

Impact of Anchor Professionalism on User Intimacy in E-commerce Livestreaming

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Abstract. Over the past few years, the retail industry has witnessed a growing trend in live streaming e-commerce. This allows consumers to have an interactive and engaging shopping experience, where they can communicate directly with sellers and get real-time answers to their product queries. The paper aims to examine the impact of anchor professionalism on user intimacy in the context of live streaming e-commerce. Employing a questionnaire-based approach, over 800 users were classified and surveyed to assess their perceptions of anchor professionalism and intimacy levels. Principal component analysis(PCA) was employed to extract measures of anchor professionalism and user intimacy, while regression analysis was used to investigate the relationship between the two constructs. The paper finds that anchor professionalism significantly enhances user intimacy. The results of this study have important implications for enhancing efficiency and improving consumer satisfaction in the live streaming e-commerce industry.

Keywords: Anchor Professionalism, User Intimacy, Livestreaming.

1. Introduction

In recent years, live streaming e-commerce has become an increasingly popular trend in the retail industry [1-2]. Live streaming provides an interactive and engaging shopping experience for consumers, allowing them to directly communicate with sellers and ask questions about products in real time. This personalized approach has proven to be effective in increasing sales and brand awareness [3].

According to a report by iiMedia Research, the transaction value of China's live streaming e-commerce market exceeded 1 trillion yuan (\$154 billion) in 2020, accounting for more than 10% of the country's total online retail sales [4]. Other countries such as the US, Japan, South Korea, and India are also rapidly developing their live streaming e-commerce markets [5].

In addition, the integration of artificial intelligence (AI) and augmented reality (AR) technologies is transforming the live streaming e-commerce industry. These technologies can provide personalized recommendations and virtual product try-ons, enhancing the consumer experience and increasing sales. E-commerce livestreaming is not only a cutting-edge social commerce, but also has special live interactive attributes while having social commerce elements, which has brought huge traffic to e-commerce.

Although the e-commerce livestreaming model still has great potential and has experienced explosive development in 2019, there are still great obstacles during the operation period, and this obstacle mainly lies in the conversion rate and user stickiness. Many platforms are also constantly paying attention to which factors will affect the efficiency of livestreaming [6-8]. For instance, the professionalism of livestreaming may affect the user intimacy. If the hosts demonstrate expertise in the products they are selling and can effectively communicate their features and benefits to viewers, users may feel more connected and loyal to the brand. Conversely, if hosts appear unprofessional or unprepared, users may lose interest or trust in the product and the brand [9-10]. Therefore, it is important for livestreaming e-commerce platforms to carefully select and train their hosts to ensure they are able to effectively engage and retain their audience.

This paper mainly wants to test the influence of anchor professionalism on user intimacy in live broadcast e-commerce. This paper uses questionnaire method to collect more than 800 users,

classifies and investigates users, and uses principal component analysis to extract anchor professional degree Intimacy with users. This article uses regression analysis to test the relationship between the two. The result shows that the professionalism of the anchor can indeed improve the intimacy of users, which will increase by 34.6%.

2. Data and Result Analysis

2.1. Sample data statistics

After screening, a total of 800 valid sample data were obtained, including 422 males and 378 females. The ages of the subjects were mainly concentrated between 25-35 years old and 18-25 years old. There were 311 subjects with a bachelor's degree, accounting for 38.9%. The occupational distribution is dominated by students and employees of private enterprises. The distribution results of each category of the sample are basically consistent with the pre-test link, and the statistical results of the specific sample distribution are shown in Table 1. We also plot the age distribution of the survey sample as follows in Fig 1.

