



RESEARCH ARTICLE

The Power of Live-Streaming Commerce Purchase Intention Among Millennials Generations: The Mediating Role of Trust

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ABSTRACT

The expansion of live-streaming platforms has been recognized as a global economic phenomenon. The trend has become practical to reach the products easily by the customers who have engaged with real-time online interaction and information presence. Even though social commerce live-streaming has become more popular, however, up to the scholar's knowledge there are very less research endeavors on how the formation of trust and purchase intention on the live-streaming platforms occur by the specific consumers' millennial generation. Grounded by the stimulus-organism-response (S-O-R) model, this study aims to understand factors that affect live-streaming commerce purchase intention among the millennial generation. A total of 384 respondents were collected and useable among millennials age. The finding from analysis found that perceived social presence and perceived social support significantly influence trust besides, trust was found to be a significant influence on online purchase intention in the live-streaming platforms. However, perceived information overload was identified as not significant with the trust. The mediation analysis found that trust does not mediate the relationship between perceived information overload and online purchase intention. This finding extends meaningful insights into how live-streaming commerce affects the millennial generation. Besides, the information overload sheds light on the effects of consumers being reluctant to make their purchases.

INTRODUCTION

Live-streaming commerce is now showing the increasing trend users shopping recently (Zhou & Tong, 2022). The full participation of users making these platforms is crucial as it allows the activities for the purchases. The online communication has turned into a major information reference by the online users. The rise of the internet development has offered greater opportunity for users to share their knowledge and information and as such, the consumers not only relying on the reviews from the public but, also likely to seek various information from the online community platforms such social media. The users on the online platforms specifically screen the quality of the information provided by different people crossed over the world. This has been proven live-streaming commerce has become more prominent in today's culture (Giertz, Weiger, Törhönen, & Hamari, 2021). Besides, these new trend activities have benefits for the digital commerce market(Lin, Tseng, Shirazi, Hajli, &

Tsai, 2023). Through these platforms, consumers have the ability to see the products that are being demonstrate in live-streaming commerce (Wongkitrungrueng & Assarut, 2018). In Malaysia, live-streaming has become spreading and expanding in the previous years (Jacob, 2022). Malaysia also identified as one of the leading countries in Southeast Asia who actively use live-streaming commerce (Chan, Kong, Ong, & Toh, 2022). The live communication specifically can be use effectively as the bullet screen allowing the answers to be receive immediately (Wang, Vo-Thanh, Liu, Dang-Van, & Nguyen, 2022). Unexpectedly, purchasing power through live-streaming commerce is generally empowered by the millennials. The millennials range in ages between 23 and 43 years old (Mohammad, 2023). Recent statistics, millennials shopping demographic increasing up to 30 percent of the digitalization preferences (Klarna, 2023). Besides, (Mohammad, 2023) claimed that about 80 percent, approximately 57.79 million today's millennials mostly do shop online. Moreover, about 73 percent of millennials are planning to spend more on an online platform and 91 percent represent the millennials prefer to shop online (Mohammad, 2023). Based on the percentages, about 59 percent of millennials most likely purchase clothing and shoes over the internet (Klarna, 2023). This is because millennials are widely open to being actively technology savvy. As such, more consideration was given by the users on the online platforms on how the millennials effectively used online for purchases. To date, there are less studies working on the live-streaming commerce among the millennial's generation. Thus, this research is deemed needed by many scholars and practitioners.

