



**Research Publishing
Academy (RPA)**
London, United Kingdom (UK)

JIBM

Journal of International Business and Management (JIBM)
Journal Homepage: <https://rpajournals.com/jibm>

Influence of Virtual Anchor Characteristics on Consumers' Consumption Willingness

Yunzhu Yu^{1*}

An Peng²

Simon CM Kwong³

Achaya Bannasilp⁴

City University Malaysia, Malaysia^{1,3}

Jiaying University, Meizhou, Guangdong, China^{1,2,4}

Abstract

Nowadays, virtual anchors that emerged on the video platform represented by Youtube are loved and favored by young consumers, and the virtual anchor industry is in rapid development. However, the research on the emerging phenomenon and industry of virtual anchors is still limited. In order to fill the research gaps in current studies on virtual anchors, this study attempts to find out the factors that influence consumers' consumption willingness related to virtual anchors (i.e., subscription, super chat, gift-giving, events, good purchases, etc.). This study empirically proves that virtual anchor characteristics, including physical attractiveness, interactivity, and entertainment have a positive impact on the audience's consumption willingness. Furthermore, the entertainment characteristic of virtual anchors shows the most effect of impact on the audience's consumption willingness, and the physical attractiveness of virtual anchors shows the least effect on that. The findings of this study can help expand the research on the virtual anchor domain and bring management implications to virtual anchor companies and benefit the development of the virtual anchor industry.

Keywords: Virtual anchor, Physical attractiveness, Interactivity, Entertainment, Consumption willingness

DOI: <https://doi.org/10.37227/JIBM-2023-07-6203>

Introduction

Since the birth of *Kizuna AI*, the first "Virtual YouTuber" (VTuber), virtual anchors have proliferated on video platforms such as YouTube and Bilibili. Today, virtual anchors have become an active force on video platforms. Virtual anchors are not only favored and loved by young consumers but also have an obvious stimulating effect on the consumer's consumption willingness. To express love toward the virtual anchor, and/or express appreciation for the virtual anchor's content, audiences of virtual anchors are willing to make consumption for their favorite virtual anchors. Such consumption includes subscriptions, super chat, gift-giving, and so on. Meanwhile, audiences of virtual anchors are willing to make a purchase of virtual anchors' content products, events (such as concerts), and virtual anchors endorsed brands due to their trust and love for virtual anchors. According to

Playboard, the professional data collection site of Youtube, in the list of Most Super Chatted YouTubers in 2022, four of the top 10 were virtual anchors (VTubers).

In specific, virtual anchor *Vox Akuma* ranked second on the list due to the yearly Super Chat Revenue of MYR 4,712,869. This indicates that virtual anchors have outstanding performance in stimulating consumers' willingness to consume (such as super chat). With the commercial value of virtual anchors has been affirmed and valued, the companies operating virtual anchors have also ushered in the golden period of development. Taking ANYCOLOR Inc., one of the leading companies in Japan's VTuber industry, as an example. According to the financial report from ANYCOLOR Inc., in the first quarter of the Fiscal Year Ending April 2023, the sales volume of ANYCOLOR Inc. reached 5.93 billion yen with a year-on-year increase of 113 %, the operating profit reached 2.122 billion yen with a year-on-year increase of 152 %, and the net profit for the period was 1.47 billion yen with 149 % year-on-year growth (ANYCOLOR Inc., 2022).

Although the virtual anchor industry has been developing rapidly in recent years, there is limited academic research on the emerging phenomenon and industry of virtual anchor, leading to the business practice of the virtual anchor industry lacking the necessary theoretical support and guidance. Therefore, this study hopes to study the impact of virtual anchors on consumers' consumption willingness from the perspective of virtual anchor characteristics, in order to expand the research in the domain of virtual anchors and provide managerial implications for the design and operation of virtual anchors. This study believes that it will have a certain significance for virtual anchor companies and the virtual anchor industry.

Theory Background and Hypotheses Development

Virtual Anchors

In 2016, the world's first virtual anchor *Kizuna AI* registered the channel named A.I. Channel on YouTube, which pioneered the concept of virtual anchors. The rise of UGC (user-generated content) video platforms such as YouTube and Bilibili has provided technical support and cultural soil for the emergence of virtual anchors. Since the outbreak of COVID-19, people had more time to stay at home, which greatly promoted the development of virtual anchors around the world, especially in East Asia.

