RESEARCH ON THE INFLUENCE OF VIRTUAL ANCHORS' CHARACTERISTICS ON CONSUMER PURCHASE INTENTION

Khakimova A.I.[1], Wang J.Y.[2]

[1]Khakimova Alfina Ildusovna – undegraduate,
MANAGEMENT DEPARTMENT,
[2]Wang Ju Ying – PhD in Management, Associate Professor
OCEAN UNIVERSITY OF CHINA,
QINGDAO, CHINA

Abstract: *this article systematically analyzes how anthropomorphic traits, professionalism, hedonic appeal, and empathic responsiveness of AI hosts in live streams shape purchase intention. Using a dual-channel trust-value model, it is found that emotional trust and cognitive value simultaneously mediate the influence of each dimension of virtual streamer characteristics on purchase decisions. The study integrates theories such as the Technology Acceptance Model, the Theory of Planned Behavior, Social Presence Theory, the Elaboration Likelihood Model, and the S-O-R model, employing a three-stage design (literature review, model building, and PLS-SEM experiment) and demonstrates that customer engagement, the number of products in the stream, and skill in using smart tools enhance different paths of addiction.*
Keywords: *virtual anchor characteristics, affective trust, cognitive value, consumer purchase intention*

ИССЛЕДОВАНИЕ ВЛИЯНИЯ ХАРАКТЕРИСТИК ВИРТУАЛЬНЫХ ХОСТОВ НА НАМЕРЕНИЕ ПОТРЕБИТЕЛЕЙ СОВЕРШАТЬ ПОКУПКИ

Хакимова А.И.[1], Ван Ц.И.[2]

[1]Хакимова Альфина Ильдусовна – магистрант,
факультет менеджмента,
[2]Ван Цзю Ин – доктор философии в области менеджмента, доцент,
Китайский океанологический университет,
г. Циндао, Китай

Аннотация: *в статье систематически анализируется, как антропоморфные черты, профессионаллизм, гедонистическая привлекательность и эмпатийная отзывчивость ИИ-хостов в прямых трансляциях формируют покупательское намерение. На основе двухканальной модели «доверие–ценность» выявляется, что эмоциональное доверие и когнитивная ценность одновременно опосредуют влияние каждого измерения характеристик виртуального стримера на покупательское решение. Исследование объединяет такие теории как, Technology Acceptance Model, Theory of Planned Behavior, Social Presence Theory, Elaboration Likelihood Model и S-O-R-модель, применяет трёхэтапную схему «литературный обзор – построение модели – PLS-SEM эксперимент» и показывает, что вовлечённость клиента, количество товаров в стриме и навык использования умных инструментов усиливают различные пути зависимости.*
Ключевые слова: *характеристики виртуального хоста, эмоциональное доверие, когнитивная ценность, намерение потребителя совершать покупку*.

УДК 366.12

1. Introduction

E-commerce live streaming has transformed online retail by merging real-time interaction with immersive shopping experiences. A notable development within this sphere is the emergence of AI-driven virtual anchors—digital personas hosting live sales sessions. They offer benefits like 24/7 availability and scalability, yet a crucial research gap remains: how their specific characteristics influence consumer psychology and purchase decisions. While prior studies have focused on human influencers or platform features, the impact of virtual anchor attributes is underexplored [1].

This study addresses this gap by proposing a conceptual model grounded in the Stimulus-Organism-Response (S-O-R) framework [2], [3]. It identifies four key virtual anchor characteristics—anthropomorphism, professionalism, hedonic value, and empathy response—as stimuli (S). These are hypothesized to influence consumers' internal states (O), namely affective trust and cognitive value, which in turn drive purchase intention, the response [4], [5], [6]. By integrating theories like the Technology Acceptance Model and the Elaboration Likelihood Model, this research provides a nuanced understanding of the psychological mechanisms through which virtual anchors shape consumer behavior in AI-mediated commerce [7], [8].

2. Theoretical Foundations and Synthesis of Research

This research is underpinned by an integration of theoretical frameworks that explain consumer interactions with digital entities.

The Stimulus-Organism-Response (S-O-R) model provides the overarching structure. The characteristics of the virtual anchor (anthropomorphism, professionalism, hedonic value, empathy response) serve as the Stimuli. These influence the internal Organism—the consumer's affective trust and cognitive value—which in turn drives the response of purchase intention.

Other theories inform specific pathways. The Elaboration Likelihood Model (ELM) explains the dual processing routes: the central route (cognitive value from professionalism) and the peripheral route (affective trust from hedonic value or anthropomorphism)[7]. The moderating role of consumer involvement is directly derived from ELM. Social Presence Theory clarifies how anthropomorphism and empathy help virtual anchors convey human warmth, fostering a sense of connection and affective trust[10]. Principles from the Technology Acceptance Model (perceived usefulness) and the Theory of Planned Behavior (attitude shaped by anchor traits) further support the model's constructs[8].

While these theories have been applied to e-commerce, their integrated application to virtual anchors is novel. Prior research on virtual anchors has been fragmented, focusing on technology or fan culture without a systematic analysis of the characteristics driving consumer decisions. This study synthesizes these perspectives to build a comprehensive model for the AI-mediated commerce context.

3. Research Hypotheses and Modeling

Virtual Anchor Characteristics as Stimuli (S): We focus on four key characteristics derived from the literature: Anthropomorphism (ANT): The extent to which a virtual anchor exhibits human-like features in appearance, voice, and behavior. Professionalism (PRO): The virtual anchor's demonstrated expertise, knowledge, and accuracy in presenting product information. Hedonic Value (HED): The ability of the virtual anchor to create an entertaining, enjoyable, and fun shopping atmosphere. Empathy Response (EMP): The virtual anchor's capacity to perceive, understand, and respond to viewers' emotions and needs in a caring manner.

