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Idols as Virtual Live Streamers in E-commerce: Analysis of E-service Quality as Determinants of E-satisfaction and Purchase Intention



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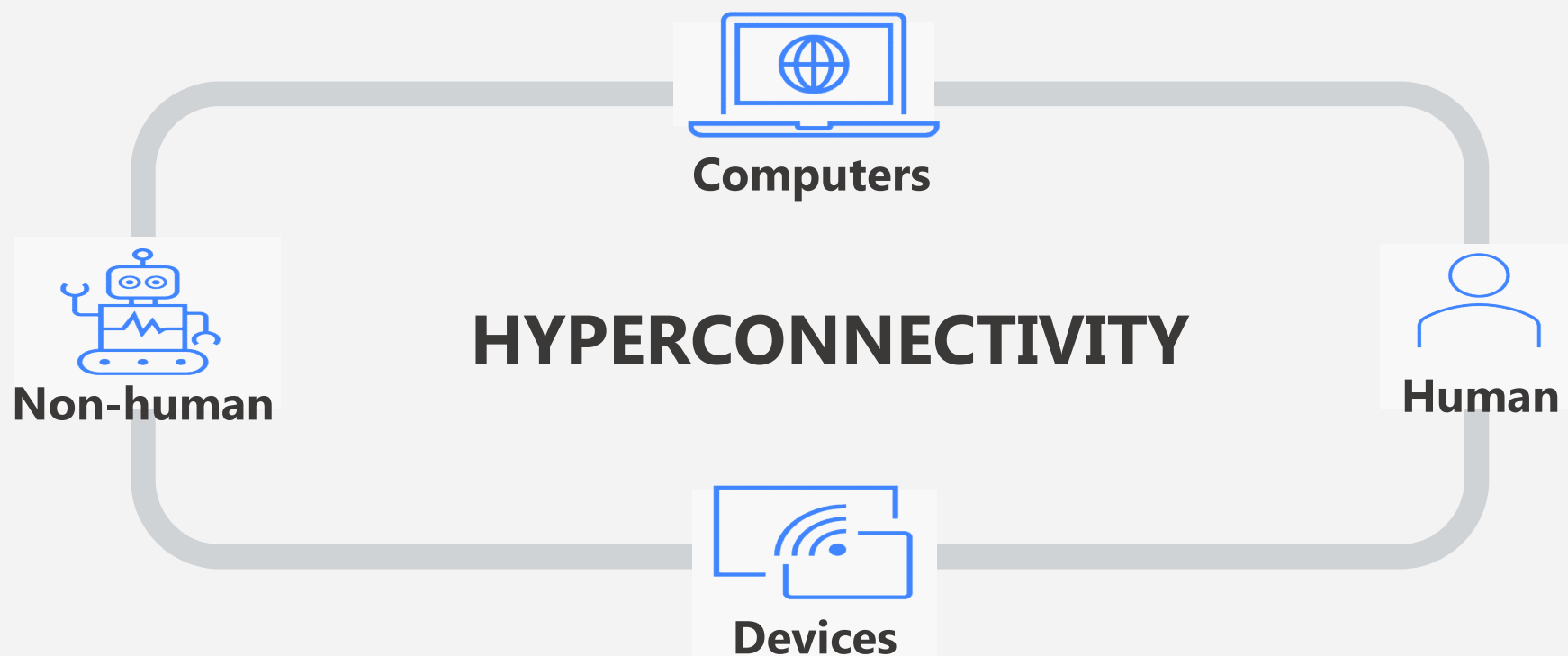
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Part 1

INTRODUCTION



INTRODUCTION.



Due to [hyperconnectivity](#), non-human agents establish their presence in human-only spaces, and the ongoing advances in [artificial intelligence \(AI\)](#) technology dramatically change how e-services are provided.