Table 1. Statistic summary

Variable	Mean	Std. Dev.	Min	Max
gender	1.4725	0.4995555	1	2
age	2.98125	1.040313	1	6
academic qualifications	2.65125	0.9853106	1	4
Profession	3.645	2.227707	1	7
monthly income	2.91375	1.313761	1	7
Amount of consumption	3.63125	1.109871	1	5
Participation frequency	4.0625	0.9135847	1	5

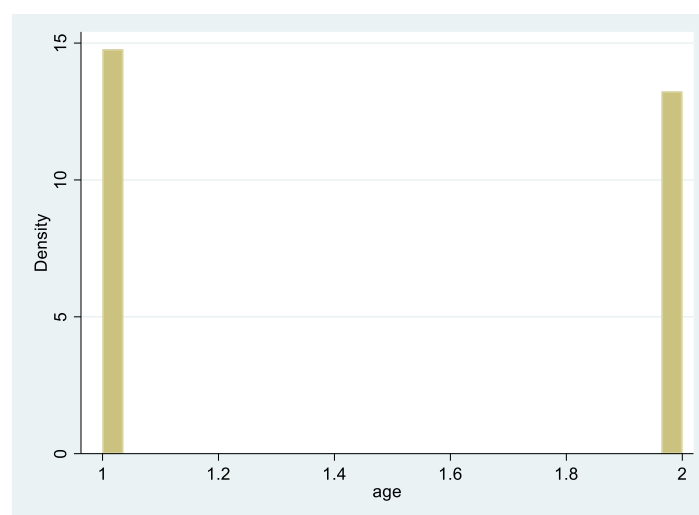


Figure 1. Distribution of Age

2.2. PCA

According to Table 2, The results of principal component factor analysis of the data show that professionalism and intimacy $KMO=0.846>0.7$, so it is very suitable for principal component factor extraction.

Table 2. KMO and Bartlett test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.846
Bartlett test of sphericity	Approximate chi-square	3233.403
	degrees of freedom	28
	significant	0.000

In the calculation result of the total variance explanation rate, two independent factor components can be extracted, and the cumulative variance explanation rate reaches 71.506%>70%, which can represent most of the variance variation (Table 3).

Table 3. Factor analysis

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	3.4601	2.95314	0.692	0.692
Factor2	0.50696	0.10112	0.1014	0.7934
Factor3	0.40584	0.03111	0.0812	0.8746
Factor4	0.37473	0.12237	0.0749	0.9495
Factor5	0.25236	.	0.0505	1

The maximum variance method is used to rotate the factors. In the calculation results of the loaded value matrix after rotation, the five indicators of the professional dimension have a loading value higher than 0.5 on the first factor and lower than 0.5 on the second factor, while intimacy three the two indicators also only have a load higher than 0.5 on the second factor, so the two variable dimensions have better differentiation and aggregation.

2.3. Correlation analysis

The Pearson product-difference correlation analysis method was used to calculate the correlation between variables [11-12], and the calculation results are shown in Table 4. It can be seen from the data in the table that there is a significant positive correlation between professionalism and intimacy, and the correlation coefficient is higher than 0.3, which belongs to the medium degree of correlation. Since the correlation does not reflect the causal relationship between the variables, further regression tests on the variables are required.

Table 4. variable correlation coefficient matrix

	gender	age	academic qualifications	Profession	monthly income	Amount of consumption	Participation frequency	professional	intimacy
gender	1								
age	-0.079*	1							
academic qualifications	0.066	-0.483***	1						
Profession	-0.059	0.724***	-0.228***	1					
monthly income	-0.029	0.543***	0.068	0.755***	1				
Amount of consumption	-0.051	0.625***	-0.183***	0.760***	0.709***	1			
Participation frequency	0.007	0.068	-0.022	0.031	0.024	0.039	1		
professional	0.013	-0.038	0.024	0.005	0.019	0.005	0.000	1	
intimacy	0.007	0.028	-0.026	0.050	0.065	0.041	0.011	0.347***	1