Organism (O): Affective Trust and Cognitive Value: The internal states are conceptualized as:

Affective Trust (TRU): The emotional bond and feeling of security a consumer develops towards the virtual anchor, based on care and concern. Cognitive Value (VAL): The consumer's perception that interacting with the virtual anchor provides useful, problem-solving information that facilitates informed decision-making.

Response (R): Purchase Intention (PUI): This is the consumer's self-reported likelihood of purchasing products promoted by the virtual anchor.

Direct Effects (H1-H6): We hypothesize that each of the four virtual anchor characteristics will positively influence both affective trust and cognitive value (H1a/b, H2a/b, H3a/b, H4a/b). Furthermore, both affective trust and cognitive value are expected to positively influence purchase intention (H5, H6).

H1a. Virtual anchors' anthropomorphism positively impacts affective trust.

H1b. Virtual anchors' anthropomorphism positively impacts cognitive value.

H2a: Virtual anchors' professionalism positively impacts affective trust.

H2b: Virtual anchors' professionalism positively impacts cognitive value.

H3a: Virtual anchors' hedonic value positively impacts affective trust.

H3b: Virtual anchors' hedonic value positively impacts cognitive value.

H4a: Virtual anchors' ability to give an empathy response positively impacts affective trust.

H4b: Virtual anchors' ability to give an empathy response positively impacts cognitive value.

H5: Affective trust has a positive impact on customer purchase intention.

H6: Cognitive value has a positive impact on customer purchase intention.

Mediating Effects (H7-H8): We propose that affective trust and cognitive value serve as parallel mediators in the relationship between virtual anchor characteristics and purchase intention. Specifically, each characteristic influences purchase intention through its impact on trust and/or value (H7a-d, H8a-d).

H7a: Affective trust mediates the effect of anthropomorphism on consumer purchase intention.

H7b: Affective trust mediates the effect of professionalism on consumer purchase intention.

H7c: Affective trust mediates the effect of hedonic value on consumer purchase intention.

H7d: Affective trust mediates the effect of empathy response on consumer purchase intention.

H8a: Cognitive value mediates the effect of anthropomorphism on consumer purchase intention.

H8b: Cognitive value mediates the effect of professionalism on consumer purchase intention.

H8c: Cognitive value mediates the effect of hedonic value on consumer purchase intention.

H8d: Cognitive value mediates the effect of empathy response on consumer purchase intention.

Moderating Effects (H9-H11): To account for contextual factors, we introduce three moderators:

Involvement (INV): The personal relevance of the product or shopping activity to the consumer. We hypothesize that high involvement strengthens the relationship between affective trust and purchase intention (H9a) and between cognitive value and purchase intention (H9b).

H9a: Consumers' involvement moderates the relationship between affective trust and purchase intention.

H9b: Consumers' involvement moderates the relationship between cognitive value and purchase intention.

Product Quantity (PRQ): The perceived number of units a consumer plans to purchase. We posit that purchasing larger quantities (e.g., bulk, bundles) will strengthen the effects of both trust (H10a) and value (H10b) on purchase intention, potentially due to heightened perceived value or scarcity.

H10a: The relationship between affective trust and purchase intention is moderated by product quantity, such that the effect is stronger when purchasing in bulk.

H10b: The relationship between cognitive value and purchase intention is moderated by product quantity, such that the effect is stronger when considering larger quantities.

Smart Tools Proficiency (SMT): The consumer's perceived ability to use the technological features of the live streaming platform. We hypothesize that higher proficiency strengthens the positive effects of both affective trust (H11a) and cognitive value (H11b) on purchase intention.

H11a: Consumers' smart tools proficiency moderates the relationship between affective trust and purchase intention, such that the positive effect of affective trust on purchase intention is stronger for consumers with higher proficiency.

H11b: Consumers' smart tools proficiency moderates the relationship between cognitive value and purchase intention, such that the positive effect of cognitive value on purchase intention is stronger for consumers with higher proficiency.

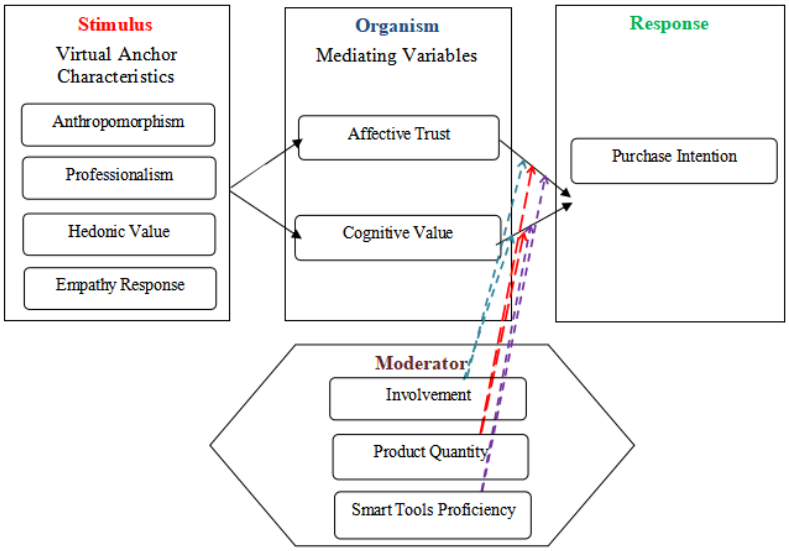

Fig. 3-1. Theoretical Framework.

4. Research Design

4.1 Measurement and Questionnaire

A survey questionnaire was developed using established scales from prior literature, adapted to the context of virtual anchors. All constructs were measured using multiple items on a five-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). The key constructs and their sources are summarized in Table 4-1.

Table 4-1. Mesaurement Scale.

