Jurnal Informatika Ekonomi Bisnis

http://www.infeb.org

2023 Vol. 5 Iss. 4 Hal: 1166-1171 e-ISSN: 2714-8491

Investigating Impulse Buying Behavior in Live Streaming Shopping with SOR Model Perspective

Pristiana Widyastuti[1]✉

[1]Atma Jaya Catholic University of Indonesia

pristiana.widyastuti@atmajaya.ac.id

Abstract

This research aims to investigate impulse buying behavior in live-streaming shopping with SOR Model Perspective. This research is conducted using a quantitative approach and statistical tests. The research method uses the Structural Equation Model (SEM). The statistical tool is using SmartPLS. The sampling technique uses non-probability with a purposive sampling approach based on certain criteria, Indonesian people who have watched and bought products online via live streaming. To collect samples from an infinite population, the sample size was determined to be 96 respondents. The study results reveal that online purchasing behavior on live-streaming platforms is stimulated by interactivity factors. Interactive experiences can increase the desire to immediately own the product or service. Hedonic and utilitarian can mediate impulse buying in live-streaming shopping. Viewers are captivated by products or services that provide aesthetic satisfaction (hedonic) or functional solutions (utilitarian) and impulsively buy because of the visual or emotional impact of live streaming.

Keywords: Buying Behavior, Live Streaming, Online Purchasing Behavior, Interactivity Experience, SOR Model.

1. Introduction

Online-based sales have become part of product marketing strategies. Almost all over the world, online shopping systems are being built that make it easier for customers to shop. In Indonesia, the online market has formed a strong ecosystem. CNBC Indonesia reported 78.9 million Indonesian society shopped online from 2022 to early 2023, which experienced an increase of 12.8% year-on-year. The estimated value of online shopping for Indonesian citizens was US$55.97 billion or Rp. 851 trillion. Based on research, Shopee Live is the most frequently used by Indonesians as well as 69 percent compared to others [1].

Various products are offered through e-commerce and social media with intensive marketing. One method used to market products is live-streaming shopping. Live streaming allows product providers and customers to interact more closely. Apart from providing a convenience factor, live streaming can foster impulse buying behavior. Live streaming shopping, which is a simultaneous shopping channel is easier to urge the consumer to immerse the situation of impulsive buying because of limited shopping time and quantity of products and services, watching others' purchases, and a hasty shopping atmosphere [2].

This new media of course opens great opportunities for sellers to offer their products. Sellers need to know what factors can influence buyers in making impulse buying decisions. Impulse buying is consumer behavior where the buyer has no previous plan (unplanned in shopping list) to buy the product [3]. Online impulse buying mainly concerns consumers who have spontaneous behavior due to lack of control when exposed to online stimuli of e-stores [4]. In short, impulse purchase holds three key features, which are unplanned, the result of exposure to a stimulus, and decided "on the spot" [5]. Therefore, sellers need to consider things that can increase impulse buying.

To further investigate impulse buying behavior, this research uses a stimulus-organism-response (SOR) model to provide clues about consumer buying behavior. The SOR marketing model is used to understand and analyze consumer behavior in a marketing context. The SOR model provides a thorough model for understanding how an external stimulus (S) might cause an organism (O) to involve in a psychological process to generate a behavioral response (R) [6]. This model identifies key factors that influence consumer reactions to marketing stimuli. Impulse buying behavior certainly has factors that act as triggers that stimulate consumers to take buying action. The response of consumers who receive stimulation (organism) becomes a psychological influence that encourages consumers to ultimately make buying decisions (response). Many studies that apply SOR theory state that customer relationships in relation to social media marketing and consumer purchase intentions provide value for customers to make purchasing decisions [7].

Stimulus in the context of live streaming marketing refers to various factors or elements used to influence demand. A good stimulus can increase demand by creating awareness, and interest, and motivating

Accepted: 16-11-2023 | Revision: 18-11-2023 | Publication: 31-12-2023 | doi: 10.37034/infeb.v5i4.732

viewers to engage in live streaming. The more interesting and relevant the content, the greater of high demand. When consumers obtain product or service information from the influencer and then create a shopping demand, the consumer will instantaneously produce an urge to own the product or service [2].