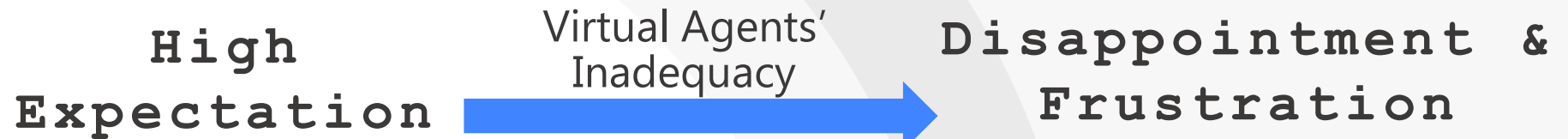


Non-human Agents

- Animated embodiments in **computer-mediated** environments
- Equipped with the ability to **think, speak, and interact** with humans via **text, voice, or mixed conversations**
- Possess **humanlike characters** and can imitate **human conversations** to provide customers with real-time product information.



翎
Ling



@kuki_ai

🌞🌍 I'm Kuki, your AI 🧊 BFF 💖

01

Difficult to gain help

02

Virtual agents' distant, cold, impersonal, lack empathy, or no personal feelings

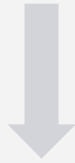
03

Lacks contextual cues to build a strong connection between customers and service providers

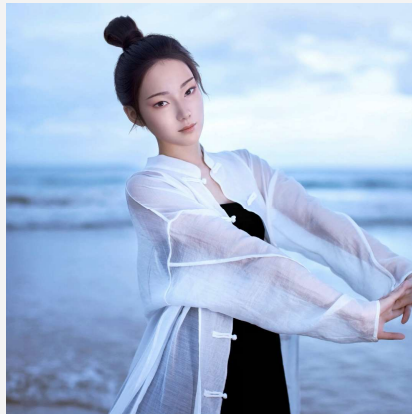
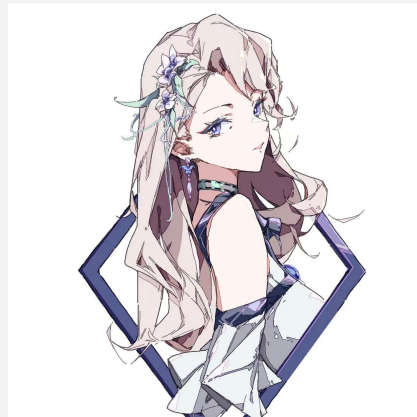
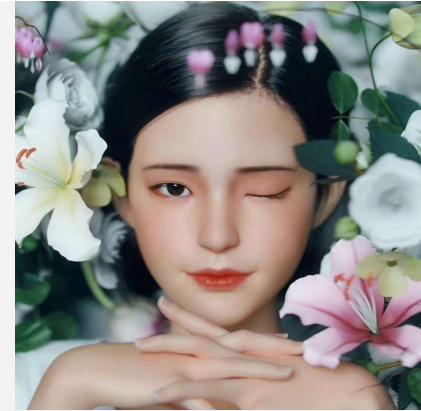


Virtual Agents:

Anthropomorphic information agents (AIA), chatbots, digital humans, virtual conversational agents, virtual influencers, and avatars



Virtual Idol Live Streamers (VILS)