Variable	Item	Reference
Anthropomorphism (ANT)	ANT1: I think virtual anchor has a human-like appearance. ANT2: I think virtual anchor resembles a real human. ANT3:I think virtual anchor looks like a human. ANT4: I think virtual anchor has a human-like voice. ANT5: I think the virtual anchors' voice sounds natural.	Zhang et al (2024)
Professionalism (PRO)	PRO1: I think the virtual anchor demonstrates professional presentation skills when introducing products. PRO2: I think the virtual anchor effectively showcases the features and benefits of products. PRO3: I think the information introduced by the virtual live streamer is objective and true. PRO4: I think the virtual anchor demonstrates professionalism and accuracy when answering questions. PRO5: I think the virtual anchor can clearly explain complex product information.	Parasuraman A., Zeithaml V.A., & Malhotra A. (2005)
Hedonic Value	HED1: Watching the virtual anchor's live stream makes me feel	Hassanein K, Head

Variable	Item	Reference
(HED)	happy and relaxed. HED2: I think through virtual live shopping, I can experience the excitement of buying new products. HED3: The virtual anchor's live stream enhances my shopping pleasure. HED4: I enjoy sharing the virtual anchor's live stream content with friends. HED5: The content from the virtual anchor makes me feel joy that I can share with others.	M. (2007) Hollebeek et al. (2014)
Empathy Response (EMP)	EMP1: The virtual anchor seems to understand my needs and preferences. EMP2: The virtual anchor can evoke my emotional resonance. EMP3: The virtual anchor can provide product recommendations that match my needs. EMP4: The virtual anchor shows concern and understanding during interactions. EMP5: The virtual anchor's expressions make it seem empathetic.	Davis M.H. (1983)
Affective Trust (TRU)	TRU1: I become emotionally attached to the virtual anchor. TRU2: I would love to interact with a virtual anchor. TRU3: I trust the virtual anchor's recommendations without hesitation. TRU4: The virtual anchor makes me feel comfortable and at ease. TRU5: The virtual anchor feels like a friend to me.	Gefen D., & Straub D.W. (2005) McAllister (1995)
Cognitive Value (VAL)	VAL1: The information provided by the virtual anchor is helpful for my purchasing decisions. VAL2: I think his product is useful for my daily activities. VAL3: The content from the virtual anchor feels practical and valuable. VAL4: The virtual anchor's live stream feels functional and practical. VAL5: The content from the virtual anchor feels like it can solve my problems.	Davis F.D. (1989)
Purchase Intention (PUI)	PUI1: I would purchase the products promoted by the virtual streamer during the live stream. PUI2: I intend to purchase the products promoted by the virtual streamer during the live stream. PUI3: I would make the virtual streamer's live streaming my preferred shopping channel. PUI4: I am willing to recommend the products promoted by the virtual streamer to my friends and family. PUI5: I plan to frequently use the virtual anchor's live streaming for shopping in the future.	Ajzen I. (1991) Dodds et al. (1991)
Involvement (INV)	INV1: I spend time thinking about the virtual anchor's recommendations. INV2: The virtual anchor's live stream captures my full attention. INV3: I watch the virtual anchor's live stream with complete focus. INV4: I actively participate in activities hosted by the virtual anchor (e.g., polls, comments). INV5: I feel highly involved with the content from the virtual anchor's live stream.	Zaichkowsky J.L. (1985)
Product Quantity (PRQ)	PRQ1: In the virtual live streaming, I usually buy single product. PRQ2: When a BOGOF (Buy One Get One Free) promotion is offered, I typically purchase 1 product in one transaction. PRQ3: When a BOGOF (Buy One Get One Free) promotion is offered, I typically purchase more than 2 products in one transaction. PRQ4: The products I buy in the virtual live streaming are a combination of multiple products. PRQ5: The product I bought in the virtual live stream is a kit.	Lichtenstein et al. (1990) Manning et al. (1995) Spears N., & Singh S.N. (2004)
Smart Tools Proficiency (SMT)	SMT1: I am comfortable using smart tools on live-streaming/shopping platforms. SMT2: I can use smart tools to find the information I need. SMT3: I can skillfully use various features of the virtual anchor platform like carts, coupons, or chats. SMT4: I can use the smart tools on the virtual anchor platform to solve shopping issues. SMT5: I can use the smart features of the virtual anchor platform to enhance my shopping experience.	Venkatesh et al. (2003)

4.2 Data Collection

The questionnaire was distributed online in China via the "Wenjuanxing" platform and social media forums. To ensure data quality, screening questions were used to filter for respondents who had prior experience with purchasing products during virtual anchor live streams. After a rigorous data cleaning process, which excluded incomplete and inconsistent responses, 586 valid questionnaires were obtained for analysis.

4.3 Sample Profile

The sample was diverse (see Table 4-2), with 52.05% female respondents. The largest age groups were 26-30 years (35.02%) and 31-35 years (26.84%). The majority of respondents held an undergraduate degree (51.88%) and reported watching live streams several times a week (53.85%). The most frequently used platforms were Douyin (63.83%) and Taobao (52.05%).

Table 4-2. Descriptive statistics of the study sample.

Sample Characteristics	Classification Criteria	No	Percentage (%)
Gender	Male	282	47.95%
	Female	304	52.05%
Age	Less than 20 years old	41	6.71%
	21-25 years old	108	18.66%
	26-30 years old	205	35.02%
	31-35 years old	157	26.84%
	More than 35 years old	75	12.77%
Educational Level	Junior college or below	189	32.24%
	Undergraduate student	304	51.88%
	Graduate student	42	7.2%
	Postgraduate student	51	8.67%
Watching Frequency	Several times a day	199	33.88%
	Several times a week	315	53.85%
	Several times a month	72	12.27%
	Hardly watch	0	0%
Purchase Experinece	Yes	586	100%
	No	0	0%
Purchase Frequency	Every day	69	11.78%
	Every week	136	23.24%
	Every month	223	38.13%
	Every six months	134	22.75%
	Once a year	24	4.09%
Platform	Chinese Douyin	403	63.83%
	Taobao	329	52.05%
	Kuaishou	197	31.26%
	Bilibili	240	37.97%
	Others	54	8.51%

5.2 Data Analysis Method

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.1 software. PLS-SEM was chosen for its suitability for predictive, exploratory research and its ability to handle complex models with multiple latent variables without imposing strict distributional assumptions. The analysis followed a two-step process: first, assessing the reliability and validity of the measurement model, and second, evaluating the structural model to test the hypotheses.