NOTE: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

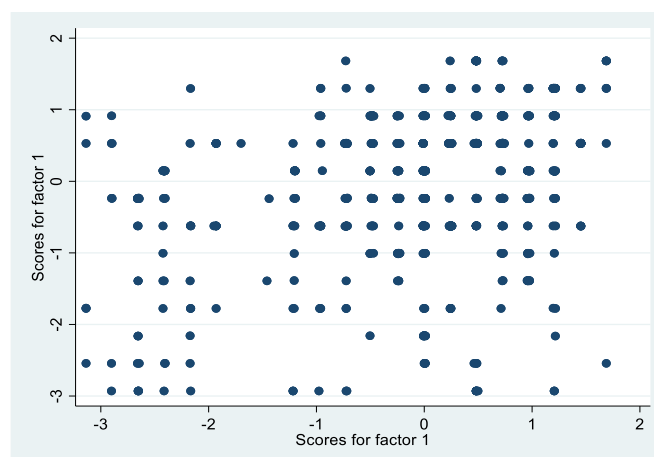


Figure 2. Scatter of Professionalism and User intimacy

The Fig 2 further depicts the relationship between the anchor's professionalism and user's intimacy.

2.4. Regression analysis

In this paper, gender, age, etc. are used as control variables, the professionalism of the anchor is the independent variable, and intimacy is the dependent variable, and a multiple linear regression model is established. Among them, the control variables of model 1 have no significant regression effect on intimacy, while in model 2 Among them, professionalism has a significant positive regression effect on intimacy, the standardized regression coefficient $\beta=0.346$, $p<0.001$, so when the professionalism of the anchor is higher, the level of intimacy will be increased. (Table 5 and 6).

Table 5. Linear regression of Model 1

intimacy	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
gender	.019	.071	0.26	.792	-.121	.158	
age	-.052	.058	-0.89	.372	-.165	.062	
academic qualifications	-.061	.046	-1.31	.189	-.152	.03	
Profession	.005	.032	0.15	.882	-.057	.067	
monthly income	.077	.048	1.61	.108	-.017	.171	
Amount of consumption	-.014	.053	-0.27	.784	-.118	.089	
Participation frequency	.012	.039	0.30	.766	-.065	.088	
Constant	.051	.29	0.18	.86	-.519	.621	
Mean dependent var	-0.000		SD dependent var		1.000		
R-squared	0.007		Number of obs		800		
F-test	0.761		Prob > F		0.621		
Akaike crit. (AIC)	2279.941		Bayesian crit. (BIC)		2317.418		

*** $p<.01$, ** $p<.05$, * $p<.1$

Table 6. Linear regression of Model 2

intimacy	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
profession	.346	.033	10.38	0	.28	.411	***
gender	.012	.067	0.18	.861	-.119	.143	
age	-.018	.054	-0.34	.736	-.125	.088	
academic qualifications	-.055	.044	-1.26	.21	-.14	.031	
Profession	-.001	.03	-0.04	.968	-.059	.057	
monthly income	.066	.045	1.47	.143	-.022	.154	
Amount of consumption	-.016	.05	-0.33	.742	-.114	.081	
Participation frequency	.01	.037	0.28	.782	-.062	.082	
Constant	.012	.273	0.04	.964	-.523	.547	
Mean dependent var	-0.000		SD dependent var		1.000		
R-squared	0.126		Number of obs		800		
F-test	14.213		Prob > F		0.000		
Akaike crit. (AIC)	2179.856		Bayesian crit. (BIC)		2222.018		

*** $p<.01$, ** $p<.05$, * $p<.1$

3. Conclusion

Consumers repurchase behavior is significantly influenced favorably by live streaming anchors' engagement, enjoyment, popularity, and accountability. Consumers' willingness to make repeat purchases and anchor attributes are mediated by perceived trust. The improvement of anchor interactivity, interest, popularity, and responsibility will contribute to an improvement in perceived trust, and an increase in perceived trust will result in a greater readiness to buy on the part of consumers.

In this work, the author examines the impact of the professionalism of the anchor on user intimacy in E-commerce livestreaming. The professionalism of the anchor is the independent variable, intimacy is the dependent variable, and gender, age, and other factors are utilized as control variables. A multiple linear regression model is then created. In contrast to model 1, which has no significant regression effect on intimacy among its control variables, model 2 has a significant positive regression effect on intimacy among its control variables. The regression results indicate that the level of intimacy will rise as the anchor's professionalism rise.

This paper still has several shortcomings, though. For instance, there is little research on the psychological preferences of consumers, and these choices will affect how intimately a product feels to them. This paper will go into further detail about this as a potential research area in the future.

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