



 sciencedirect

BALTIC JOURNAL OF LAW & POLITICS

A Journal of Vytautas Magnus University

VOLUME 15, NUMBER 3 (2022)

ISSN 2029-0454

Cite: *Baltic Journal of Law & Politics* 15:3 (2022): 900-910

DOI: 10.2478/bjlp-2022-002065

THE IMPACT OF E-COMMERCE LIVE STREAMING ON CONSUMER PURCHASE INTENTION DURING THE COVID-19 PANDEMIC

Yi Wang

graduate school of business, SEGi University, Jalan Teknologi, Kota Damansara, 47810 Petaling Jaya, Selangor, Malaysia

Received: August 14, 2022; reviews: 2; accepted: November 08, 2022

ABSTRACT

COVID-19 epidemic and the ongoing development of live e-commerce technologies have accelerated the industry's rapid expansion in China. This study, which is focused on the SOR conceptual model, uses questionnaires to evaluate the effects of live stream attributes on users' social activity and flow experiences, as well as their effects on users' purchase intentions in real-time e-commerce situations. Processing of data and participation were incorporated as controlling factors using Structural Equation Modelling (SEM). Social activity was dramatically enhanced by the host's attractiveness, communication, and trustworthiness. Additionally, flow experience was significantly influenced by host attractiveness, trustworthiness in the host, and social activity. Consumer purchase intention was significantly influenced by social activity and flow experience. In conclusion, this work highlights the importance of the host for live e-commerce and suggests that users with limited participation would represent the main emphasis of live e-commerce.

Keywords

Live E-Commerce, Host's Attractiveness, Communication, Trustworthiness, Social activity, Flow Experiences

1. INTRODUCTION

The COVID-19 epidemic has raised concerns about the safety of offline mass commerce (Yu and Zhang (1)). With improvements in online buying and shipping infrastructure, online shopping has experienced significant growth over the past decade. However, the expense of consumption is increased by internet shopping's abundance of uniform suppliers. In order to save time, it is now popular for

customers to pick best items in live e-commerce; it is also very common (Zhao and Bacao (2)). Through the utilization of several livestreaming systems, live e-commerce is indeed a type of online purchasing in which customers are offered recommendations for products and have their questions answered via real-time recordings. E-commerce purchasing differs significantly from traditional online and offline shopping in that it has both parallels and distinctions in the buying process. Live e-commerce, in contrast to typical online purchasing, actualizes a change from images to recordings, and the powerful visual user interface enhances users' social activity (Kit-fong et al. (3)). Live broadcasts without clips, however, enable customers to carefully gather all product details, increasing their trustworthiness. By virtue of advancements in live broadcasting technologies, live e-commerce, in contrast to typical online buying, may actualize real-time one-to-many increased connections, enhancing users' intimacy and satisfaction with specific products. The major live streamers, or "hosts," sometimes known as "streamers" or "broadcasters," carried out an innovative form of online commerce that encourages user engagement and purchases.

Analyses of live e-commerce hosts generally focus on two aspects: the host's attractiveness and the host's trustworthiness. First, interacting with the host while watching a live show can encourage impulsive buying. As a result, hosts can be broadly divided between celebrities and internet hosts (typically the Key-Opinion-Leader (KOL)). While KOL hosts have distinct personal attributes and expert knowledge in specialized areas, stars enjoy enormous fame and significant audience appeal. As an option, KOL hosts can provide clients with a sophisticated presentation of the products based on their comprehension (Chen et al. (4)). Additionally, all hosts ought to be respectable and competent in order to converse with customers and sway their decision to make a buy. The current paper highlights the key components of a typical Taobao live-streaming e-commerce website to make it simpler to comprehend.

Online buying can't provide a significant social interaction experience since sociality is an essential component of user shopping, and online consuming often has a lower level of social activity than offline consumption. If live e-commerce may mimic the world today and users' actions are influenced by physicality, removing social activity-based features may reduce the impression of appearance (Alam (5)). Researchers have developed flow experience concepts to describe customer behavior in purchasing online as a result of thorough investigation into users' online consuming experiences. Users' buying intentions are directly influenced favorably by flow experiences, which are most strongly expressed in cognition, emotion, purpose, and conduct. Due to their strict needs, reduced capital requirements, and practical nature, internet shoppers have a greater advantage in the buying process than physical shoppers do (Zhang et al. (6)). As a result, online shoppers often have low levels of loyalty. Several researches showed that the relationship between items or brands and users is significantly regulated by the participation. Therefore, user participation (and attention to live streaming) is a crucial regulator.