5. Empirical Results and Analysis

5.1. Measurement Model Assessment

Before testing the hypotheses, the reliability and validity of the constructs were evaluated. As shown in Table 5-2, all constructs demonstrated high reliability, with Cronbach's Alpha and Composite Reliability (CR) values exceeding the recommended threshold of 0.7.

Table 5-2. Reliability Test.

Latent Variable	Measurement Variable	Outer Loadings	Cronbach's alpha	(AVE)	Composite reliability
Anthropomorphism (ANT)	ANT1	0.819	0.877	0.671	0.911
	ANT2	0.829			
	ANT3	0.807			
	ANT4	0.824			
	ANT5	0.815			
Professionalism (PRO)	PRO1	0.839	0.886	0.687	0.917
	PRO2	0.808			
	PRO3	0.834			
	PRO4	0.826			
	PRO5	0.838			
Hedonic Value (HED)	HED1	0.813	0.891	0.696	0.920
	HED2	0.837			
	HED3	0.845			
	HED4	0.839			
	HED5	0.838			
Empathy Response (EMP)	EMP1	0.829	0.888	0.690	0.917
	EMP2	0.838			
	EMP3	0.857			
	EMP4	0.822			
	EMP5	0.805			
Affective Trust (TRU)	TRU1	0.845	0.831	0.704	0.923
	TRU2	0.831			
	TRU3	0.839			
	TRU4	0.839			
	TRU5	0.842			
Cognitive Value (VAL)	VAL1	0.846	0.849	0.709	0.924
	VAL2	0.849			
	VAL3	0.840			
	VAL4	0.835			
	VAL5	0.840			
Involvement (INV)	INV1	0.852	0.897	0.707	0.924
	INV2	0.846			
	INV3	0.838			
	INV4	0.836			
	INV5	0.832			
Product Quantity (PRQ)	PRQ1	0.832	0.881	0.677	0.913
	PRQ2	0.813			
	PRQ3	0.825			
	PRQ4	0.836			
	PRQ5	0.808			
Smart Tools Proficiency (SMT)	SMT1	0.832	0.876	0.668	0.910
	SMT2	0.813			
	SMT3	0.820			
	SMT4	0.809			
	SMT5	0.811			
Purchase Intention (PUI)	PUI1	0.847	0.901	0.716	0.926
	PUI2	0.851			
	PUI3	0.839			
	PUI4	0.842			
	PUI5	0.850			

Table 5-3. Cross Loadings.

	ANT	PRO	HED	EMP	TRU	VAL	INV	PRQ	SMT	PUI
ANT1	**0.819**	0.380	0.328	0.305	0.380	0.336	0.373	0.372	0.287	0.309
ANT2	**0.829**	0.398	0.329	0.350	0.368	0.384	0.343	0.350	0.294	0.282
ANT3	**0.807**	0.399	0.328	0.293	0.336	0.328	0.336	0.302	0.296	0.336
ANT4	**0.824**	0.375	0.331	0.314	0.315	0.362	0.321	0.309	0.309	0.347
ANT5	**0.815**	0.389	0.320	0.294	0.351	0.350	0.349	0.323	0.290	0.348
PRO1	0.402	**0.839**	0.399	0.383	0.395	0.399	0.395	0.333	0.394	0.340