In the recent years, live-streaming commerce been used by many businesses for marketing thus, making these activities promote brand awareness and product sales increase due to strong recommendations from the online reviews including the celebrities and influencers (Al-Emadi & Ben Yahia, 2020; T. Y. Chen, Yeh, & Lee, 2021). During the discussion, live-streaming allows real-time video and provide details information promoting product benefits thus, creating social presence and lead them in purchases (Corrêa, Soares, Christino, Gosling, & Gonçalves, 2020). Social presence refers to salience reader in an online communication (Ying, Tang, Ye, Tan, & Wei, 2021). Social presence specifically, enhancing consumers trust towards relationships with the sellers (Kim, Kim, Park, & Yoo, 2021). The important of social presence in live-streaming is needed when the social interaction and social support play the role during the discussion on an online platforms. Despite the growing numbers of users and businesses registered on the online platforms thus, making these live-streaming commerce has often large amounts of information. Many consumers are now relying on an online information review before they can purchase (Huang, Guo, Wang, & Yan, 2019). Scholars Zhu, Liu, Li, Jiang, & Zhu, (2023) stated that online information is now categorized as a new challenge faced by the users and businesses when the information is derived by the third party. As such, social support was initially conceptualized as information support based on experienced users. Social support plays a major role in building consumers trust and building long term relationships. Huang et al, (2019) stated that many consumers are now relying on an online information review and support before they can purchase.

With the above mentioned the new trend of live-streaming commerce making this study is about using a new perception to examine factors determinants of consumer trust and purchase intention on the live-streaming commerce platforms by applying the stimulus-organism-response (S-O-R) framework (Woodworth & Schlosberg, 1954). Based on the present study, information overload, social presence and social support as stimuli, whereas trust as organisms and purchase intention as response. The present study aims to explore factors determinants of consumers purchase in the live-streaming commerce by considering trust in the model. This paper targeted millennials consumers born between 1981 and 1996 (ages between 23 to 38) years old (Dimock, 2019). In addition to this research, factors determinants of millennials consumers trust and purchase intention in live-streaming commerce is needed in today's business and literatures. This phenomenon is still in the early stages and required to be explored in future studies.

2 LITERATURE REVIEW & HYPOTHESES

2.1 Theoretical background

Stimulus organism response (SOR) was applied for the present study. This model specifically proposed by the (Mehrabian & Russell, 1974) which explained how the individual affect with external factors environment directly trigger for certain cognitive or effect on the emotional response that may lead to the behavioral changes.

Stimulus (S) defined as how the individuals may change in their behavior due to different external factors received thus lead to different decision-making behavior meanwhile, organism (O) refers to how individuals stimulated towards certain internal factors such as cognitive and emotional besides, response (R) explains how individuals made their decision based from the perception of external stimuli (Mehrabian & Russell, 1974).

In the sense of SOR theory, it is specifically believed that many marketing activity, social cultural would affect consumers cognitive and emotional indirectly may lead to the purchase behavior. Many previous studies used SOR for their research as such, Herrando, Jiménez-Martínez, José, & Hoyos, (2019) used SOR model in measuring the hedonic stimulus and utilitarian stimulus that may affect flow experience. Furthermore, Chen & Yao, (2018) examined how mobile auction platforms may affect impulsive buying behavior. Also, Fang, Zhao, Wen, & Ruping Wang,(2017) explores on how application attributes affect travel application usage. Cao and sun 2018 analyzing how the effect of overload may affect consumers discontinuous intention on their social media usage.

For the present study, the SOR model is one of the important frameworks which explains the process of human action to predict certain behavior when received judgement on the online platform users. With the advancement of information technology, live-streaming commerce is now effectively taking place in real live communication mediated by computers. In such, the users on the online platforms perceived the stimuli from live streaming communication and effect social interaction. When online users receive various information, they will stimulate and generate the information indirectly enhancing their organism (cognitive and emotional) lead to trust. In this sense, the reaction on trust makes the users on the online platform may have purchase intention on live-streaming commerce. Live-streaming commerce is about live communication on the online platforms which allow the conversation to interact to each other. Live streaming is a component of marketing sales and internet commerce. According to Wongkitrungrueng and Assarut (2020), it entails instant ordering, live product demos, real-time question and answer sessions, time-limited pricing specials, real-time communication, and online streaming services presented by online retailers. Hence, this study aims to investigate the factors that increase the purchase intention through live broadcasts.

2.2 Information overload

An individual's subjective assessment and perception of the quantity or content of information beyond their capacity for processing is known as perceived information overload, which is a subjective description of information overload. Information overload causes customers to look for and identify complex information while making decisions about purchases, which may cause them to disregard reasoned judgment and engage in impulsive buying (Lv & Liu 2022).