For the current study, a framework for this research relying on the SOR conceptual perspective was developed in order to investigate the elements that affected buying intentions during the e-commerce actual scenario. By changing the current maturity scale, the components that went into each study were measured, and the significance level of impact of every path was confirmed by SEM. The study mainly addresses a gap in the existing literature and provides recommendations for additional studies due to the lack of studies on the interactions between several parameters in live e-commerce that have comparable characteristics. This study will enable operators and hosts of live e-commerce platforms transform user opinions into buy intents and identify which customer segments to target. The current study uses live e-commerce data, host attractiveness, communication, and host trustworthiness as its key research variables to confirm the effects of live e-commerce qualities on social activity, perceived enjoyment, and user intention. Each path's importance and involvement are also appraised.

2. RELATED WORKS

Since businesses need to predict customer behaviour during the COVID-19 pandemic to keep a competitive advantage, studying the proven determinants of online user's behaviour regarding purchase is of major value. During April 2020 COVID-19 outage, Koch et al. (7) looks at the reasons why members of generations Y and Z purchase online. Using structural equation modelling, the author analysed the data gathered from 451 consumers in Germany to compare and contrast the influence of utilitarian, hedonistic, and ethical considerations on consumer behaviour. The author advised e-commerce businesses on how to strategically use normative factors and cater to customers' buying motivations. The COVID-19 pandemic is being resulted by a virus termed as "Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2)". Given these constraints, research was done to develop a virtual outpatient clinic that might give long-term care to those influenced by the COVID-19 pandemic. Given the present state of affairs, it's unlikely that we'll ever go back to our non-face-to-face past. Therefore, the purpose of Lee and Kwon (8) provide a descriptive analysis of how the cosmetics industry has evolved since COVID-19 to meet the needs of the changing preferences of consumers. Lisanti et al. (9) determine how "Product", "Product Delivery Service", and "Product Assurance" are connected to "Consumers' Intent to Buy", "Linear Regression" was used in the quantitative study to seek for associations between variables. Respondents in the 471 e-commerce consumer samples utilised for this research all make their purchases online. Obtaining representative samples of a population by rolling the dice (snowball sampling). SPSS is a useful tool for analysing and organising data. The author demonstrates that the level of confidence in a product or service may influence a consumer's decision to make a purchase. However, during the COVID-19, there is no correlation between the quality of the delivery service and the likelihood of a consumer making a purchase.

Chen et al. (10) utilises LDA technique to obtain themes from online comments on E-commerce live streaming and analyses polarity of sentiment using multiple emotion dictionaries to explore policy implementation impacts and the primary concerns prior and after implementation of policy. The normative policy for E-commerce live streaming is more important to 20–40-year-olds. Women, who dominate live streaming, are less supportive of the regulation. The LDA models and online HDP models show that the most discussed topics are contributions of E-commerce live streaming to "standard economic transformation", "public welfare activities", "resumption of work and production", "poverty alleviation", "fraud", "counterfeit goods", "supervision", "rights protection", and other incidents in this industry. To avoid endogeneity, Gao et al. (11) used the distance from Wuhan to surveyed cities as the study variable. Our IV approach reduces prejudice. Online food purchases rise with COVID-19 cases. Young individuals in big cities with little internet purchase risk are more inclined to do this. Despite its limitations, the author's study has certain implications of policy for China and other COVID-19-affected nations. In particular, government assistance and regulation should concentrate on (i) maintaining the safety of internet-sold food, (ii) safeguarding the carrier from infection, and (iii) giving financial help to the needy in small towns who may have trouble getting food. Gu et al. (12) developed a technique to evaluate the elements that impact online customers' purchase behaviour during the COVID-19 pandemic. The study used Cattell's questionnaire and correlation analysis. The author employed a questionnaire to measure internet consumers' purchasing inclination. Online customers in the 10 fastest-growing e-commerce markets were surveyed. The suggested methodological toolbox to measure online customers' buying behaviour identifies the most relevant aspects and allows for the assessment of their activity over the research period to detect major trends and behaviour changes. The study showed COVID-19-related alterations in online customer purchase behaviour.