In order to demand, the convenience live shopping offers benefits for consumers to shop more easily, interactively, and informatively. Consumers can access live streaming via digital devices everywhere without needing to go to a physical store or visit an online store in e-commerce. During live streaming, consumers can interact directly with broadcasters or sellers to ask questions, provide feedback, and even place orders in real time. The previous research, convenience has a crucial impact on cognitive and affective attitudes which significantly increases online impulsive buying behavior for Z-generation [8].

Furthermore, interactivity is an important element in the context of live streaming because it allows broadcasters or sellers to communicate directly with their audience. Audiences can ask questions, make comments, and provide direct feedback to the seller. The seller can respond to audience questions and comments in real time. It also helps in providing clarification or additional information about the products or services offered. Interactivity allows seller to explain and demonstrate products live based on audience requests. Seller can identify audience needs and preferences through their questions and comments. This helps in building trust, loyalty, and loyal followers, which can be profitable in the long run. Interconnectivity helps companies to get feedback from customers to develop new products and services and encourage customers to spread positive word of mouth [9].

Organism factors in the SOR model refer to all internal factors that influence how individuals respond to marketing stimuli. These organism factors include various psychological, emotional, and physical aspects that influence consumer actions and responses. Psychological factors play an important role in the context of utilitarian consumer behavior. Utilitarian consumer behavior is a type of consumer behavior that is based on seeking practical or functional benefits from the products or services they purchase. Utilitarian consumption appeals to customers' rationality by accentuating the attainment of desired outcomes from shopping activities [10]. Utilitarian value is the individual's broader judgment regarding the practical benefits and sacrifices involved, the rational and objective aspects of the customer's behavior [11]. In this context, consumers act with the aim of meeting needs, achieving goals, or solving certain problems. Utilitarian consumer behavior is often related to rational and calculative considerations in making purchasing decisions.

On the other hand, sellers must understand consumers' needs and desires, focusing not only on the functional aspects of the product but also on creating emotional and experiential value that meets consumers' hedonic behavioral needs. Hedonic behavior plays a role in shaping preferences, purchasing decisions, and consumer responses to various marketing actions. The hedonic dimension of consumption results from the sensations derived from using products and services and from the multi-sensory emotive aspects of consumption, including fun, pleasant experiences, excitement, or joy [12]. Consumers with hedonic consumption behavior tend to consume products by focusing on their symbolic meaning rather than their functional characteristics [13].

There has been a lot of previous research that discusses the SOR framework in online purchasing with various antecedent factors that influence it. When people have high of satisfaction and trustworthiness with the online review rating, content and security policy, their online purchase motives are stronger [14]. The previous research provides meta-analysis evidence to confirm the mechanism that causes consumers to engage in impulse buying behavior while shopping online based on the SOR framework [15]. The S-O-R framework helps to expand the scope of sponsored advertising value and provides a platform where marketers can design ads that can help them reach their marketing goals [16]. In this research study focuses to investigating impulse buying behavior in live streaming shopping with SOR Model Perspective.

2. Research Method

This research is conducted using a quantitative approach and statistical test. The research method uses the Structural Equation Model (SEM). The statistical tool is using SmartPLS.

PLS will present the results of outer model evaluation and inner model. Outer model is a model of measurement to assess the validity and reliability of the model. The validity analysis is seen from the value of outer-loadings and the Average Variance Extracted (AVE) value. Reliability analysis is seen from the value of the Cronbach's Alpha and composite reliability. Whereas the inner model is a structural model to predict the causality relationship between latent variables. The path coefficient presents the result of hypotheses.