As a new thing, the definition of virtual anchors has not been unified. In the current research, the definition of virtual anchors mainly includes the following two streams. The first is regarding virtual anchors as a new type of communication subject. For example, Qin (2022) believed that virtual anchors were the subjects that synchronize the expressions and actions of the virtual anchor players to the virtual character modeling in real-time through facial capture, motion capture, and other technologies, so as to carry out activities such as live broadcasting. According to Chen and Song (2022), virtual anchors refer to anchors who use virtual 2D or 3D images to submit videos and carry out live broadcasts and other activities on video websites. The second is that virtual anchors are a kind of virtual avatars. For example, Lu et al. (2021) considered virtual YouTubers to be virtual 2D or 3D avatars voiced by human beings.

It can be seen that two key attributes of virtual anchors can be found in the current mainstream definition of virtual anchors. One is the virtual body construct, and the other is to engage in live-stream-based communication activities. Due to this study only focusing on virtual anchors carried out live streaming on video platforms such as YouTube, virtual anchors in this study specifically refer to the subjects that use virtual body constructs to engage in live streaming.

Virtual Anchor Characteristics

Physical Attractiveness

In the live streaming commerce context, streamer attractiveness is a crucial stimulus to trigger audiences' emotional and cognitive processes (Xu, Wu, Li, 2020), especially the physical attractiveness of streamers. Physical attractiveness is a key feature for media characters to attract and influence audiences (e.g. Hsu, 2020). Walster et al. (1966) found that physical attractiveness was

mainly manifested through the appearance image. Under the influence of physical attractiveness, audiences are easy to have the impression that “beauty is good” (Dion, Berscheid, Walster, 1972).

According to Liu (2022), the physical attractiveness of a live-streaming anchor can be understood as the personal image characteristics shown by the anchor during live live-streaming, such as cute, pretty, and handsome. Yang (2022) stated that physical attractiveness is the visual impact of anchors on audiences through good image charms such as delicate facial features and clothing trends. It is believed that the physical attractiveness of a live-streaming anchor can help the anchor deepen the impression of the audience, gain recognition of the audience, and help cultivate the loyalty of fans (Han & Xu, 2020).

Interactivity

Interactivity is the intensity and richness of the interaction that happens during mutual communication between the communicators (Kang et al., 2020). The effects of interactivity in marketing have been proven by previous studies. Interactivity is believed can lead to a flow experience (van Noort, Voorveld, van Reijmersdal, 2012), have a positive impact on consumer’s trust and sense of presence (Zheng, Wu, Liao, 2022), and help build a relationship between media characters and audiences (Andersson & Sobek, 2020). In live streaming commerce, interactivity is considered a key attribute of the live streaming environment, which can foster audiences’ positive attitudes and behaviors in the live streaming transaction (Kang et al., 2020).

As the host of the live broadcast channel, the virtual anchor needs to have sufficient interaction with audiences. Such interaction is necessary for both the dissemination and reception of information. Moreover, interaction can also increase the audience’s understanding of the virtual anchor, and promote the audience to form an emotional tie, attachment, and intimate relationship with the virtual anchor. In addition, sufficient interaction can enhance the audience’s sense of presence and immersion during the live streaming, thus increasing the audience’s trust. Therefore, this study regards interactivity as an important characteristic of virtual anchors. The interactivity of a virtual anchor is believed can affect the audience’s understanding and liking of the virtual anchor, as well as the experience of live streaming.

Entertainment

Entertainment is the extent that an experience is fun, pleasant, or interesting (Ma, Gao, Zhang, 2022). Entertainment can satisfy people’s psychological needs. In specific, entertainment can let people obtain recreation and emotional release, temporarily escape from reality. Therefore, entertainment is considered to be able to bring beneficial effects in marketing. For example, entertainment can help improve the sense of social presence, narrow the psychological distance of consumers, and help improve consumers’ perception of trust (Ma, Gao, Zhang, 2022).

The reason people utilize social media is entertainment (Ao et al., 2023), thus entertainment is the main purpose for audiences to participate in virtual anchors’ live streaming channels. Through the live streaming channels of virtual anchors, audiences can get the entertainment experience in terms of games, talent shows, chatting, and so on. In other words, virtual anchors can be seen as digital entertainment products launched to meet the entertainment needs of consumers in today’s digital era. Therefore, entertainment is a necessary and important characteristic of virtual anchors. Virtual anchors with the characteristic of entertainment can make audiences feel joy and immerse in a pleasant live broadcasting atmosphere, thereby bringing psychological satisfaction to audiences who participated in the live streaming channels of virtual anchors. Virtual anchors with advantages in entertainment characteristics are often more popular and likeable by users of video platforms.