Song et al. (13) apply the stimulus-organism-response theory to the topic of how new live broadcast characteristics (visibility, interaction, and authenticity) affect customers' propensity to purchase through consumers' perceived value and perceived trust. Three hundred and seven people who mostly utilise Chinese webcasts took part in the research. SPSS and Amos were used to analyse the data that was gathered with the help of an online questionnaire survey. A model is proposed in Sarah and Sobari (14) to analyse the connection between trust and customer involvement in live streaming and ultimately a consumer's decision to make a purchase. Thirteen assumptions from the conceptual model that was built were tested using the 207 complete surveys. The findings show that confidence in items is favourably influenced by hedonic and symbolic value in live streaming, whereas trust in sellers is considerably influenced by utilitarian and hedonic value. When it comes to live streaming as it pertains to e-commerce, only hedonic and symbolic values have a favourable effect on client involvement and faith in items. Guthrie et al. (15) research draws from the consumer behaviour literature, new

COVID-19 studies, and the viewpoint of environmental imposed limits to explain how people's habits changed while shopping online during the COVID-19 pandemic. The goal is to get insight into how people use online shopping as a means of adjusting to and dealing with adversity. We explain the changes in customer behaviour during stressful life events like COVID-19 using data from numerous sources, including a prominent French online retailer's transaction and search data.

3. METHODOLOGY

3.1 Conceptual framework

In order to investigate the consequences of customers' perceptions of live e-commerce on social activity and flow experiences, a conceptual framework was developed in accordance with the SOR theory. We employed social activity and flow experience as mediating factors, buying intention as the outcome, and also the 4 attributes of live e-commerce were independent factors.

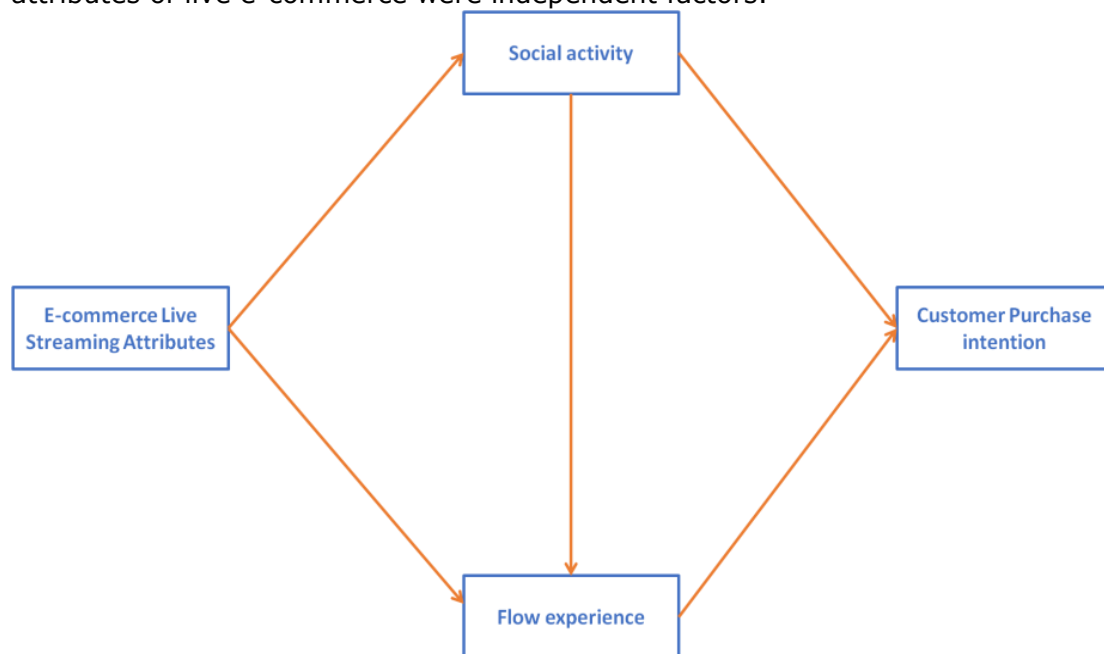


Figure 1: Conceptual framework

Additionally, empirical evidence was used to support the modification of purchasing intention. We also gave consideration to the model's regulatory role. In addition, as depicted in Figure 1, a conceptual framework of the variables impacting buying intentions in live e-commerce is developed.

3.2 Design of Questionnaires

Prior studies have shown that live e-commerce may evaluate social activity, flow experience, participation, and buying intention. To examine the relationships between various live e-commerce characteristics and buying intention, social activity, and flow experience, we developed and employed a questionnaire.