	ANT	PRO	HED	EMP	TRU	VAL	INV	PRQ	SMT	PUI
PRO2	0.404	**0.808**	0.378	0.338	0.358	0.348	0.391	0.358	0.356	0.354
PRO3	0.399	**0.834**	0.389	0.361	0.343	0.369	0.411	0.339	0.370	0.318
PRO4	0.396	**0.826**	0.394	0.384	0.339	0.354	0.380	0.327	0.388	0.360
PRO5	0.366	**0.838**	0.420	0.388	0.348	0.390	0.417	0.329	0.350	0.385
HED1	0.330	0.375	**0.813**	0.387	0.351	0.394	0.317	0.311	0.297	0.383
HED2	0.301	0.411	**0.837**	0.392	0.381	0.322	0.321	0.268	0.333	0.359
HED3	0.325	0.416	**0.845**	0.385	0.377	0.331	0.337	0.298	0.337	0.338
HED4	0.311	0.379	**0.839**	0.381	0.384	0.316	0.328	0.318	0.365	0.376
HED5	0.395	0.410	**0.838**	0.369	0.364	0.372	0.352	0.324	0.380	0.367
EMP1	0.332	0.384	0.367	**0.829**	0.352	0.340	0.332	0.322	0.252	0.359
EMP2	0.288	0.350	0.383	**0.838**	0.354	0.351	0.355	0.326	0.346	0.365
EMP3	0.353	0.382	0.411	**0.857**	0.410	0.345	0.376	0.374	0.307	0.406
EMP4	0.317	0.393	0.369	**0.822**	0.386	0.340	0.376	0.365	0.332	0.381
EMP5	0.286	0.346	0.375	**0.805**	0.342	0.296	0.326	0.320	0.290	0.347
TRU1	0.336	0.388	0.382	0.374	**0.845**	0.413	0.380	0.286	0.326	0.366
TRU2	0.355	0.325	0.352	0.369	**0.831**	0.394	0.359	0.280	0.274	0.381
TRU3	0.392	0.394	0.401	0.423	**0.839**	0.392	0.360	0.327	0.344	0.340
TRU4	0.374	0.365	0.374	0.373	**0.839**	0.388	0.378	0.304	0.313	0.383
TRU5	0.337	0.331	0.353	0.322	**0.842**	0.414	0.351	0.279	0.254	0.314
VAL1	0.378	0.359	0.349	0.349	0.411	**0.846**	0.379	0.285	0.284	0.360
VAL2	0.384	0.370	0.372	0.332	0.411	**0.849**	0.346	0.278	0.294	0.370
VAL3	0.346	0.428	0.369	0.375	0.387	**0.840**	0.339	0.277	0.281	0.336
VAL4	0.351	0.358	0.323	0.287	0.395	**0.835**	0.316	0.235	0.312	0.362
VAL5	0.351	0.376	0.340	0.354	0.401	**0.840**	0.305	0.246	0.265	0.341
INV1	0.365	0.402	0.333	0.373	0.385	0.354	**0.852**	0.355	0.345	0.349
INV2	0.353	0.433	0.346	0.369	0.367	0.381	**0.846**	0.302	0.335	0.336
INV3	0.363	0.413	0.291	0.325	0.372	0.295	**0.838**	0.336	0.302	0.312
INV4	0.342	0.364	0.355	0.379	0.366	0.306	**0.836**	0.316	0.360	0.371
INV5	0.348	0.415	0.339	0.339	0.343	0.348	**0.832**	0.325	0.311	0.331
PRQ1	0.315	0.333	0.303	0.354	0.270	0.231	0.349	**0.832**	0.330	0.297
PRQ2	0.372	0.340	0.348	0.348	0.314	0.286	0.321	**0.813**	0.354	0.277
PRQ3	0.348	0.381	0.319	0.333	0.302	0.267	0.337	**0.825**	0.328	0.326
PRQ4	0.328	0.323	0.260	0.348	0.275	0.249	0.295	**0.836**	0.306	0.320
PRQ5	0.302	0.288	0.272	0.311	0.293	0.265	0.294	**0.808**	0.303	0.259
SMT1	0.296	0.369	0.306	0.281	0.304	0.255	0.305	0.328	**0.832**	0.358
SMT2	0.313	0.395	0.360	0.333	0.294	0.304	0.334	0.333	**0.813**	0.338
SMT3	0.295	0.343	0.329	0.287	0.283	0.314	0.321	0.297	**0.820**	0.314
SMT4	0.295	0.386	0.350	0.313	0.297	0.256	0.328	0.327	**0.809**	0.349
SMT5	0.269	0.334	0.333	0.292	0.299	0.269	0.325	0.322	**0.811**	0.305
PUI1	0.308	0.341	0.331	0.361	0.348	0.333	0.325	0.309	0.339	**0.847**
PUI2	0.340	0.359	0.399	0.392	0.372	0.380	0.347	0.312	0.353	**0.851**
PUI3	0.339	0.393	0.363	0.373	0.377	0.381	0.363	0.293	0.349	**0.839**
PUI4	0.319	0.340	0.361	0.389	0.341	0.356	0.325	0.299	0.350	**0.842**
PUI5	0.363	0.358	0.392	0.381	0.362	0.323	0.353	0.317	0.338	**0.850**

Table 5-4. Fornell-Larcker criterion.

	ANT	PRO	HED	EMP	TRU	VAL	INV	PRQ	SMT	PUI
ANT	**0.819**									
PRO	0.474	**0.829**								
HED	0.399	0.477	**0.834**							
EMP	0.381	0.447	0.459	**0.831**						
TRU	0.428	0.431	0.445	0.445	**0.839**					
VAL	0.430	0.449	0.417	0.404	0.476	**0.842**				
INV	0.421	0.481	0.397	0.426	0.436	0.400	**0.841**			
PRQ	0.405	0.406	0.364	0.412	0.352	0.315	0.388	**0.823**		
SMT	0.360	0.448	0.410	0.368	0.362	0.341	0.394	0.393	**0.817**	
PUI	0.395	0.424	0.437	0.448	0.426	0.420	0.406	0.362	0.409	**0.846**

Table 5-5. HTMT results.

	ANT	PRO	HED	EMP	TRU	VAL	INV	PRQ	SMT	PUI
ANT	—									
PRO	**0.538**	—								
HED	0.451	**0.537**	—							
EMP	0.429	0.503	**0.516**	—						
TRU	0.481	0.481	0.497	**0.496**	—					
VAL	0.484	0.503	0.465	0.451	**0.532**	—				
INV	0.474	0.541	0.443	0.475	0.486	**0.446**	—			
PRQ	0.459	0.458	0.411	0.464	0.397	0.354	**0.436**	—		
SMT	0.410	0.507	0.465	0.417	0.406	0.386	0.444	**0.448**	—	
PUI	0.445	0.474	0.487	0.500	0.473	0.467	0.449	0.403	**0.458**	—

Convergent validity was confirmed as the Average Variance Extracted (AVE) for each construct was above 0.5. Discriminant validity was established using the Fornell-Larcker criterion (see Tab 5-4) and the Heterotrait-Monotrait (HTMT) ratio (Tab 5-5), confirming that each construct shared more variance with its own indicators than with other constructs.

5.2 Structural Model and Hypothesis Testing

The structural model was evaluated for predictive accuracy and hypothesis testing. The model's explanatory power was satisfactory, with R^2 values of 0.419 for Affective Trust, 0.331 for Cognitive Value, and 0.313 for Purchase Intention. The results of the hypothesis tests are summarized in Table 5-6.

Table 5-6. Structural evaluation model.

Variable	R^2	R-square adjusted	Q^2	SRMR
ANT				

PRO	—	—		
HED	—	—		
EMP	—	—		
INV	—	—		
PRQ	—	—		
SMT	—	—		0.029
TRU	0.419	0.408	0.320	
VAL	0.331	0.327	0.301	
PUI	0.313	0.308	0.326	

Direct Effects (H1-H6): All four virtual anchor characteristics had a significant positive impact on both affective trust and cognitive value, providing strong support for H1a/b, H2a/b, H3a/b, and H4a/b. Furthermore, both affective trust ($\beta = 0.118$, $p < 0.01$) and cognitive value ($\beta = 0.135$, $p < 0.01$) significantly predicted purchase intention, supporting H5 and H6. The results of direct effects presented in Table 5-7.