Virtual Anchor Characteristics and Consumption willingness

The profit model of virtual anchors usually includes several sectors, which are the audience’s payment on the live streaming channels (e.g., subscription, super chat, and gift-giving), the sale of goods related to virtual anchors, the holding of events, and product or brand endorsement. Through reasonable operation, virtual anchors can stimulate consumers’ willingness to consume the product

or service related to the virtual anchor they are favored. Such consumption can bring considerable income to the operating companies of virtual anchors. Taking consumers' tipping (gift-giving) as an example, a research report in China showed that for users that only subscribed to one virtual anchor, 29.4 % of them tipped the virtual anchor exceeding 201 yuan per month, and for the users who subscribed 4 to 5 virtual anchors, 72.6 % of them tipped to virtual anchors more than 201 yuan per month (iResearch, 2022). It can be seen that whether it is for users who only subscribe to one virtual anchor or users who subscribe to multiple amounts of virtual anchors, virtual anchors can bring a certain stimulus effect on the consumption willingness of users.

Physical Attractiveness and Consumption Willingness

Previous studies have pointed out the correlation between the physical attractiveness of media figures and consumers' consumption willingness. For example, Walster et al. (1966) stated that consumers were more likely to accept opinions from good looking people when making consumption decisions. In recent studies in the domain of live streaming commerce, the physical attractiveness of live streamers is considered to have a positive persuasive effect on audiences' consumption. Xu, Wu, and Li (2020) pointed out that an attractive live streaming anchor could persuade the audience to accept the information of product recommendation, prolong the viewing time and increase the viewing frequency of live streaming. Gao et al. (2021) proposed that the attractiveness of live-streaming anchors could significantly affect viewers' perception of persuasive information and lead to corresponding behavioral intentions. Li and Peng (2021) proved that the attractiveness of a live-streaming anchor could stimulate the audience's emotional attachment to the anchor, thus enhancing the audience's willingness to gift-giving. Therefore, this study believes that the physical attractiveness of virtual anchors has a positive impact on consumers' consumption willingness related to the virtual anchors, which includes subscriptions, super chat, gift-giving, related commodity purchases, and so on.

Hypothesis 1: The physical attractiveness of a virtual anchor can positively affect the audience's consumption willingness related to the virtual anchor.

Interactivity and Consumption Willingness

Interactivity is a prominent attribute and advantage of live streaming mode. The interactivity that consumers perceived in the process of live streaming is of great significance to live streaming commerce. Research by Addo et al. (2020) proved that interactivity was an important feature of B2C and C2C live streaming to promote consumers' sustainable purchasing decisions. Zheng, Wu, and Liao (2022), in their study on destination live streaming, also demonstrated that interactivity had a positive impact on consumers' sense of presence and trust, thereby in turn increasing consumers' willingness to travel. Since virtual anchors are using virtual images to carry out live streaming, it is a bit difficult for audiences to have a sense of presence and immersion when watching the live streaming of a virtual anchor. The high interactivity of virtual anchors can make up for the lack of immersive atmosphere and experience brought by the virtual body structures of virtual anchors, and help audiences perceive the existence of virtual anchors during viewing the live streaming of virtual anchors. This is the premise for the audience to have an emotional bond with the virtual anchor and produce the consumption willingness related to the virtual anchor. Therefore, this study proposes that the interactivity characteristic of virtual anchors will have a positive impact on consumers' consumption willingness related to the virtual anchors.

Hypothesis 2: The interactivity of a virtual anchor can positively affect the audience's consumption willingness related to the virtual anchor.