According to Furner & Ziniko (2017), trust and purchase intention rise with the review's extensiveness of information until the information load gets too much, at which point they start to decline. Information overload during mobile web shopping reduces consumer trust and purchase intention. The environment that a streamer creates during a live broadcast, along with the vast amount of product information they deliver in a brief amount of time, will enhance the way consumers perceive them (Zhang, Cao & Liu, 2023). Therefore, a hypothesis was postulated:

H₁: There is a significant relationship between information overload in live-streaming commerce towards trust.

2.3 Social presence

Social presence is the degree to which an individual in a media environment is regarded as a "person in a real environment" and their sense of community inside the media-mediated communication process (Parker et al, 1976). Zhang et al. (2014) also stated that social presence as a degree to which the social commerce environment permits a customer to establish a personal, warm, intimate, and sociable interaction with others.

A study conducted by Nadeem et al., (2020) found that social commerce online brand communities, social presence, and commitment as well as loyalty are entirely mediated by social commerce trust. The influence of consumer's social presence on their purchase intentions is more strongly mediated by their trust in online live streaming when users have high brand familiarity as opposed to low brand familiarity (Hou et al., 2023). Hence, the above discussed literature leads researchers to draw the following hypothesis:

H₂: There is a significant relationship between social presence in live-streaming commerce towards trust.

2.4 Social support

Chanadya et al (2020) stated that trust has a significant effect on the intention to purchase, which also has a significant effect on consumers' actual purchase. Social assistance is frequently viewed as a multifaceted concept that encompasses both emotional and informational help (Lee et al., 2021). Online social support can be both emotional and informational, and it is typically intangible (Coulson, 2005). The belief that communications from friends on a social networking site offer the necessary support is known as information support (Liang et al., 2011). According to Liang et al. (2011), emotional support is the belief that communications from friends on social networking sites address emotional issues including empathy, compassion, and understanding.

H₃: There is a significant relationship between social support in live-streaming commerce towards trust.

2.5 Trust

One major barrier to consumer behaviour that has been repeatedly found is a lack of trust (Calder et al, 2009; Prentice et al, 2019). Chang et al (2020) also stated that extensive research has established the critical role that trust plays in fostering interactions between buyers and sellers. Chen & Yang (2023) found that live streaming e-commerce has a similar trust mechanism in place, where users voluntarily accept the legitimacy and dependability of the goods and services provided by streamers. This in turn has a big impact on their intention to buy. According to Wu & Huang (2023), when it comes to live streaming e-commerce, the streamer serves as both a salesperson and an opinion leader, acting as a bridge between the consumer and the product. The consumer considers factors such as the product's reputation, brand, and quality, and their ultimate purchasing decision is mostly determined by their level of trust in both the streamer's recommendation and the product itself. In addition, Wang and Lu (2014) stated that the most significant variables influencing the determinants of sustained purchase intention are contentment, trust, and the perceived complexity of the product. In order to lessen cognitive dissonance, people either avoid or favour particular information selectively (Osgood, 1955). According to Wang et al (2022), in live streaming e-commerce, customers get the majority of their information from streamers, and their assessment of the product is based on

how much confidence they place in the information source. In live streaming e-commerce, the streamer's assessment of the product as an information source will influence consumers' attitudes towards the product and that if consumers trust the streamer enough, they will be more likely to approve of the product they recommend (Wang et al, 2022).