Some Facts in China

617 Million

Live-streamer users in
2020

=

62.4%

Internet population

490 Million

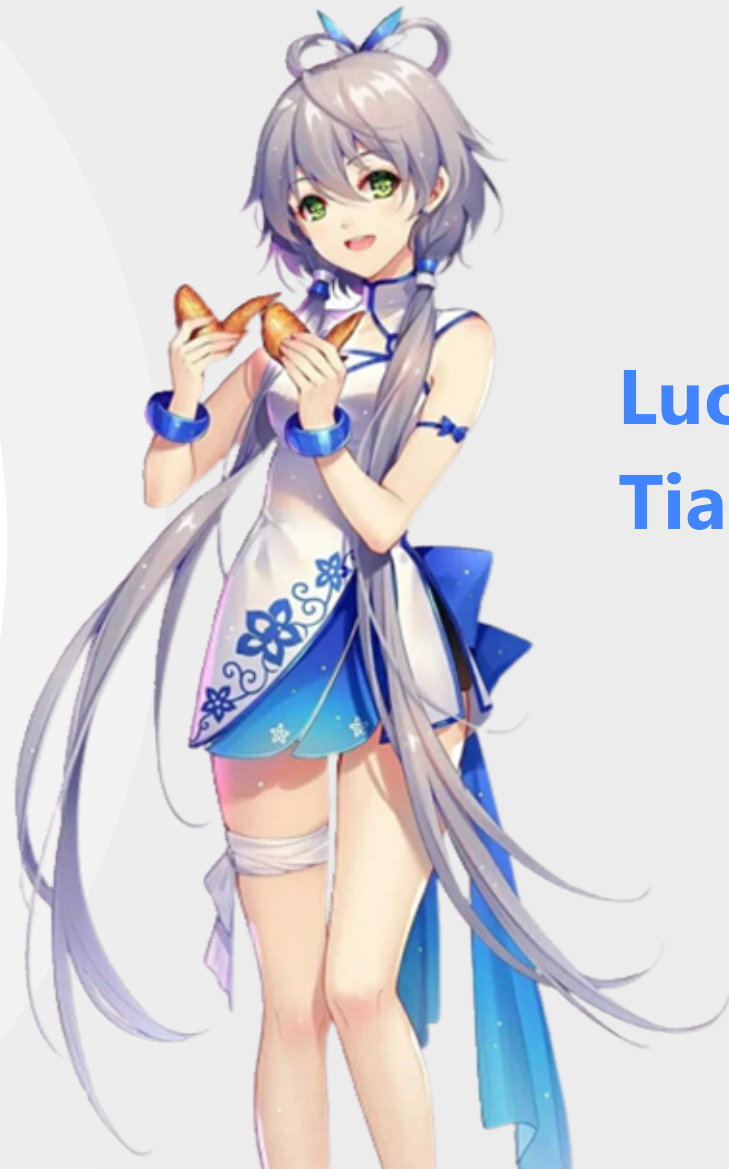
Were into anime, gaming,
& comics

390 Million

Interested in virtual idols

\$978 Million

Chinese virtual market in 2021



Luo
Tianyi



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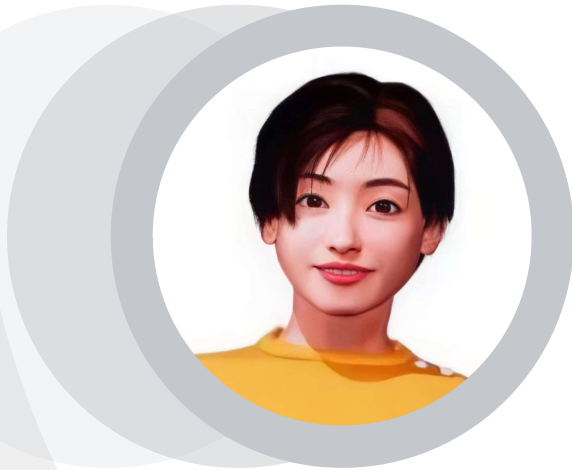
Part 2

LITERATURE REVIEW



From Virtual Idols to Virtual Live-streamer in China.

Beginning of the story



1996

Japan

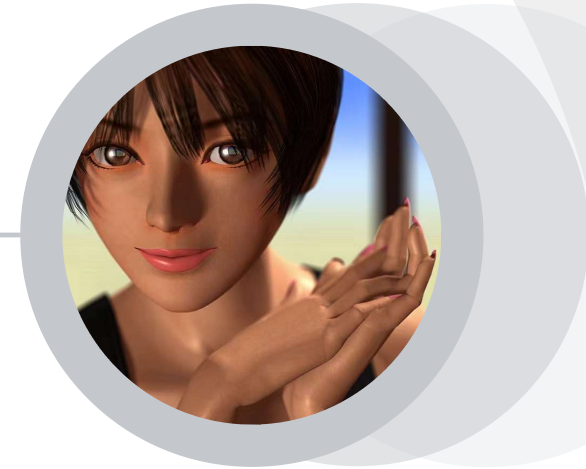
A Japanese computer graphics company, Visual Science Laboratory, created the project Digital Kids 1996 (DK-96), which produced [Kyoko Date](#), the first virtual idol (VI) in the world.