WeChat, the most popular instant messenger from China, was used to disperse the surveys for this research, and 348 legitimate questions were gathered.

4. RESULTS AND DISCUSSION

The impact of E-commerce live stream attributes namely host's attractiveness, communication, and trustworthiness on users' social activity and flow experiences is analyzed in this section. In addition, the influence of users' social activity and flow experiences on their purchase intentions in real-time e-commerce situations is investigated.

Cronbach's alpha scores indicate the conceptual model's research components' reliability and internal consistency. Cronbach's alpha ranges from 0.60 (poor) to 0.80 (excellent). Figure 2 shows the reliability analysis of the instrument based on various factors considered for this research. This research found that E-commerce live stream features such as "host's attractiveness", "communication", "trustworthiness", "users' social activity", "flow experiences", "buy intention", and involvement had acceptable Cronbach's alpha values. The reliability of the instrument was significantly acceptable for the features considered for our study.

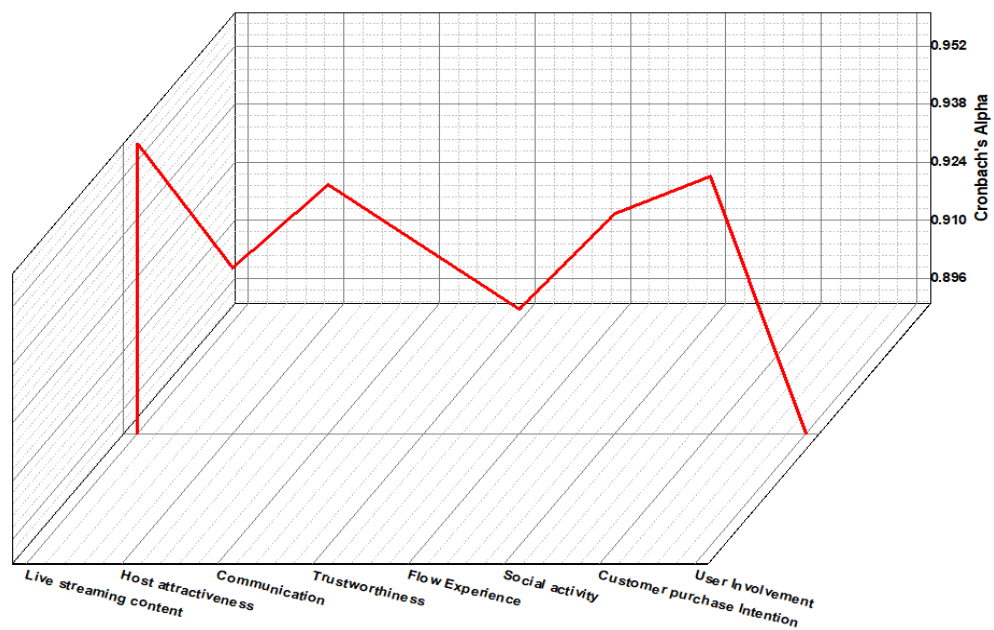


Figure 2: Reliability Analysis of study factors

The conceptual model's research elements are validated using "Composite reliability (CR)" and "Average Variance (AVE)". The data is valid if CR is above 0.7 and AVE is above 0.5. Figure 3 shows the validity analysis of study factors depending on CR. The CR for E-commerce live stream attributes namely host's attractiveness, communication, and trustworthiness, and users' social activity, flow experiences, purchase intention, and involvement were greater than 0.7. The validity analysis of study factors depending on AVE was presented in figure 4. The

AVE for E-commerce live stream attributes namely host's attractiveness, communication, and trustworthiness, and users' social activity, flow experiences, purchase intention, and involvement were greater than 0.5. As a result, the factors utilized for building our research model were highly valid.