Live streaming presenters' self-improvement boosts their fan base's perception of them, and this in turn boosts purchases, ratings, and traffic for livestream e-commerce (Chen et al, 2023; Liu et al, 2022; Wang et al, 2014). Through the moderating role of self-improvement, social presence with livestream e-commerce affects consumer identification. In the livestream e-commerce scenario, live streaming hosts have a large fan base and video broadcasting. They insert advertisements directly or subtly through self-improvement marketing techniques, interacting with and observing their fans while marketing. The popularity, quality, and sales of live streaming rooms increase with the degree of self-improvement of the hosts (Chou et al, 2022). As a result, consumers may decide whether to buy products (Pang et al, 2021; Jong et al, 2022). Qin et al (2023) stated that support and extend the applicability of social support as an effective approach for enhancing customer engagement in live streaming commerce. With the assistance of live streaming commerce, clients can obtain social attributes of livestreaming commerce support from vendors, broadcasters, and other customers. Prior studies have demonstrated the correlation between social support and favourable consequences like the quality of relationships (Tajvidi et al., 2018), and the intention to participate in social commerce (Zhang et al., 2014).

Purchase intention, or a consumer's willingness to purchase goods and services, can be thought of as a particular kind of behaviour. The ability to schedule or request future purchases of a specific good or service is known as purchase intention (Cao, Meadows, Wong & Xia, 2020). Reading comments on Social Network Sites (SNSs) can influence consumers' purchasing decisions. Following the viewing of videos uploaded on social networking sites, users have the option to "like," reply, or share postings. According to Shang, Wu & Sie (2017), previous studies indicate that locating and viewing information with higher resonance activity levels may increase the desire to purchase the goods. During live streaming shopping, buyers may ask questions straight via the bullet screen and get prompt answers from streamers, which would affect their purchasing decisions. By fusing brand and performance marketing, live streaming breaks down the barrier to communication between companies and consumers, with an emphasis on driving immediate sales growth and improving corporate marketing effectiveness. Unlike traditional internet shopping, which depends exclusively on text, picture, or video, consumers might obtain substantial information from the streamer's presentation, product information page, and other consumers' remarks at the same time through live streaming. The customer's trust was further increased and their level of buy intention was raised by the streamer's engaging introduction of the products (Chen, Lu & Wang, 2017; Zhou, Wang & Xu, 2018; Hajli, 2015). Therefore, the above discussed literature leads researchers to draw the following hypotheses:

H₄: There is a significant relationship between trust in live-streaming commerce towards online purchase intention.

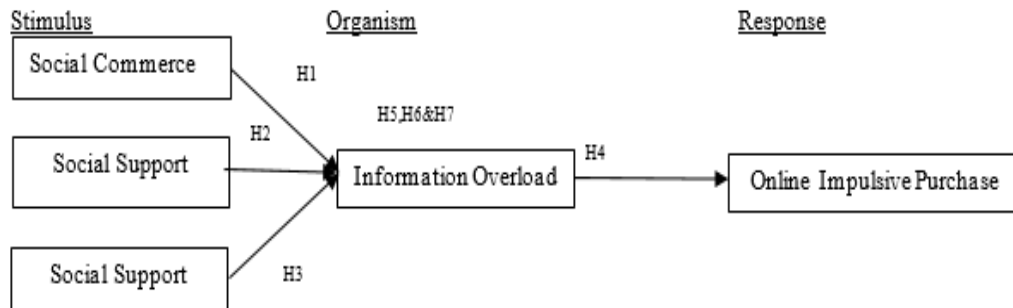
H₅: Trust mediates the relationship between information overload and online purchase intention.

H₆: Trust mediates the relationship between social presence and online purchase intention.

H₇: Trust mediates the relationship between social support and online purchase intention.

Based on above statements and justifications, this study adopts Stimulus Organism Response (SOR) model to explore the relationship of Live-streaming commerce and online purchase intention. The research framework is divided into three parts, which are stimuli (S) including information overload, social presence and social support which in turn affect by the organism (O) such trust to enhance the

response (R) which is online purchase intention. Figure 1 shows the research framework based on the SOR model.



3 METHODOLOGY

3.1 Research design

The present study proposed using quantitative method analysis to investigate the variables in the model. An online distribution was taken for data collection of the present study to assess the factors determinants consumer purchase intention in live-streaming commerce. For the pilot test, three experts in the field of marketing were taken for fine tuning and verification to confirm the content validity of a questionnaire (Hawkins, Swanson, Kremer, & Fogg, 2014). Finally, the findings of this analysis contributed to the valuable expectations including the overview of live-steaming commerce research.