1997

Japan

Followed subsequently
by [Yuki Terai](#), which Kenichi Kutsugi designed
in 1997 for his manga "Libido".



2007

Japan—VIs from Japan achieve great success

Crypton Future Media introduced "[Hatsune Miku](#)"
(Vocaloid VI) in collaboration with YAMAHA
Corporation.

VIs of Japan became so popular in [China](#), and the
country became a VI incubator.



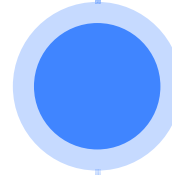
2012

China

Inspired by **Hatsune Miku**,
Information Technology Co. Ltd. collaborated
with YAMAHA Corporation to create **Luo
Tianyi**



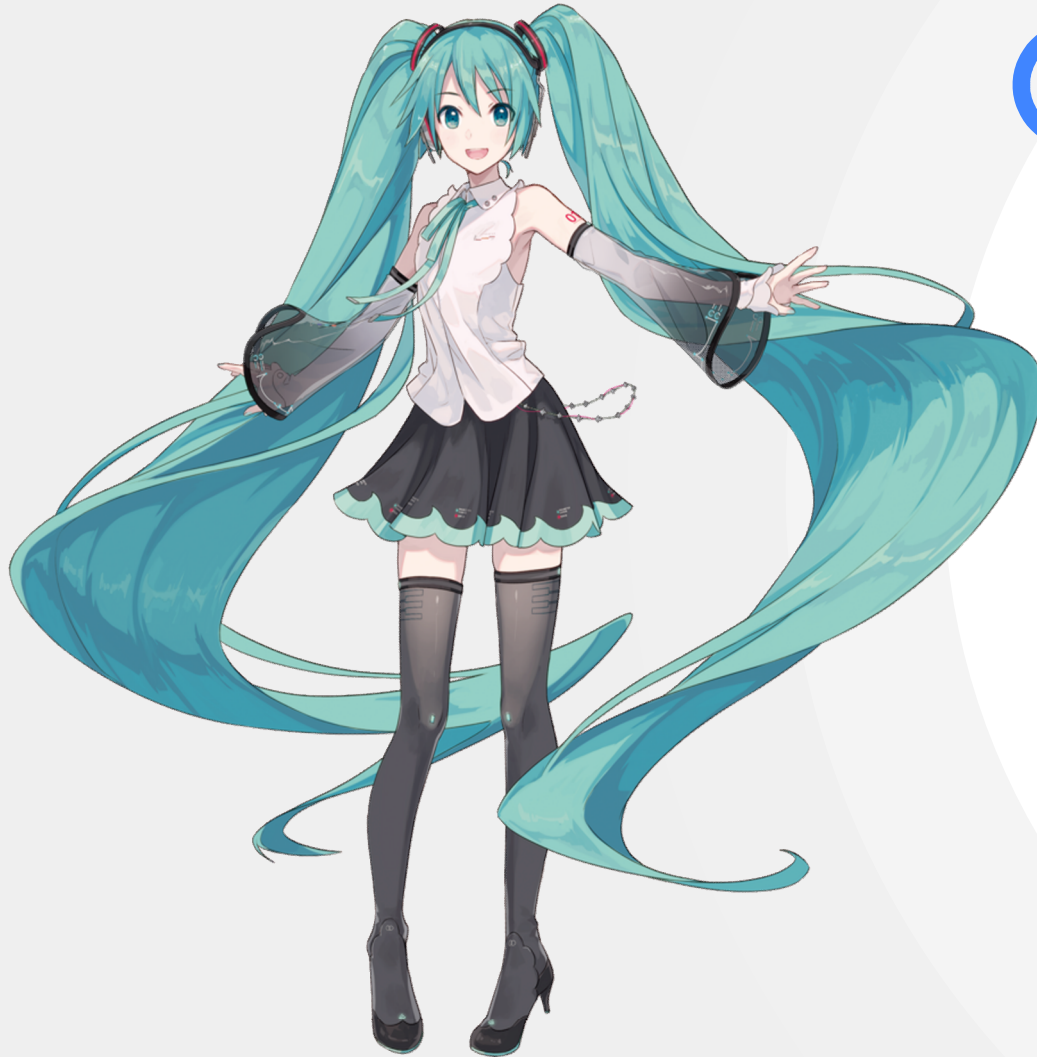
淘宝 618



2020.6.18

China

Hatsune Miku joined the **618 mid-year shopping festival of Alibaba's Taobao festival** in China as the ambassador of the event and a virtual idol live-streamer (VILS) on Taobao Live, attracting over **10 million** website visits and virtual gifts



E-Service Quality (e-SQ)

- The overall customer evaluations of e-service quality offered in the virtual marketplace.