Entertainment and Consumption Willingness

Previous research confirmed that the perceived entertainment value of influencers could positively impact consumers' purchase intention (Ao et al., 2023). On the other hand, entertainment can cause the audience's flow experience during live streaming, thus promoting the audience's emotional

attachment to the live streaming anchor (Li & Peng, 2021). Meanwhile, entertainment also has a positive impact on the trust of live streaming viewers (Ma, Gao, Zhang, 2022). Past research showed that emotional attachment to social media characters, such as influencers, helped increase audiences' purchase intention (Sanchez-Fernandez & Jimenez-Castillo, 2021). In addition, past research also showed that the trustworthiness of social media characters can contribute to the purchase intention of audiences (Lou & Yuan, 2019). Therefore, this study believes that virtual anchors are launched to provide entertainment value to consumers, thus the entertainment characteristic of a virtual anchor should have a positive impact on consumers' consumption willingness related to the virtual anchor. The higher the entertainment of a virtual anchor, the more significant the impact on consumers' consumption willingness.

Hypothesis 3: The entertainment of a virtual anchor can positively affect the audience's consumption willingness related to the virtual anchor.

According to the above hypotheses, the research model of this study can be illustrated as Figure 1.

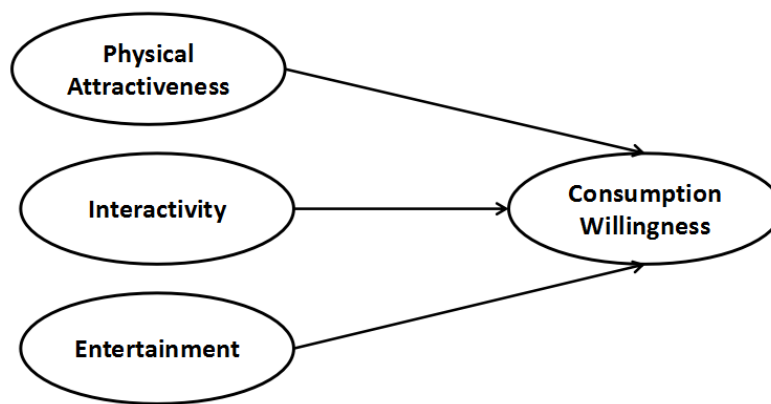


Figure 1: Research Model

Questionnaire Design

The questionnaire in this study consists of three parts. The first part is a filtering question to ask whether the respondent has viewed live streaming of virtual anchors before, which aims to identify qualified respondents for this study. The second part is the survey of the basic demographic information of the respondents, including gender, age, and educational background. The third part is the measurement of the variables, all items are measured by a five-point Likert scale (1 = “strongly disagree”, 5 = “strongly agree”).

The measurement of the questionnaire was adopted from previous work and modified according to the context of virtual anchors. The measurement of physical attractiveness was adapted from Holzwarth, Janiszewski, and Neumann (2006), which was composed of three items including “The virtual anchor is physically attractive”. The measurement of interactivity was adopted from Liu et al. (2020), which was composed of three items such as “The virtual anchor has a good interaction with me”. The measurement of entertainment was adapted from Ma, Gao, Zhang (2022), which consisted of three items such as “I feel pleasure when viewing the virtual anchor’s live streaming”. The measurement of consumption intention was adapted from Liu et al. (2020), which consisted of four items such as “I am willing to pay for my favorite virtual anchor”. See Table 1 for the details of the measurement.

Table 1: Measurement

Variables		Items	Sources
Physical Attractiveness	PA1	The virtual anchor is physically attractive.	Holzwarth, Janiszewski, Neumann, 2006
	PA2	The virtual anchor is beautiful / handsome.	
	PA3	The virtual anchor is good looking.	
Interactivity	I1	The virtual anchor has a good interaction with me.	Liu et al., 2020
	I2	The content from the virtual anchor can make me get involve.	
	I3	The content of the virtual anchor can arouse my interest.	
Entertainment	E1	I feel pleasure when viewing the virtual anchor's live streaming.	Ma, Gao, Zhang, 2022
	E2	I feel the virtual anchor's live streaming is interesting.	
	E3	I feel satisfied when viewing the virtual anchor's live streaming.	
Consumption Willingness	CW1	I am willing to pay for my favorite virtual anchor.	Liu et al., 2020
	CW2	There is a great possibility for me to buy goods recommended or endorsed by my favorite virtual anchor.	
	CW3	It's pleasure to tip my favorite virtual anchor.	
	CW4	I will like the brands recommended by my favorite virtual anchor.	