Table 5-7. Direct effect.

Hypothesis	Casual Path	Path Coefficient	P Values	Result
H1a	ANT -> TRU	0.199	0.000	Supported
H1b	ANT -> VAL	0.209	0.000	Supported
H2a	PRO -> TRU	0.147	0.001	Supported
H2b	PRO -> VAL	0.201	0.000	Supported
H3a	HED -> TRU	0.197	0.000	Supported
H3b	HED -> VAL	0.165	0.000	Supported
H4a	EMP -> TRU	0.213	0.000	Supported
H4b	EMP -> VAL	0.159	0.000	Supported
H5	TRU -> PUI	0.118	0.007	Supported
H6	VAL -> PUI	0.135	0.003	Supported

Mediating Effects (H7-H8): The bootstrap analysis confirmed the significant mediating roles of affective trust and cognitive value. The indirect effects of all four characteristics on purchase intention through both mediators were significant (95% confidence intervals did not include zero). Therefore, H7a-d and H8a-d were fully supported (see table 5-8).

Table 5-8. Mediation effect.

Hypothesis	Relationship	Path Coefficient	Std Error	Confidence Interval (BC)		P-Value
				LL	UL	
H7a	ANT -> VAL -> PUI	0.028	0.011	0.010	0.055	0.011
H7b	ANT -> TRU -> PUI	0.024	0.010	0.007	0.048	0.023
H7c	PRO -> VAL -> PUI	0.027	0.011	0.010	0.054	0.012
H7d	PRO -> TRU -> PUI	0.017	0.008	0.005	0.038	0.033
H8a	HED -> VAL -> PUI	0.022	0.010	0.007	0.047	0.025
H8b	HED -> TRU -> PUI	0.024	0.011	0.007	0.048	0.027
H8c	EMP -> VAL -> PUI	0.022	0.010	0.007	0.045	0.027
H8d	EMP -> TRU -> PUI	0.026	0.011	0.007	0.052	0.024

Moderating Effects (H9-H11): The results for moderation were mixed as you can see in table 5-9. Consumer involvement significantly moderated the relationship between affective trust and purchase intention (H9a supported) but not between cognitive value and purchase intention (H9b not supported). Product quantity positively moderated both the trust→intention (H10a supported) and value→intention (H10b supported) paths. Smart tools proficiency significantly moderated the value→intention path (H11b supported) but not the trust→intention path (H11a not supported).

Hypothesis	Relationship	Path Coefficient	P-Value	Result

H9a	INV x TRU -> PUI	0.103	0.026	Supported
H9b	INV x VAL -> PUI	-0.037	0.222	Not Supported
H10a	PRQ x TRU -> PUI	0.117	0.018	Supported
H10b	PRQ x VAL -> PUI	0.106	0.032	Supported
H11a	SMT x TRU -> PUI	-0.094	0.904	Not Supported
H11b	SMT x VAL -> PUI	0.118	0.016	Supported

Table 5-9. Moderation effect.

The analysis of moderating effects yielded mixed results, as summarized in Table 3. The relationship between affective trust and purchase intention was significantly strengthened by higher levels of consumer involvement (H9a supported; see Fig. 5-10) and when purchasing larger product quantities (H10a supported; see Fig. 5-11).

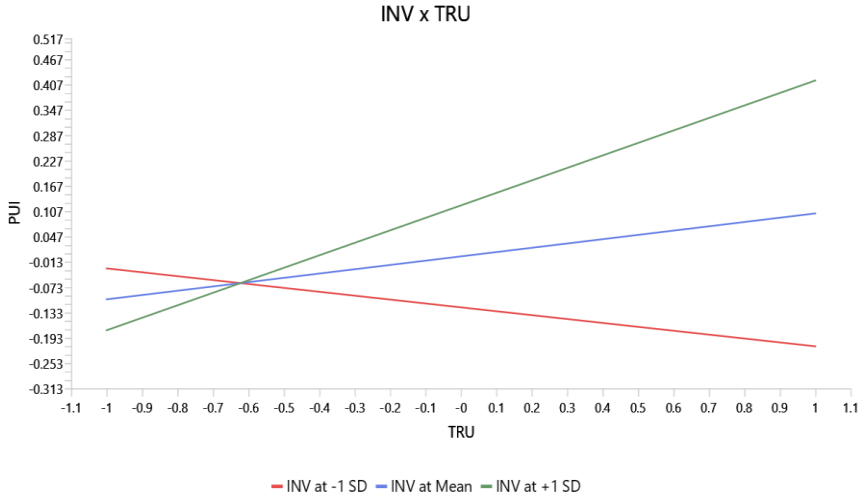

Fig. 5-10. The moderating effect of involvement on the relationship between affective trust and purchase intention.

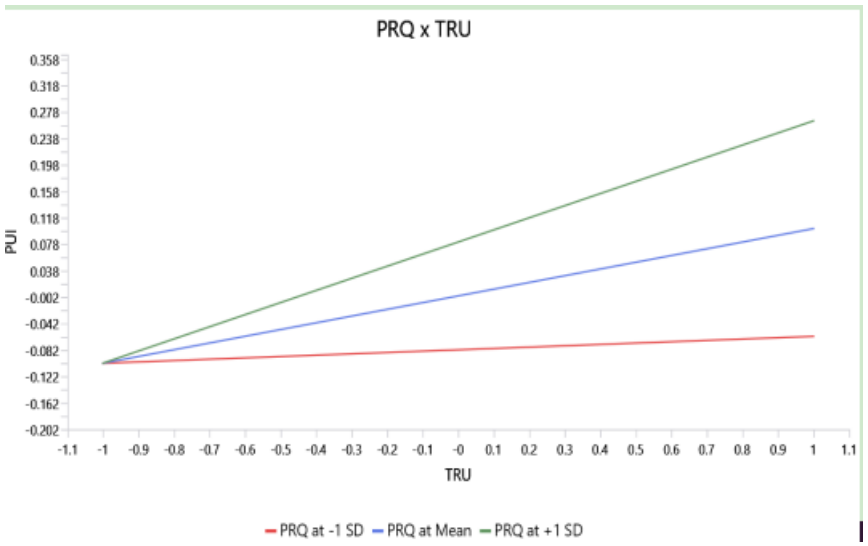

Fig. 5-11. The moderating effect of product quantity on the relationship between affective trust and purchase intention.