- Concerning live-streaming platforms, e-SQ refers to the services offered by the live streamer as a strong indicator of customer satisfaction with live-stream shopping.



Two Dimensions of e-SQ.

Utilitarian dimensions of e-SQ (e-USQ)

1. **Efficiency (EF):** Effortlessness and swiftness.
2. **Fulfilment (FU):** Product availability and on-time delivery.
3. **System Availability (SA):** Technical functions correctly working or functional fit-to-task.
4. **Privacy (PR):** Security and safety of personal information and payment details.

Hedonic dimensions of e-SQ (e-HSQ)

1. **Interaction (IN):** Ease of communication.
2. **Entertainment (EN):** Playfulness, excitement, fun, pleasant, or interesting customers experience.
3. **Customization (CU):** Personalization of communications.
4. **Trendiness (TR):** Latest product information & trends



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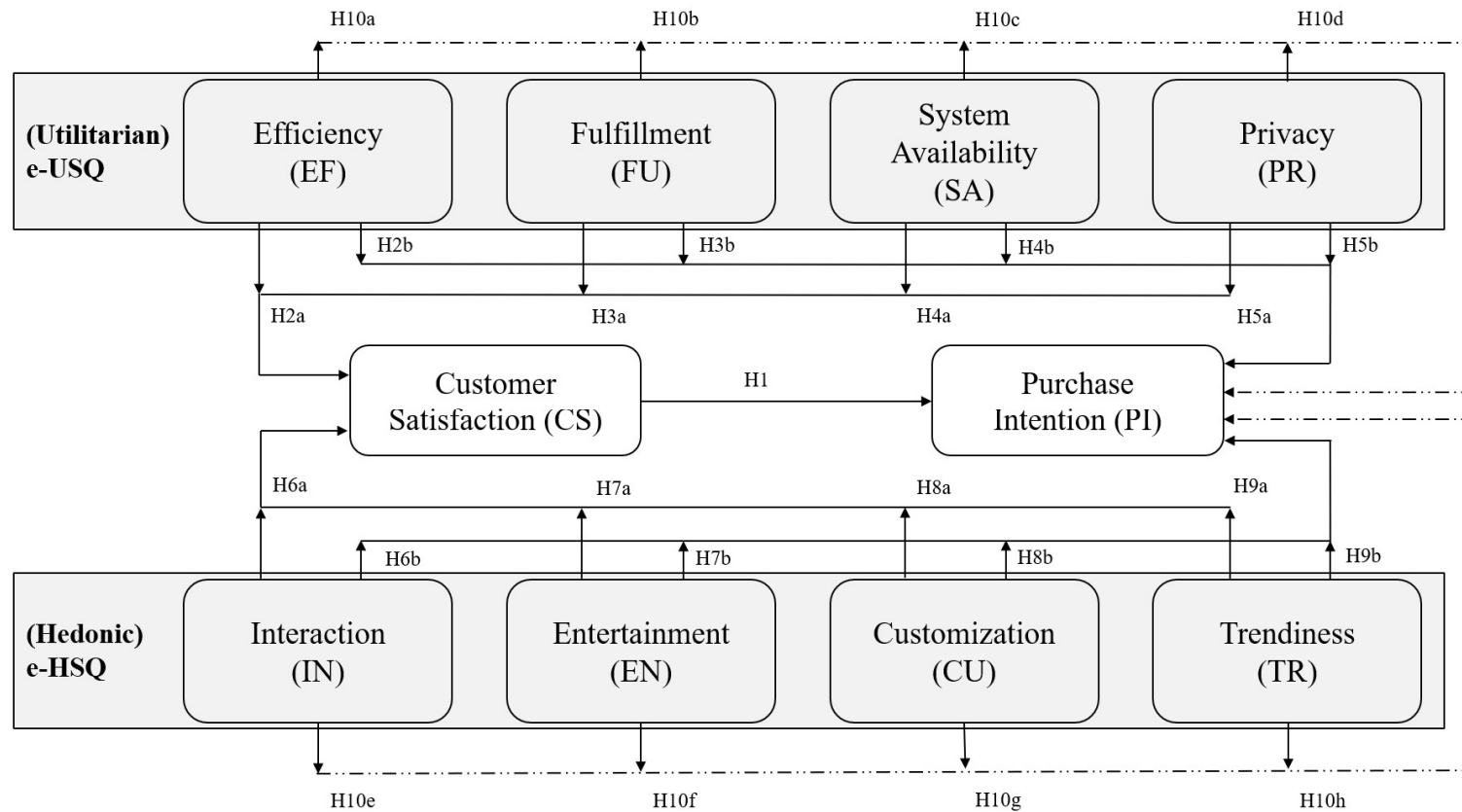
Part 3