Data Collection

The data collection was conducted through an online survey platform in China. The online questionnaire was distributed to virtual anchor fans through the Wechat group of virtual anchor fans, the QQ group of virtual anchor fans, and online forums of virtual anchors. A total of 237 respondents provided their feedback. After eliminating 33 invalid questionnaires that were without viewing experience of virtual anchor live streaming, with low response time, and provided the same answers on each item, a total of 204 valid questionnaires were retained, with a valid rate of 86.08 %.

Data Analysis

According to the descriptive statistical results of the respondents, males accounted for 89.71 % and females accounted for 10.29 %, and the number of males was much higher than that of females. According to a survey on China's virtual anchor industry, males accounted for more than 80 % of virtual anchor viewers, while females accounted for less than 20 % (V-Surface Observation Center, 2021). Therefore, the imbalance between male and female respondents is considered reasonable. In terms of age, respondents were mainly 19-25 years old, accounting for more than 80 %, indicating that the audiences of virtual anchors were young in general, and 19-25 years old is the core group of audiences of virtual anchors. This is also consistent with the survey that consumers aged 19 to 25 are the core audiences of virtual anchors in China (V-Surface Observation Center, 2021). In terms of educational background, undergraduates accounted for 71.08 %, indicating that the audiences of virtual anchors had a good educational background. To sum up, according to the demographic descriptive statistics of the respondents, it can be judged that the sample is consistent with the portrait of the audiences of virtual anchors. The demographic descriptive statistics of the respondents are shown in Table 2.

Table 2: Respondents' Demographic Descriptive Statistics

	Options	Frequency	Percentage
Gender	Male	183	89.71
	Female	21	10.29
Age	Under 10	4	1.96
	10-18	9	4.41
	19-25	164	80.39
	26-35	23	11.27
	36-45	2	0.98
	Above 45	2	0.98
Educational Background	Under high school	14	6.86
	Community college	22	10.78
	Undergraduate	145	71.08
	Master and above	23	11.28

Reliability and Validity

As can be seen from Table 3, the standard factor loading of each item is greater than 0.7, which is higher than the recommended value of 0.6 (Urbach & Ahlemann, 2010). The value of each Cronbach's α and composite reliability (CR) are both greater than 0.8, well above the threshold of 0.6 (Cronbach, 1951; Urbach & Ahlemann, 2010). All AVE values also exceed the threshold of 0.5 (Fornell & Larcker, 1981). The above results show that the measurement has good internal consistency and convergence validity. Table 4 shows the results of the discriminant validity. It can be seen that the AVE square root of each variable is greater than the correlation coefficient between this variable and the other variables, indicating that the measurement has good discriminant validity (Fornell & Larcker, 1981).

Table 3: Std. Factor Loading, Cronbach 'α, CR, AVE

Variables	Items	St. Factor Loading	Cronbach 'α	CR	AVE
Physical Attractiveness	PA1	0.863	0.937	0.940	0.840
	PA2	0.920			
	PA3	0.961			
Interactivity	I1	0.857	0.870	0.883	0.719
	I2	0.908			
	I3	0.745			
Entertainment	E1	0.864	0.899	0.902	0.756
	E2	0.857			
	E3	0.883			
Consumption Willingness	CW1	0.850	0.896	0.897	0.686
	CW2	0.857			
	CW3	0.820			
	CW4	0.783			

Table 4: Discriminant Validity

	PA	I	E	CW
PA	0.917			
I	0.420	0.848		
E	0.489	0.623	0.869	
CW	0.397	0.494	0.554	0.828

The diagonal elements in bold represent the square root of the AVE for the respective variable.

Hypotheses Test

In order to test the hypotheses proposed by this study, the stepwise regression method was adopted in this study, with physical attractiveness, interactivity, and entertainment as the independent variables and consumption willingness as the dependent variable for regression analysis. The result of the stepwise regression showed that all independent variables were retained in the model.

