1.061	0.082	12.92	***	0.801		
UI3	<---	UI	0.943	0.077	12.273	***	0.741		
UI4	<---	UI	0.878	0.074	11.785	***	0.698		
AA5	<---	AA	1				0.79	0.894	0.627
AA4	<---	AA	0.99	0.058	17.046	***	0.844		
AA3	<---	AA	1.142	0.073	15.645	***	0.798		
AA2	<---	AA	1.033	0.066	15.655	***	0.795		
AA1	<---	AA	0.93	0.066	14.167	***	0.729		

As can be seen from the table above (see Table. 7), the good composite reliability (CR) of each factor is greater than 0.7, the AVE is greater than 0.5, and the factor loadings are all greater than 0.6. Under the condition of P-value < 0.001, all factors have strong statistical significance. It can be indicated that there is good CR and convergent validity among six factors, and therefore the quality of this questionnaire is acceptable.

Table 8 Discriminant Validity

	AA	UI	RA	CB	UF	EM
AA	0.792					
UI	0.461	0.745				
RA	0.528	0.301	0.789			
CB	0.527	0.305	0.397	0.780		
UF	0.499	0.34	0.197	0.435	0.744	
EM	0.521	0.261	0.264	0.364	0.274	0.784

In the table above (see table. 8), the numbers on the diagonal are the square root of the AVE value of each factor. The square root of the AVE value of each factor is between 0.744-0.784, and the absolute value of the correlation coefficient between the factors is between 0.197-0.528. The square roots of the values are significantly larger than the correlation coefficients between this factor and other factors, which indicates that the six factors have an effective discriminant validity.

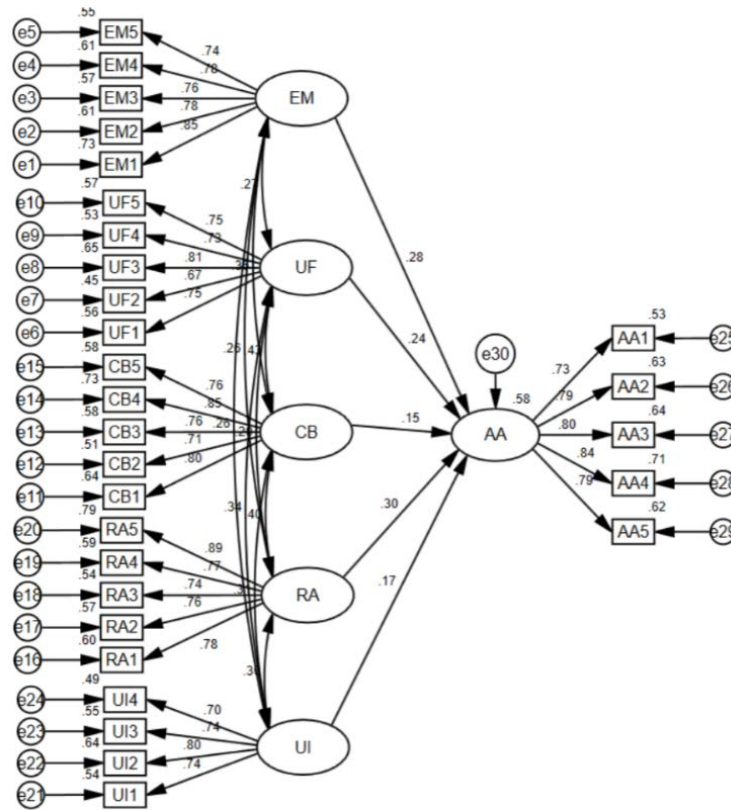


Fig.5 Cfa Model

Table 9 Model Index

	X2	df	X2/df	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Recommended Values			1-3	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08
Fit Index	446.692	362	1.234	0.919	0.903	0.921	0.911	0.984	0.984	0.026

According to the table above (see Figure. 5 and table. 9), the fitting indexes of the structural equations have reached ideal values, indicating that the model fits well.

5. Results and Discussion

In this research, EM, UF, CB, RA, and UI were defined as independent variables, and AA was defined as the dependent variable. The equation established through path analysis results was:

$$AA = 0.027EM + 0.239UF + 0.152CB + 0.296RA + 0.174UI$$

According to the model, attitudes toward the advertisement on Tik Tok (regarding promotional messages and product information) is persuaded by the five elements: entertainment emotion, user-friendly, customer-build, reliability and authenticity, and user interaction.