Similarly, the positive effect of cognitive value on purchase intention was amplified when consumers were considering bulk purchases (H10b supported; see Fig. 5-12) and when they had higher proficiency in using smart tools on the platform (H11b supported; see Fig. 5-13).

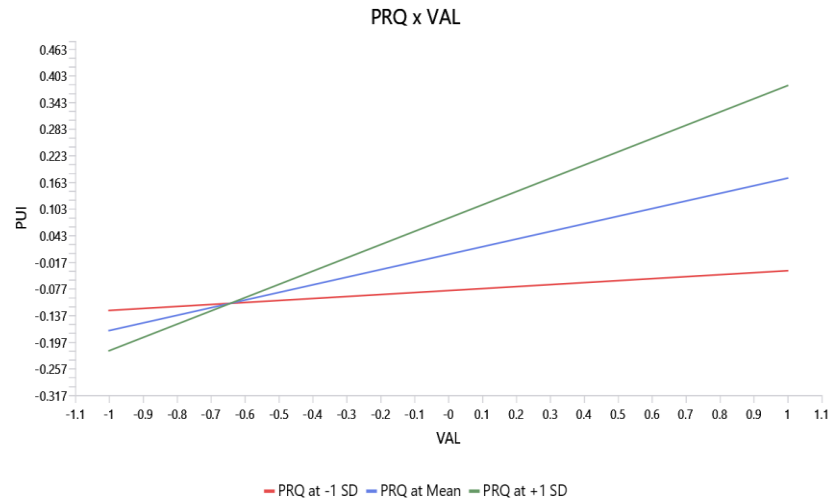

Fig. 5-12. The moderating effect of product quantity on the relationship between cognitive value and purchase intention.

However, consumer involvement did not significantly moderate the cognitive value-purchase intention link (H9b not supported), and smart tools proficiency did not affect the relationship between affective trust and purchase intention (H11a not supported).

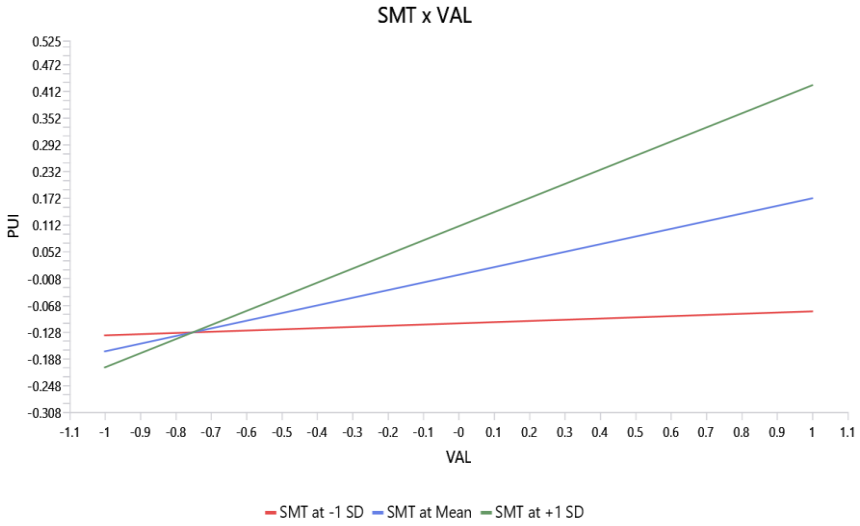

Fig. 5-13. The moderating effect of smart tools proficiency on the relationship between cognitive value and purchase intention.

In conclusion, while the core relationships hold, the strength of their influence on purchase intention is context-dependent. Marketers should tailor virtual anchor strategies by emphasizing emotional trust for highly involved consumers and in bulk-purchase scenarios, while ensuring platform usability to maximize the impact of the cognitive value provided.

5.3 Summary of Hypotheses

This study examines how virtual anchor characteristics (anthropomorphism, professionalism, hedonic value, empathy response) influence consumer purchase intention in live streaming commerce. Based on the S-O-R framework, the model proposes that these characteristics affect purchase intention through the mediating mechanisms of affective trust and cognitive value, with these paths moderated by consumer involvement, product quantity, and smart tools proficiency. The hypotheses were tested using PLS-SEM analysis of data from 586 survey respondents.

Table 5-14. Results of hypotheses testing

Hypothesis	Hypothesis Path	Result of the Test
H1a	The anthropomorphism of virtual anchor positively affects on affective trust.	Supported
H1b	The anthropomorphism of virtual anchor positively affects on	Supported