Table 5 shows the analysis results of the model. It can be seen that the model passed the F-test ($F = 36.947$, $p = 0.000$, < 0.05), indicating that there is a regression relationship between the four variables (i.e., physical attractiveness, interactivity, entertainment, and consumption willingness). In addition, the multicollinearity test results showed that all VIF values were less than threshold 5, indicating that there was no collinearity problem and the regression model was well constructed. In specific, the regression coefficient of physical attractiveness was 0.178 ($p = 0.046$, < 0.05), indicating that the physical attractiveness of virtual anchors had a positive impact on the audience's consumption willingness, which was significant at the 5% level. This means that Hypothesis 1 is supported. The regression coefficient value of interactivity was 0.256 ($p = 0.003$, < 0.01), indicating that the interactivity of virtual anchors had a positive impact on the audience's consumption willingness, which was significant at the 1% level. This means that Hypothesis 2 is supported. The regression coefficient value of entertainment was 0.539 ($p = 0.000$, < 0.01), indicating that the entertainment of virtual anchors had a positive impact on the audience's consumption willingness, which was significant at the 1% level. This shows that Hypothesis 3 is supported as well. According to the regression analysis results, the formula of the regression model can be expressed as $y = -0.547 + 0.539 \cdot E + 0.256 \cdot I + 0.178 \cdot PA$.

Table 5: Regression Analysis Result (N = 204)

	Unstandardized Coefficients		Standardized Coefficients	t	P	VIF	R ²	Adjusted R ²	F
	B	Std. Error	Beta						
Constant	-0.547	0.409	0	-1.339	0.182	-	0.357	0.347	F=36.947, P=0.000***
E	0.539	0.117	0.354	4.620	0.000***	1.821			
I	0.256	0.086	0.218	2.964	0.003***	1.683			
PA	0.178	0.088	0.133	2.011	0.046**	1.353			
Dependent Variable: CW									
Note: *** **, * represents significance levels of 1%, 5% and 10% respectively.									

Result and Discussion

From the above data analysis results, it can be seen that the physical attractiveness, interactivity, and entertainment characteristics of a virtual anchor can bring a positive impact on the audience's consumption willingness related to the virtual anchor. Furthermore, of the three characteristics, entertainment had the greatest effect ($\beta = 0.539$, $P < 0.01$), followed by interactivity ($\beta = 0.256$, $P < 0.01$), and finally physical attractiveness ($\beta = 0.178$, $P < 0.05$).

Entertainment showed the greatest impact on the audience's relevant consumption willingness. Virtual anchors are a new thing in the entertainment industry, which is the integration of technology and the entertainment industry. With the support of computer technology, motion capture technology, and artificial intelligence technology, virtual anchors can bring rich, diverse, and unique entertainment experiences to audiences. As a new thing in the entertainment industry, the entertainment value brought by virtual anchors to audiences is the key reason for virtual anchors to attract audiences. Taking ANYCOLOR Inc. as an example again. As one of the most successful virtual anchor companies at present, ANYCOLOR Inc. attracts a large number of fans due to the virtual anchors belonging to ANYCOLOR Inc. focus on providing attractive entertainment content in the fields of games, music, and chat. The virtual anchor with good performance in terms of the entertainment characteristic can make audiences feel happy, pleasure, and relaxed so that the audiences are willing to continue to view the channel of the virtual anchor. Over time, the audiences'

stickiness to the virtual anchor will increase, and the audiences' emotional bond with the virtual anchor will also be strengthened. Then, under the influence of emotional attachment and para-social relationship, the audience will be willing to spend money on the virtual anchor, such as paying a subscription to the virtual anchor' channel, tipping the virtual anchor, purchasing peripheral goods, and so on.

Although virtual anchors who present themselves with virtual images are born to have a shortage of authenticity, interactivity can effectively make up for this deficiency. Nowadays, with the support of various human-computer interaction technology (e.g., voice recognition technology, natural language processing technology, motion capture technology, etc.), virtual anchors can interact with the audience in real-time, to meet the needs of the audience, and provide the audience with personalized experience. This can promote the flow and the sense of social presence, which in turn increases the audience's trust in the virtual anchor. The stronger the interactive ability of the virtual anchor, the stronger the flow experience and social presence the audience will perceive, which will be more conducive to forming the trust of the audience. Trust plays an important role in promoting consumers' consumption intention (Lou & Yuan 2019). Therefore, the interactivity of a virtual anchor can bring an important and positive impact on the audience's consumption willingness.

In order to attract audiences, virtual anchors usually have their own unique image features. At present, benefiting from the advances in technology in computer modeling and imagery, the appearance of virtual anchors is becoming more and more sophisticated and can make a good first impression on audiences. However, as virtual anchors aim to provide entertainment value to audiences, compared with the quality of entertaining content and interactive experience, the impact of the virtual anchor's physical attractiveness on the audience is relatively limited. After all, in the long run, the physical attractiveness of a virtual anchor alone will not motivate viewers to keep watching the virtual anchor's channel. The viewing time and frequency of the audience are the guarantee of the consumption influence of the virtual anchor on the audience. Therefore, the physical attractiveness of a virtual anchor will have a certain positive impact on the audience's consumption willingness, but the impact will be relatively limited.