CONCEPTUAL FRAMEWORK & HYPOTHESES



CONCEPTUAL FRAMEWORK.

Fig 1. Conceptual Framework.



Note: H10a, H10b, H10c, and H10d show the mediating effect of CS between e-USQ attributes and PI.

H10e, H10f, H10g, and H10h show the mediating effect of CS between e-HSQ attributes and PI.



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Part 4

RESEARCH METHOD



Instrument & Data Collection.

- 01 Avoid Language Bias
The original questionnaire questions were in English. This research conducted a [back translation](#) between English and Chinese, ensuring the meanings of all items fit the research target.
- 02 Pre-test
Two marketing professors performed a [pre-test with 50 respondents](#) to clarify the correctness and reduce sentence inconsistencies and errors of the questionnaire
- 03 Data Collection
A marketing agent was responsible for data collection for around [seven weeks](#) to collect customers' attitudes toward VILS' e-USQ, e-HSQ, customer satisfaction, and purchase intention.



Sample Profile.

Table 2. Demographics of respondents. Total Sample = 684

Demographic	Frequency	Percentage
Gender		
Male	319	46.64
Female	365	53.36
Age		
18-25	203	29.68
26-33	223	32.60
34-41	83	12.13
42-49	61	8.92
Above 50	14	2.05
Educational Level		
Middle & High School	182	26.61
High School	148	21.64
Undergraduate	203	29.68
Bachelor's Degree	119	17.40
Graduate Degree	32	4.68
Monthly Expenditure on Live shopping		
Less than 1000 RMB	228	33.33
1000-1999 RMB	171	25.00
2000-2999 RMB	90	13.16
3000-3999 RMB	67	9.80
4000-4999 RMB	69	10.09
5000 RMB or Above	59	8.63