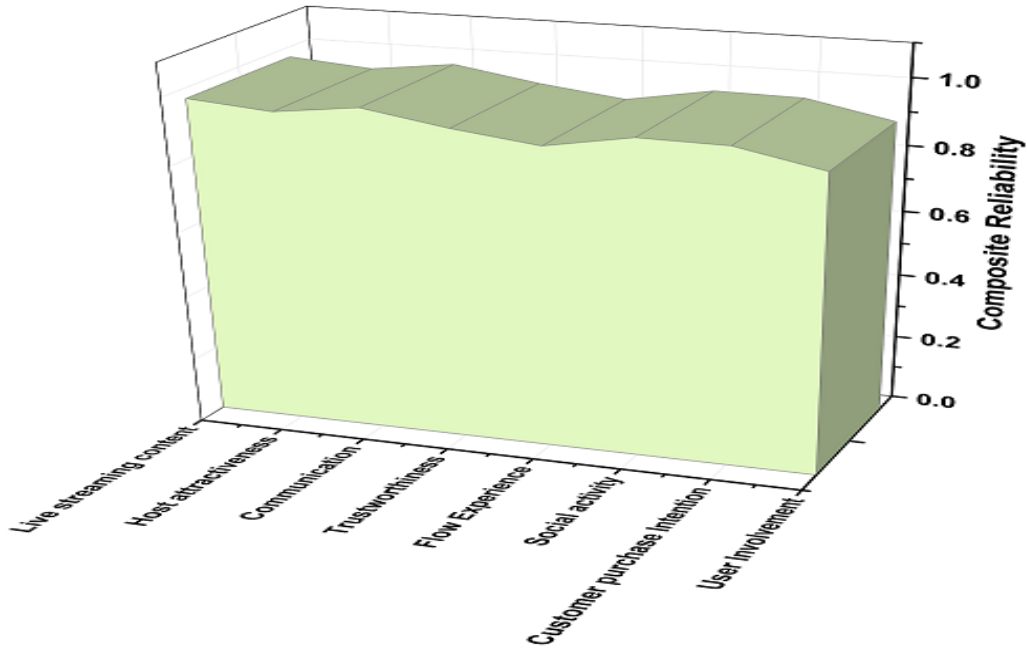


Figure 3: CR analysis

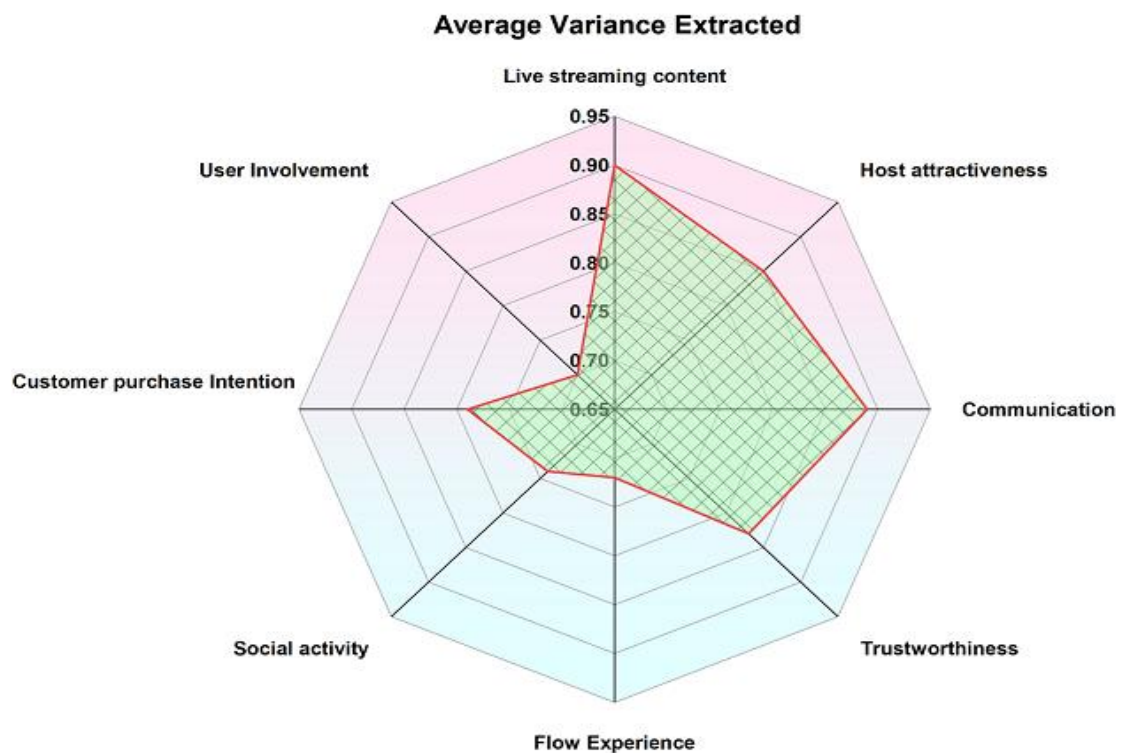


Figure 4: AVE analysis

The discriminant validity of constructs employed in our research is shown in table 1. In table 1, the square root of the AVE is diagonal and construct correlations are off-diagonal. It checks whether unrelated notions are genuinely unrelated. This was shown by contrasting the average variance across variables with the squared correlation of those variables. In terms of E-commerce live stream attributes, such as the host's attractiveness, communication, and trustworthiness, and users' social activity, flow experiences, purchase intention, and involvement, the average variance extracted for all these factors is greater than the squared correlation, proving the factors' discriminant validity.

Table 1: Investigation of discriminant validity of different constructs

	Purchase Intention	Live Streaming Content	Host Attractiveness	Social Activity	Flow experience	Communication	Trustworthiness
Purchase Intention	0.936						
Live Streaming Content	0.084	0.895					
Host Attractiveness	0.138	0.277	0.927				
Social Activity	0.259	0.255	0.275	0.896			
Flow experience	0.109	0.305	0.216	0.345	0.836		
Communication	0.115	0.275	0.248	0.335	0.446	0.849	
Trustworthiness	0.143	0.230	0.236	0.295	0.308	0.246	0.889

Table 2 illustrates the path analysis showing the effect of various independent variables on dependent variables. The p-value for the individual effect of host attractiveness, communication, and trustworthiness on user's social activity is observed to be less than 0.05. This means that E-commerce live streaming attributes such as host attractiveness, communication, and trustworthiness positively influences user's social activity. But the p-value for the effect of live streaming content on user's social activity is observed to be greater than 0.05. This means that E-commerce live streaming content has no significant effect on user's social activity. From table 2, we observed that p-value was found to be lesser than 0.05 for various relations like host-attractiveness and flow experience, trustworthiness and flow experience, and social activity and flow experience. This showed that there is a positive effect of host-attractiveness, trustworthiness, and social activity on flow experience. But the effect of live streaming content and communication on flow experience was not significant because p-value was higher than 0.05. We evaluated that the impact of social activity and flow experience on customer's purchase intention was significant.