Research Limitation and Future Direction

Since this study has not conducted an in-depth discussion on the mechanism of virtual anchors' influence on consumers' consumption willingness, future studies can further discuss the role of trust, flow, and social presence in the working mechanism of virtual anchors' influence on consumers' relevant consumption willingness. In addition, since the sample of this study did not include respondents from different countries and regions, in order to further verify the conclusions of this study, this study can be replicated in other countries and regions in the future.

Conclusion

Virtual anchors that emerged on the video platform represented by Youtube are loved and favored by young consumers, and the virtual anchor industry is gaining booming. In order to fill the research gaps in current studies on the emerging phenomenon and industry of virtual anchors, through conducting empirical research, this study proves that the physical attractiveness, interactivity, and entertainment characteristics of virtual anchors have a positive impact on the audience's consumption willingness related to the virtual anchors. Therefore, when virtual anchor companies plan to launch a new virtual anchor, the design of the new virtual anchor can focus on the physical attractiveness, interactivity, and entertainment characteristics of the virtual anchor, especially the entertainment characteristic, to enlarge the economic benefits of the virtual anchor. The findings of this study can bring management implications to virtual anchor companies and benefit the development of the virtual anchor industry.

Acknowledgment

This paper is supported by the Projects of the Philosophy and Social Science of Guangdong Province China (grant number GD22CGL30).

References

- Addo, P. C., Fang, J., & Li, L. (2020). Green Advertising and Purchase Decisions in Live-streaming B2C and C2C Interactive Marketing. *International Journal of Information and Management Sciences*, 31, 191–212.
- Andersson, V., & Sobek, T. (2020). Virtual Avatars, Virtual Influencers & Authenticity (pp. 1–46). https://gupea.ub.gu.se/bitstream/handle/2077/64928/gupea_2077_64928_1.pdf?sequence=1&isAllowed=y
- ANYCOLOR Inc. (2022, September 14). Fiscal Year Ending April 2023 First Quarter Financial Results Briefing Materials. ANYCOLOR Inc. <https://ssl4.eir-parts.net/doc/5032/tdnet/2181573/00.pdf>
- Ao, L., Bansal, R., Pruthi, N., & Khaskheli, M. B. (2023). Impact of Social Media Influencers on Customer Engagement and Purchase Intention: A Meta-Analysis. *Sustainability*, 15(3), 2744. <https://doi.org/10.3390/su15032744>
- Chen, Y., & Song, Y. (2022). The Dual Role of Real and Virtual: the Evolution, Problems and Prospects of Virtual Anchors. *Youth Journalist*, 08, 95–97. <https://doi.org/10.15997/j.cnki.qnjz.2022.08.012>
- Cronbach, L. J. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/bf02310555>
- Dion, K., Berscheid, E., & Walster, E. (1972). What is Beautiful is Good. *Journal of Personality and Social Psychology*, 24(3), 285–290. <https://doi.org/10.1037/h0033731>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Gao, X., Xu, X.-Y., Tayyab, S. M. U., & Li, Q. (2021). How the Live Streaming Commerce Viewers Process the Persuasive Message: An ELM Perspective and the Moderating Effect of Mindfulness. *Electronic Commerce Research and Applications*, 49, 101087. <https://doi.org/10.1016/j.elerap.2021.101087>
- Han, X., & Xu, Z. (2020). Impacts of E-Commerce Anchor Attributes on Consumers' Willingness to Buy Online: Research Based on the Grounded Theory. *Foreign Economics & Management*, 42(10), 62–75. <https://doi.org/10.16538/j.cnki.fem.20200820.301>
- Holzwarth, M., Janiszewski, C., & Neumann, M. M. (2006). The Influence of Avatars on Online Consumer Shopping Behavior. *Journal of Marketing*, 70, 19–36. <https://doi.org/10.1509/jmkg.70.4.19>
- Hsu, C.-L. (2020). How Vloggers Embrace Their Viewers: Focusing on the Roles of Para-social Interactions and Flow Experience. *Telematics and Informatics*, 49, 101364. <https://doi.org/10.1016/j.tele.2020.101364>
- iResearch. (2022). Ecological Research Report on China's Virtual Anchor Industry in 2022. iResearch Inc.
- Kang, K., Lu, J., Guo, L., & Li, W. (2020). The Dynamic Effect of Interactivity on Customer Engagement Behavior through Tie Strength: Evidence from Live Streaming Commerce Platforms. *International Journal of Information Management*, 56, 102251. <https://doi.org/10.1016/j.ijinfomgt.2020.102251>
- Li, Y., & Peng, Y. (2021). What Drives Gift-giving Intention in Live Streaming? The Perspectives of Emotional Attachment and Flow Experience. *International Journal of Human-Computer Interaction*, 37(14), 1317–1329. <https://doi.org/10.1080/10447318.2021.1885224>
- Liu, F., Meng, L., Chen, S., & Duan, K. (2020). The Impact of Network Celebrities' Information Source Characteristics on Purchase Intention. *Chinese Journal of Management*, 17(01), 94–104. cnki:SUN:GLXB.0.2020-01-011
- Liu, Q. (2022). Effects of Male Anchor's Appearance Attractiveness on Female Consumers' Purchase Intention in the Context of Livestreaming [Master Thesis].