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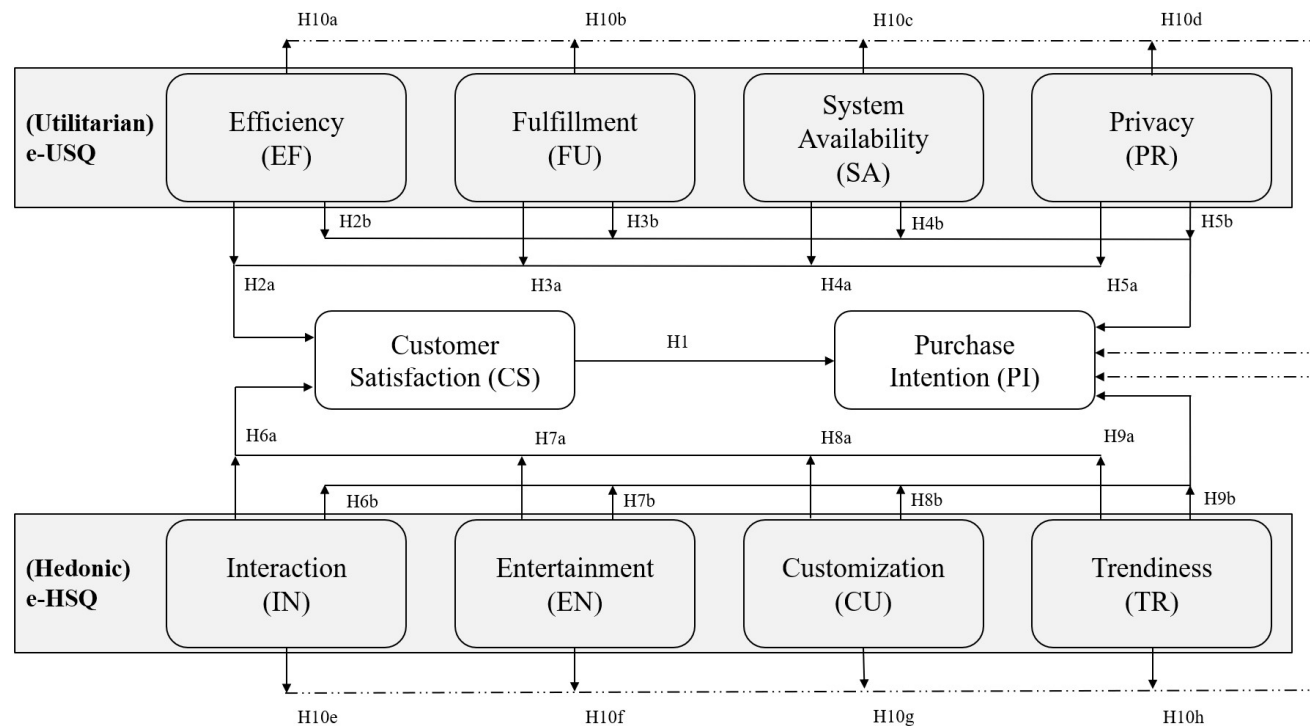
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EMPIRICAL RESULTS & DISCUSSION



Hypothesis Summary

All hypotheses are significant.



Note: **: $p\text{-value} < .01$.



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Part 6

IMPLICATIONS



Managerial Implications.

- 01 The use of VILS offers several benefits to firms. (1). 100% controllable; (2). cheaper to work in the long run than human influencers; (3). can do a lot of live broadcasting in many places; (4). are not affected by tiredness, depression, or uncertainties; (5). never age or die; (6). not volatile to speak or misbehave like human live streamers
- 02 Valuable customers' perspectives on e-SQ of VILS driving the satisfaction and purchase intention emerged from this study. The findings can assist firms in identifying the factors of successful live-streaming e-commerce via VILS and optimize their service strategies for customer satisfaction.
- 03 Regarding hedonic e-SQ, potential and inexperienced customers of VILS on live-streaming e-commerce should be exposed to features by providing quick links or short videos about VILS (e.g., who they are)



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LIMITATION & FUTURE RESEARCH



Limitation & Future Research.

First, the study focuses only on four dimensions of e-USQ and e-HSQ. The study can be expanded to **other theoretical models** on service quality, such as the SERVQUAL model (Parasuraman et al., 1988).

Second, the current study was conducted in China, live-streaming e-commerce; thus, it calls for further research on the **diversified cultural backgrounds of demographic samples**.

Third, empirically testing sample demographic characteristics allows researchers to examine how the trajectory of views might differ across **various demographic**. In addition, the potential role of the demographic profile of respondents as **moderating variables** can be considered in the future on the relationship between e-SQ and customer satisfaction.

Lastly, we hope our study can stimulate discussions about **the variety of roles played by VILS in serving customers both e-USQ and e-HSQ**.



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Thank You!



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