Table 2: Analysis of path coefficients

Independent variable	Dependent variable	Estimate	S.E.	C.R.	p-value	Results (Not significant effect-NSE, Significant effect-SE)
Live Streaming Content		0.012	0.045	0.276	0.774	NSE
Communication		0.083	0.03	2.084	0.036	SE
Trustworthiness	Social	0.165	0.043	3.75	0.012	SE
Host	Activity	0.118	0.042	2.734	0.005	SE
Attractiveness						
Live Streaming Content		0.007	0.042	0.191	0.845	NSE
Communication		0.020	0.035	0.545	0.582	NSE
Trustworthiness		0.121	0.40	2.911	0.03	SE
Host	Flow	0.090	0.040	2.225	0.023	SE
Attractiveness	experience					
Social Activity		0.293	0.053	5.03	0.013	SE
Flow experience	Purchase	0.205	0.063	3.224	0.001	SE
Social Activity	Intention	0.115	0.053	1.96	0.045	SE

6. CONCLUSION

Using the S-O-R framework, this research looked at how different aspects of live e-commerce affected participants' feelings of social activity and flow throughout their shopping experience. The empirical investigation showed that confidence in the host and impression of host attractiveness significantly impacted flow experience, whereas the host's attractiveness, communication, and trustworthiness significantly impacted social activity. Flow experience and social activity has a significant effect on customer's purchase intentions for E-commerce products. Moreover, it was discovered that consumers play a crucial regulatory role in the suggested paradigm. The following generalisations are possible:

(1) While live e-commerce is fundamentally a marketing practise, it is vastly different from traditional offline marketing. One downside is that customers have no way of physically inspecting or judging a product's quality. The host acts as a bridge between the guests and the merchandise in this case. The host gets a first-hand look and feel for the product so that viewers don't have to. Therefore, the host's physical appeal is crucial to audience reaction and satisfaction. Since customers are more likely to relax and go with the flow when watching live broadcasts from credible presenters, this has significant implications for the quality of the social activity and flow experience that may be expected from these broadcasts.

(2) Any individual or company may engage in live e-commerce at the

moment. Live e-commerce hosts are found in most businesses nowadays. In online buying, customers may move between live broadcast rooms at a low cost. Therefore, live streaming content cannot improve social activity and flow experience.