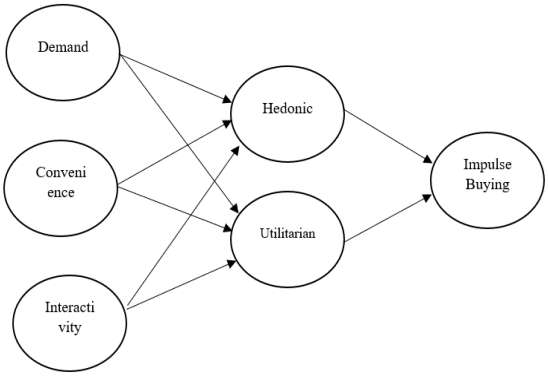
The primary data was conducted by distributing questionnaire to respondent. The questionnaire structure based on a five-point Likert scale which specified their level of agreement based on five points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree and (5) Strongly agree. The sampling technique use non-probability with a purposive sampling approach based on certain criteria, Indonesian people who have watched and bought

products online via live streaming. To collect samples from an infinite population, the sample size was determined to be 96 respondents [17]. The variables and indicators of this study are described in detail in Table 1.

Table 1. Research Construct

Var	Operationalization	Code
D	It makes me want to buy products while watching the live stream	X1.P1
	The process of watching the live stream makes me want to own the item	X1.P2
	I can see what I want in the live stream shopping	X1.P3
	I can see what I need in the live stream shopping	X1.P4
	I often feel that the displayed products are what I need while watching the live stream	X1.P5
C	I find it convenient to shop by the live stream	X2.P1
	It saves me much time by the live stream	X2.P2
	It reduces many troubles for me to pick up the products because of the diversity of delivery method of live stream shopping	X2.P3
	I can buy items while watching the live stream	X2.P4
	The payment process is simple in the live streaming shopping	X2.P5
I	I can communicate directly with the online streamer	X3.P1
	I can communicate directly with other participants	X3.P2
	I can interact with others by leaving a message	X3.P3
	It makes me feel engaged while reading others' responses	X3.P4
U	I watch this live video streaming to buy better items in price or quality	Z.P1
	I watch this live video streaming to gather information about products	Z.P2
	I look around the live video streaming to comparison shop	Z.P3
	I watch this live video streaming for efficient shopping online	Z.P4
H	While watching the live video streaming, I can forget my problems and to feel relaxed	Z.P5
	During live video streaming watching, I am very excited	Z.P6
	I enjoy live video streaming watching enough to forget a time out	Z.P7
IB	While watching live streaming shopping, I often buy things spontaneously	Y.P1
	While watching live streaming shopping, I often buy things without thinking	Y.P2
	While watching live streaming shopping, I often buy things according to how I feel at the moment	Y.P3
	When the item I want to buy is limited, I want to urge to buy impulsively	Y.P4
	While many consumers expressed their willingness to buy, I would prefer to buy it quickly	Y.P5

Where D is demand, C is convenience and I is interactivity. U is utilitarian, H is hedonic and IB is impulse buying. The research model is figured on Figure 1.



Figures 1. Research Model

H1 : Demand has positive and significant impact on hedonic
H2 : Demand has positive and significant impact on utilitarian
H3 : Convenience has positive and significant impact on hedonic
H4 : Convenience has positive and significant impact on utilitarian
H5 : Interactivity has positive and significant impact on utilitarian
H6 : Interactivity has positive and significant impact on hedonic
H7: Hedonic has positive and significant impact on impulse buying
H8 : Utilitarian has positive and significant impact on impulse buying
H9 : Hedonic has mediating impact on demand and impulse buying
H10 : Utilitarian has mediating impact on demand and impulse buying
H11 : Hedonic has mediating impact on convenience and impulse buying
H12 : Utilitarian has mediating impact on convenience and impulse buying
H13 : Hedonic has mediating impact on interactivity and impulse buying
H14 : Utilitarian has mediating impact on interactivity and impulse buying

3. Result and Discussion

3.1. Validity and Reliability Test

The validity test is considered practically significant if the loading factors have values greater than 0.5. Based on the statistical test, all the indicators are valid to reflect the variable. The reliability test criteria include Cronbach's Alpha values greater than 0.6, Composite Reliability values exceeding 0.7, and AVE values surpassing 0.5. The results of the reliability test, all indicators are deemed reliable for forming a construct variable. The result for test of validity and reliability can be seen on Table 2.