3.2 Data collection and sampling

53 percent of Malaysia's population who actively in Live-streaming commerce in 2021 as compared with only 15 percent in the previous years 2020. This trend is increasing after the implementation of the MCO2.0 and thus, this trend has been increasing recently in 2023. The average age of population shoppers was highest among the millennials who are more familiar and identified as technology experts on various social media (Oppotus, 2021). 80 percent of millennials mostly do shop online (Mohammad, 2023). Facebook is the leading social media platform worldwide for activities such as sharing personal usage, experiences, ratings, comments, ideas and supports based on the communication. This platform is categorized as the leading social media platform to reach a wider range of users. The sample frame of this study was Malaysian users who registered and active in Facebook community. The Facebook users were given a link to a survey where the participants are identified as anonymous. Due to focusing on the millennial's generations therefore, this study is only applicable those who are under millennials age. In addition to the Facebook platform, this questionnaire is easily collected online as well as covered a wide geographical scope. All the respondents were informed that this study is strictly confidential and not exposed to other parties. For the sample size the present study collected and used 384 respondents followed by the rule of thumb (Krejcie & Morgan, 1970). The questionnaire was set for mandatory in Google forms for each of the questions therefore, making this data collection easy to be collected.

3.3 Data analysis

The present study applied partial least square structural equation modelling (PLS-SEM). Since this study optimized the exploratory research, PLS-SEM is most suitable to use for the prediction and estimation of research (Ramayah, Cheah, Chuah, Ting, & Memon, 2018). PLS-SEM was also chosen for this study due to its capability to run even under non-normal data distribution.

4 RESULTS AND FINDINGS

4.1 Measurement model assessment

Before proceeding with the hypotheses testing, this study applied convergent and discriminant validity analysis. Three criteria under convergent validity was run such as (i) composite reliability (CR), (ii) average variance extracted (AVE) and (iii) outer loading. The finding based from these three analysis found that all outer loading above 0.6 whereas, composite reliability exceeded 0.9 and average variance extracted were found above 0.5 (Hair, Black, Babin, & Anderson, 2010). Meanwhile the testing for the discriminant validity was run based on the Heterotrait-Monotrait Ratio (HTMT). Previous expert suggested that HTMT is the most suitable analysis for the assessment of discriminant validity due to low threshold 0.85. Thus, making this study meet the requirement for the Discriminant Validity for low cross loading between the variables. (Ramayah et al., 2018). Table 1 depicted constructs reliability analysis and Table 2 details of the discriminant validity of HTMT ratio.

Table 1: Constructs Reliability Analysis

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Online purchase intention	0.918	0.942	0.802
Information Overload	0.901	0.931	0.772
Social Presence	0.904	0.924	0.637
Social Support	0.927	0.943	0.734
Trust	0.912	0.928	0.619

Table 2: Discriminant Validity HTMT Ratio

Variables	Online purchase intention	Information overload	Social Presence	Social Support	Trust
Online Purchase Intention	0.895				
Information Overload	0.437	0.878			
Social Presence	0.491	0.477	0.798		
Social Support	0.342	0.381	0.463	0.857	
Trust	0.467	0.275	0.505	0.398	0.787

4.2 Hypotheses testing for direct relationships.

Hypotheses testing quantifiable as a crucial step in any quantitative research. The analysis enables research questions to be answered surely. For this study, the findings indicate that social presence significantly influences trust ($t=6.974$, $p<0.000$), and social support significant influence trust ($t=4.058$, $p<0.000$) thus supporting the hypotheses H2 and H3. Furthermore, the results have revealed that trust significantly influences online purchase intention ($t=11.795$, $p<0.000$) for this result the study supporting the hypotheses H4. Nevertheless, the information overload does not significant influence trust with ($t=0.013$, $p<0.495$) hence, rejecting H1. Therefore, the hypotheses testing results are showed in Table 3.