Hypothesis	Hypothesis Path	Result of the Test
	cognitive value.	
H2a	Virtual anchor's professionalism positively affects on affective trust.	Supported
H2b	Virtual anchor's professionalism positively affects on cognitive value.	Supported
H3a	The hedonic value of virtual anchor positively affects on affective trust.	Supported
H3b	The hedonic value of virtual anchor positively affects on cognitive value.	Supported
H4a	Virtual anchor' ability to give an empathy response positively affects on affective trust.	Supported
H4b	Virtual anchor' ability to give an empathy response positively affects on cognitive value.	Supported
H5	Affective trust has a positive impact on customer purchase intention.	Supported
H6	Cognitive value has a positive impact on customer purchase intention.	Supported
H7a	Affective trust mediates the effect of anthropomorphism on consumer purchase intention.	Supported
H7b	Affective trust mediates the effect of professionalism on consumer purchase intention.	Supported
H7c	Affective trust mediates the effect of hedonic value on consumer purchase intention.	Supported
H7d	Affective trust mediates the effect of empathy response on consumer purchase intention.	Supported
H8a	Cognitive value mediates the effect of anthropomorphism on consumer purchase intention.	Supported
H8b	Cognitive value mediates the effect of professionalism on consumer purchase intention.	Supported
H8c	Cognitive value mediates the effect of hedonic value on consumer purchase intention.	Supported
H8d	Cognitive value mediates the effect of empathy response on consumer purchase intention.	Supported
H9a	Consumer involvement moderates the relationship between affective trust and purchase intention.	Supported
H9b	Consumer involvement moderates the relationship between cognitive value and purchase intention.	Not Supported
H10a:	The relationship between affective trust and purchase intention is moderated by product quantity, such that the effect is stronger when purchasing in bulk.	Supported
H10b:	The relationship between cognitive value and purchase intention is moderated by product quantity, such that the effect is stronger when considering larger quantities.	Supported
H11a	Consumer' smart tools proficiency moderates the relationship between affective trust and purchase intention, such that the positive effect of affective trust on purchase intention is stronger for consumers with higher proficiency.	Not Supported
H11b	Consumer' smart tools proficiency moderates the relationship between cognitive value and purchase intention, such that the positive effect of cognitive value on purchase intention is stronger for consumers with higher proficiency.	Supported

6. Discussion and Insights

This study confirms that virtual anchors are persuasive agents whose effectiveness hinges on emulating human-like qualities to foster emotional and rational consumer assessments[9].

6.1 Theoretical Implications

The research offers key theoretical contributions. First, it extends the S-O-R model by identifying specific virtual anchor characteristics as stimuli and establishing affective trust and cognitive value as dual organismic states (O) that drive purchase intention (R). Second, it introduces a dual-mediation model, demonstrating that virtual anchors persuade through parallel emotional and rational pathways, enriching the Elaboration Likelihood Model (ELM)[7]. The strong effect of empathy response on trust underscores the importance of emotional intelligence in AI design. Third, the moderating effect of product quantity suggests virtual anchors are potent for

promotions leveraging scarcity, while the finding that smart tools proficiency only moderates the cognitive path indicates emotional trust is more fundamental[13].

6.2 Practical Implications

Actionable strategies include:

- Optimize Design: Invest in high-quality anthropomorphism and deep product knowledge (professionalism) to build rapport and credibility[11].
- Infuse Emotion: Incorporate hedonic value and, crucially, develop AI capable of empathy response to build strong affective trust[2].
- Segment Strategies: Use virtual anchors to promote bundles and volume discounts, leveraging their effectiveness in bulk purchase contexts[12].
- Ensure Usability: Simplify interfaces to ensure all users can access the cognitive value provided by the anchor[13].

6.3 Limitations and Future Research

The study's limitations, including its Chinese sample and cross-sectional design, present future research avenues. Future studies should test the model in different cultural contexts (e.g., Russia), employ longitudinal designs to track evolving consumer-anchor relationships, and incorporate objective behavioral data like actual sales.

In conclusion, the success of virtual anchors depends on balancing synthetic efficiency with authentic emotional resonance. This study provides a framework showing that the most effective virtual influencers are both technologically advanced and psychologically attuned to consumer needs[14][15].

References / Список литературы

1. *Cai J., Wohn D.Y., Mittal A., and Sureshbabu D*. Utilitarian and Hedonic Motivations for Live Streaming Shopping. In Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video (TVX '18). 2018:81–88.
2. *Sun W., Gao W., and Geng R.* The Impact of the Interactivity of Internet Celebrity Anchors on Consumers' Purchase Intention. Front. Psychol., 2022; 12:757059.
3. *Mehrabian and Russell. A Mehrabian, J.A Russell*. An Approach to Environmental Psychology, MIT Press, Cambridge, MA. 1974.
4. *McAllister Daniel*. Affect- and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organizations. Academy of Management Journal. 1995; 38(1):24-59.
5. *Zeithaml V.A.* Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. Journal of Marketing. 1988; 52(3):2–22.
6. *Ajzen I.* The Theory of Planned Behavior. Organizational Behavior and Human Decision Processes. 1991; 50(2):179–211.
7. *Petty Richard & Cacioppo John.* The Elaboration Likelihood Model of Persuasion. Advances in hydroscience. 1986; 19:124-205.
8. *Davis F.D.* Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly. 1989; 13(3):319-340.
9. *Liu J., & Zhang M.* (2023). Formation mechanism of consumers' purchase intention in multimedia live platform: a case study of taobao live. Multimedia Tools and Applications.
10. *Short, J., Williams, E., & Christie, B.* The social psychology of telecommunications. London: John Wiley & Sons. 1976.
11. *Gao F., Liu H.* (2023). Anthropomorphism in virtual anchors: Balancing engagement and the uncanny valley effect. International Journal of Human-Computer Interaction.
12. *Lichtenstein D.R., et al.* (1990). Distinguishing coupon proneness from value consciousness: An acquisition-transaction utility theory perspective. Journal of Marketing.
13. *Venkatesh V, Morris M.G., Davis G.B., Davis F.D.* User acceptance of information technology: Toward a unified view. MIS quarterly. 2003; 425-478.
14. *Wei G., Ning J., Qingqing G.* (2023). How do virtual streamers affect purchase intention in the live streaming context? A presence perspective. Journal of Retailing and Consumer Services. 2023;156(7):481-493.
15. *Yu Y., & Zhang Q.* Virtual Anchors in Media Theory: Reshaping Audience-Media Interactions. Journal of Media Theory and Practice. 2023; 12(1):45-60.