- <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1022575528.nh>
- Lou, C., & Yuan, S. (2019). Influencer Marketing: How Message Value and Credibility Affect Consumer Trust of Branded Content on Social Media. *Journal of Interactive Advertising*, 19, 58–73. <https://doi.org/10.1080/15252019.2018.1533501>
- Lu, Z., Shen, C., Li, J., Shen, H., & Wigdor, D. (2021). More Kawaii than a Real-Person Live Streamer: Understanding How the Otaku Community Engages with and Perceives Virtual YouTubers. Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. <https://doi.org/10.1145/3411764.3445660>
- Ma, L., Gao, S., & Zhang, X. (2022). How to Use Live Streaming to Improve Consumer Purchase Intentions: Evidence from China. *Sustainability*, 14(2), 1045. <https://doi.org/10.3390/su14021045>
- Qin, Y. (2022). Virtual Bodies and Symbolic Consumption: A study on the Interaction of Virtual Anchors in Live Broadcasting. *New Media Research*, 8(02), 39–44. <https://doi.org/10.16604/j.cnki.issn2096-0360.2022.02.006>
- Sánchez-Fernández, R., & Jiménez-Castillo, D. (2021). How Social Media Influencers Affect Behavioural Intentions Towards Recommended Brands: the Role of Emotional Attachment and Information Value. *Journal of Marketing Management*, 37, 1–25. <https://doi.org/10.1080/0267257x.2020.1866648>
- Urbach, N., & Ahlemann, F. (2010). Structural Equation Modeling in Information Systems Research Using Partial Least Squares. *Journal of Information Technology Theory and Application*, 11, 6–38.
- van Noort, G., Voorveld, H. A. M., & van Reijmersdal, E. A. (2012). Interactivity in Brand Web Sites: Cognitive, Affective, and Behavioral Responses Explained by Consumers' Online Flow Experience. *Journal of Interactive Marketing*, 26(4), 223–234. <https://doi.org/10.1016/j.intmar.2011.11.002>
- V-Surface Observation Center. (2021). General Situation of Virtual Anchor Audience : Analysis of Virtual Anchor Growth Questionnaire 2021 (Part 1). Bilibili. <https://www.bilibili.com/read/cv14247268/>
- Walster, E., Aronson, V., Abrahams, D., & Rottman, L. (1966). Importance of Physical Attractiveness in Dating Behavior. *Journal of Personality and Social Psychology*, 4(5), 508–516. <https://doi.org/10.1037/h0021188>
- Xu, X., Wu, J.-H., & Li, Q. (2020). What Drives Consumer Shopping Behavior in Live Streaming Commerce. *Journal of Electronic Commerce Research*, 21(3), 144–167.
- Yang, P. (2022). Research on the Influence of E-commerce Anchor Characteristics on Customer Word-of-mouth Recommendation Intention: The Moderating Effect of Customer Gender [Master Thesis]. <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202301&filename=1022559802.nh>
- Zheng, S., Wu, M., & Liao, J. (2022). The Impact of Destination Live Streaming on Viewers' Travel Intention. *Current Issues in Tourism*, 1–15. <https://doi.org/10.1080/13683500.2022.2117594>