Table3: Hypotheses testing

Variables	T-value	P-value	Results
Information overload → Trust	0.013	0.495	Not supported
Social presence → Trust	6.974	0.000	Supported
Social support → Trust	4.058	0.000	Supported
Trust → Online Purchase Intention	11.795	0.000	Supported

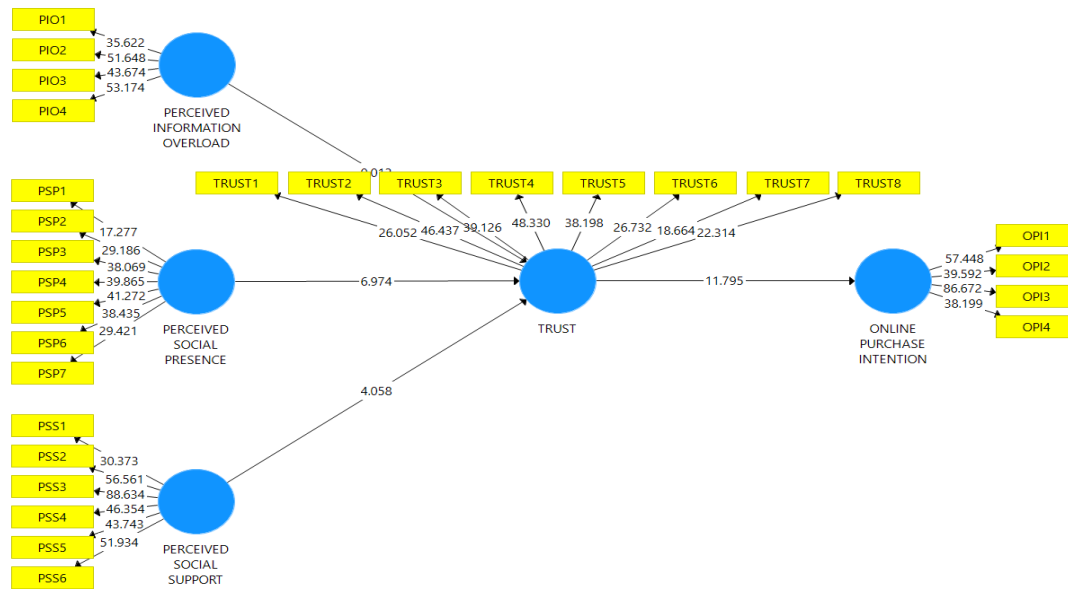
4.3 Hypotheses testing for mediation effects of trust.

The present study proposed the mediating effect of trust between the variables in the model. Up to the researcher’s knowledge, up to now there were no studies measured trust as a mediator between the relationship information overload, social presence, social support and online purchase intention in one single model. Therefore, this study is to measure the mediating effect by using bootstrapping approach suggested (Preacher & Hayes, 2008). Hence, the result demonstrates that trust has significantly and indirect impacts between social support and online purchase intention with 95% bootstrap confidence interval (CI0.95=0.056,0.143) thus, supporting H6. Meanwhile, the present study also proves significant indirect effect of trust between social presence and online purchase intention with the finding (CI0.95=0.136,0.246) therefore, supporting H7. As this study expected, the mediation analysis of trust between the relationship with information overload and online purchase intention found as not mediate between the relationship in the model with the finding (CI-0.046, 0.047) thus, rejecting H5. Table 4 depicted the results of mediation analysis. Figure 2 showed the path coefficient.