This research was done in China during COVID-19. Some physical businesses closed due to the pandemic, therefore people largely shopped online. After the outbreak is under control, things may change. The questionnaire approach used in this research may lead to inaccuracies. With the standardisation of the live streaming industry, "what should be the focus of cultivating hosts", "what are the most cost-effective characteristics to cultivate?", and "As hosts are the main factors affecting e-commerce live streaming", researchers can conduct future studies based on this study's findings.

REFERENCES

1. Yu, Z. and Zhang, K., 2022. The Determinants of Purchase Intention on Agricultural Products via Public-Interest Live Streaming for Farmers during COVID-19 Pandemic. *Sustainability*, 14(21), p.13921.
2. Zhao, Y. and Bacao, F., 2021. How does gender moderate customer intention of shopping via live-streaming apps during the COVID-19 pandemic lockdown period?. *International Journal of Environmental Research and Public Health*, 18(24), p.13004.
3. Kit-fong, A., Wenyue, L.I.A.O. and Zhaole, L.I.U., 2022. The Future of e-Commerce: Live Stream Shopping and Purchase Intention Post-COVID-19. *International Journal of Electronic Commerce Studies*, 13(3), pp.147-184.
4. Chen, T., Peng, L., Yang, J., Cong, G. and Li, G., 2021. Evolutionary game of multi-subjects in live streaming and governance strategies based on social preference theory during the COVID-19 pandemic. *Mathematics*, 9(21), p.2743.
5. Alam, J., 2020. Buying behavior under coronavirus disease (COVID-19) pandemic situation: a online perspective case in Bangladeshi shoppers. *Chinese Business Review*, 19(3), pp.82-90.
6. Zhang, F., Zhu, S. and Ye, Z., 2022, April. The Influence Mechanism of Mainstream Media E-Commerce Live Streaming on Consumers' Purchase Decision: An Exploratory Study Based on Grounded Theory. In *Proceedings of the 4th International Conference on Management Science and Industrial Engineering* (pp. 1-8).
7. Koch, J., Frommeyer, B. and Schewe, G., 2020. Online shopping motives during the COVID-19 pandemic—lessons from the crisis. *Sustainability*, 12(24), p.10247.
8. Lee, J. and Kwon, K.H., 2022. Mobile shopping beauty live commerce changes in COVID-19 pandemic focused on fun contents of MZ generation in Republic of Korea. *Journal of Cosmetic Dermatology*.
9. Lisanti, Y., Eni, Y., Cassandra, C. and Kusumaningtyas, A.W., 2021, August.

- Analysis of product, product delivery service, and product assurance in e-commerce on purchase intention during the COVID-19 pandemic. In *2021 International Conference on Information Management and Technology (ICIMTech)* (Vol. 1, pp. 825-828). IEEE.
10. Chen, T., Tong, C., Bai, Y., Yang, J., Cong, G. and Cong, T., 2022. Analysis of the Public Opinion Evolution on the Normative Policies for the Live Streaming E-Commerce Industry Based on Online Comment Mining under COVID-19 Epidemic in China. *Mathematics*, 10(18), p.3387.
 11. Gao, X., Shi, X., Guo, H. and Liu, Y., 2020. To buy or not buy food online: The impact of the COVID-19 epidemic on the adoption of e-commerce in China. *PloS one*, 15(8), p.e0237900
 12. Gu, S., Slusarczyk, B., Hajizada, S., Kovalyova, I. and Sakhbieva, A., 2021. Impact of the covid-19 pandemic on online consumer purchasing behavior. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(6), pp.2263-2281.
 13. Song, Z., Liu, C. and Shi, R., 2022. How Do Fresh Live Broadcast Impact Consumers' Purchase Intention? Based on the SOR Theory. *Sustainability*, 14(21), p.14382.
 14. Sarah, S. and Sobari, N., 2022, July. The effect of live streaming on purchase intention of e-commerce customers. In *Proceeding of the International Conference on Family Business and Entrepreneurship* (Vol. 3, No. 1).
 15. Guthrie, C., Fosso-Wamba, S. and Arnaud, J.B., 2021. Online consumer resilience during a pandemic: An exploratory study of e-commerce behavior before, during and after a COVID-19 lockdown. *Journal of Retailing and Consumer Services*, 61, p.102570.