Table 10 Results

			Estimate	S.E.	C.R.	P	Standardized estimation	Hypothesis
AA	<---	EM	0.271	0.051	5.335	***	0.277	valid

AA	<---	UF	0.222	0.051	4.316	***	0.239	valid
AA	<---	CB	0.152	0.056	2.698	0.007	0.152	valid
AA	<---	RA	0.276	0.050	5.544	***	0.296	valid
AA	<---	UI	0.188	0.058	3.254	0.001	0.172	valid

From the table above (see table. 10), it could be seen that EM ($\beta = 0.277$, $P < 0.001$) has a significant positive effect on AA. Hypothesis 1 is valid. UF ($\beta = 0.239$, $P < 0.001$) has a significant positive effect on AA, and Hypothesis 2 is valid. CB ($\beta = 0.152$, $P < 0.01$) has a significant positive impact on AA, and hypothesis 3 valid. RA ($\beta = 0.296$, $P < 0.001$) has a significant positive effect on AA, and hypothesis 4 is valid. UI ($\beta = 0.172$, $P < 0.01$) has a significant positive impact on AA, and hypothesis 5 is valid.

6. Conclusion

Two major findings emerged from this research. First, Tik Tok has strong power in advertising. The majority of people embrace advertisements on Tik Tok, which outstrips the population who prefer to watch the advertisements on other platforms. In result, Tik Tok is a prosperous platform that marketers and advertisers should strive to conquer. However, in the quantitative study, it shows that many people prefer the advertisements on WeChat. In the interviews, plenty of interviewees said they are willing to receive the product information from relatives, which is consistent with the network loop [13].

The second finding is five constructs influence people's positive attitudes toward advertisement on Tik Tok: entertainment emotion (EM), user-friendly (UI), customer-build (CB), reliability and authenticity (RA), and user interaction (UI). The results of empirical research will be explained and demonstrated based on existing literature and behavioral theories to develop grounded theories.

Some researchers (Lee, et al.) mentioned that people like social network sites due to enjoyment and relaxation. These days people are overwhelmed with a myriad of problems, regarding expensive housing mortgage, promotion stress, and complicated interpersonal relationships (especially in China). They have few approaches to take a rest for the physical body and psyche due to the limitation of time and money. The short video format is a suitable tool for these people to relax through forgetting about the pressure momentarily. This finding is also supported by the theory of prospective gratification [25]. User-friendly advertisement on Tik Tok mainly embodies is that the content of the advertisement is easy to understand. There are little confusing and abstruse phrases that intervene in audiences' understanding. Moreover, the advertisers match the advertisements with some keywords and musics, which makes the advertisement easy to understand. No matter the age and educational background of the audience, they can figure out the advertisement, expanding the scope of the audience. Customer-build refers to tailored advertising, concentrating on the needs and wants of the audience, by identifying their habits, interests, demographic characteristics to produce the content of advertisement [26]. Furthermore, the audience can swipe away the advertisement they dislike. The right of control [5] is magic trait that the advertisement on other platforms cannot reach. Reliability and authenticity are the most critical element that drives people to like advertisements on Tik Tok. Unlike the advertisement on other platforms, the advertisement on Tik Tok is greatly transparent to the audience. Not only can people see the substance and usage through pictures and videos, but they also learn the effect of product through others' comments and their sales. In this way, the messages of products would be more reliable. User interaction is pervasively available on social media while not available on advertisements. Tik Tok allows the audience to comment and raise concerns freely about the product information, respecting user experience and purchasing experience. On the surface, advertising is the origin of product publicity. Yet, the user interaction is a better way to promulgate the product information forcefully.

From the results of this research, five elements (entertainment motivation, user friendly, customer-build, reliability and authenticity, user interaction) inspire the Public Relations communicators and marketers about new advertising strategies. Besides the content of the advertisement, the context of advertisement is quite significant. In marketing, the five factors are worthy of being considered.

The advertisements on Tik Tok are just the buds of Chinese advertising. In most Chinese people's minds, the

concept of advertising is not very clear, which can be seen when publishing the questionnaire. To guide them to express their most authentic feelings of advertisement on Tik Tok, the researcher have to summarize and list the common advertisements attaching clarification to help them review and distinguish advertisements they had seen on Tik Tok. With the awakening of Chinese people's advertising consciousness, there will be specialized advertisers based on these 5 factors in the future to produce advertisements. At present, Tik Tok is just an entertainment-based short video platform. There will likely be a platform for sharing product information in the future, which supporting people to discuss, see sales, the information is true and easy to understand, while making people feel fun and free to learn about the products they are interested in. In fact, now an app named Xiaohongshu is currently developing in China, with the five functions in the rough. However, its development is not mature enough. Perhaps a more complete and professional product information- shared software will emerge in other countries.

7. Future Research and Limitations

This research has several limitations that can be investigated gradually in future studies. This research was conducted exclusively in China because Tik Tok is only popular in China, as there is a small group of users in other countries. The conclusion might be less universal in other regions. The second limitation of this research is survey data. Most of the respondents are Chinese, who are influenced by the concept of the golden mean (Zhong Yong), so they tend to score lower when scoring. They will give a lower score even if they think the advertisements on Tik Tok is very nice. Because of this, there may be some inevitable errors in data. However, this would not have a huge impact on the research final results that 5 factors prompt customers to have positive attitudes towards advertisement on Tik Tok.

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