Table 4: Mediation testing analysis

Variables	T-value	P-value	Results
IO → Trust → OPI	0.013	0.495	Not supported
SP → Trust → OPI	5.681	0.000***	Supported
SS → Trust → OPI	3.676	0.000***	Supported

Notes: IO denotes information overload; OPI denotes online purchase intention; SP denotes social presence; SS denotes social support



5 DISCUSSION & IMPLICATIONS

5.1 Key findings

This study explores the factors that affect live-streaming commerce purchase intention among the millennial generation. First, results show positive significant effect of trust on online purchase intention in the live-streaming platforms and social presence and social support determine purchase intention. Research findings reveal that social presence in live-streaming has a positive influence on consumer purchase intention. The result also demonstrates that the relationship between social presence and consumer purchase intention is mediated by immersive experience. It shows that,

attractive and engaging social presence influences the decision making of customers. Further, the customers' experience positively and significantly influences the customers' intention towards social commerce purchase ($t=6.917$, $p<0.000$). Therefore, the sellers on online shopping centers should find a way to make the people feel easy and friendly on their buying intention. Moreover, the findings of the study confirm the mediation of customers' experience between social presence and individuals' intention to engage in social commerce (see table 3). Second, the result however found that perceived information overload was identified as not significant with the trust. The mediation analysis found that trust does not mediate the relationship between perceived information overload and online purchase intention. Information overload produces decreases of the trust level and at the end low the purchase intention. Moreover, they feel fatigued to process the information and they want to speed up the decision-making process. The large amount of information repeatedly displayed may make them ignore the information because they are in hurry. Finally, the result of this study did not show significant effect of information overloaded on e-commerce with the trust.

5.2 Implication for Research and Practices

This study has few theoretical contributions. First, the present study proposes a solid model which contributed to the body of knowledge by integrating all the variables into one single model. Second, this study also focused on the millennials generation which limited studies has been measured and focus into that generation thus, contributes to the new knowledge of the literatures and practitioners. Besides theoretical this study also contributing to empirical whereby very limited studies has been measured the millennials generation which this study believes it also helping other literatures by adding new information and justification that specifically relates to Live-streaming purchase intention. Next, for the practical contribution this study contributes to managers and marketers by applying new strategies through Live-streaming commerce. The managers may develop new marketing strategies and control the conversation and information delivered on the online platform to avoid from information overload that may affect consumer trust on the online purchase intention. Marketers should create useful information including generate good contents to enhance and strengthen the communication between social support and social presence. The more useful information delivered on the online platform, the more the consumers may interest to join the discussion which indirectly influence them in purchase intention. In addition to these strategies, this study may help companies to focus on the important information that may generate more companies' profitability future.

6 Limitations and Direction Future Research

This study has few limitations which deserve future attention. First, this study is only focus on Millennials generation that would not generalize to all level consumers, therefore future research should take all consumers as to get the solid knowledge feedback regarding live-streaming purchase. Second, this study is only focus in one single platform, which may not represent the entire population of the country, therefore future research can propose a comparative study as to get two different perceptions and knowledge regarding certain information that delivered on the online platforms between both different studies. Next, this study-based stimulus organism responses (SOR) model and it would be better to have an integrated model to expand the knowledge and further clarification on the effectiveness of Live-streaming purchases. Last but not least, this study propose trust as mediating variable, it would be better in the future study recommended for the moderation as well for the interaction effect between the relationship in the model such as demographic profiling (age, gender and income).

7 CONCLUSION

Based on the SOR theory, this research examines factors that influence live-streaming commerce and online purchase intention among the millennial's generation. Specifically, trust is an important

element for a transaction both in an online and offline environment. It is important for companies to learn how to manage consumers' trust in live-streaming commerce and need to understand how consumers evaluate their experience of online shopping. Trust has always been measured as a major issue in any online research including online transaction platforms. Malaysia saw a drastic increase of online scams over the last two years during the Covid-19 pandemic. According to the Royal Malaysia Police's (PDRM) commercial crimes investigation department (CCID), a total of 71,833 scams, amounting to more than RM5.2 billion losses, was reported from 2020 until May 2022. Millennials are everywhere. Through this generation, they are more prominent with the tech-savvy and digital information usage. However, when it comes to website commerce and online commerce purchase the truth is millennials are 25% more likely involved with fraud and as compared age above 40 (Fletcher, 2019). Millennials are very keen towards technology hence, discussion, social interaction and communication is needed in order to create better generation which contribute to the economic sustainability.

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