Table 2. Test of Validity and Reliability

C	Item	Mean	SD	FL	CA	CR	AVE
D	X1.P1	0.910	0.059	0.921	0.896	0.903	0.710
	X1.P2	0.802	0.096	0.825			
	X1.P3	0.728	0.087	0.741			
	X1.P4	0.839	0.080	0.855			
	X1.P5	0.840	0.091	0.861			
C	X2.P1	0.893	0.051	0.898	0.893	0.921	0.701
	X2.P2	0.800	0.080	0.815			
	X2.P3	0.761	0.108	0.782			
	X2.P4	0.775	0.122	0.808			
	X2.P5	0.869	0.056	0.878			
I	X3.P1	0.826	0.076	0.843	0.847	0.898	0.688
	X3.P2	0.767	0.118	0.790			
	X3.P3	0.737	0.095	0.755			
	X3.P4	0.911	0.054	0.921			
U	Z.P1	0.865	0.095	0.946	0.893	0.926	0.760
	Z.P2	0.826	0.089	0.834			
	Z.P3	0.853	0.071	0.865			
	Z.P4	0.815	0.094	0.836			
H	Z.P5	0.901	0.065	0.913	0.838	0.903	0.758
	Z.P6	0.781	0.089	0.797			
	Z.P7	0.880	0.078	0.896			
IB	Y.P1	0.956	0.032	0.960	0.908	0.933	0.736
	Y.P2	0.853	0.084	0.873			
	Y.P3	0.763	0.099	0.780			
	Y.P4	0.769	0.092	0.785			
	Y.P5	0.871	0.053	0.879			

Where Ct is construct, SD is standard deviation, FL is factor loading, CA is Cronbach's Alpha and CR is composite reliability. D is demand, C is convenience and I is interactivity. U is utilitarian, H is hedonic and IB is impulse buying.

3.2 Hypothesis Testing

The research construct was assessed by examining the R-square value to see whether the influence of the exogenous latent variable on the endogenous latent variable has a substantive influence. The R square value is 0.67 (strong), 0.33 (moderate) and 0.19 (weak) [18]. In this research, R square value is 0.960 which means it has strong predictors. Hypothesis testing was conducted through the examination of the inner model, which aimed to measure the relationships between latent variables. A relationship between variables is deemed significant if the T-Statistic value exceeds 1.96 with a P-Value less than 0.05 (alpha level of 5%). The results of the path coefficients are presented in Table 3.

Table 3. Hypothesis Testing

Path Coefficient	T-Statistic	P-Value	Result
D → H	0.344	0.731	Rejected
D → U	3.607	0.000	Rejected
C → H	1.584	0.113	Rejected
C → U	1.821	0.069	Rejected
I → H	3.816	0.000	Accepted
I → U	2.287	0.022	Accepted
U → IB	4.954	0.000	Accepted
H → IB	3.373	0.001	Accepted
D → H → IB	0.342	0.733	Rejected
D → U → IB	2.769	0.006	Accepted
C → H → IB	1.648	0.099	Rejected
C → U → IB	1.556	0.120	Rejected
I → H → IB	2.377	0.017	Accepted
I → U → IB	2.061	0.039	Accepted

Where D is demand, C is convenience and I is interactivity. U is utilitarian, H is hedonic and IB is impulse buying.

3.3 Discussion

Based on statistical test, only the interactivity variable has an influence on hedonic and utilitarian stimulus factors. Live-streaming shopping is a platform of e-commerce where sellers directly interact with potential buyers to showcase and sell products. Interactivity allows consumers to communicate directly with the streamer. Meanwhile, streamers can also directly respond the messages and requests by consumers. It shows that there is high engagement among them. The first accepted hypothesis, interactivity has a positive and significant impact on hedonic shopping. The interactivity of live-streaming shopping influences consumer hedonic behavior, due to the emotional satisfaction obtained from a pleasant shopping experience. The increased interactivity in live-streaming shopping, such as direct communication with streamers, real-time product screenings, and interactive question-and-answer sessions, can create a more enjoyable shopping experience. Well-designed live-streaming shopping can create live sessions that are visually and contextually engaging. Live streaming often has an entertainment element, such as creative product screenings, story-based content, or engaging demonstrations. All of this can increase the entertainment aspect and hedonic satisfaction for the audience. Live streaming shopping experiences often include special offers and discounts that are only available during the live session. This aspect can increase spontaneous or unplanned purchases because of attractive promotions. This result in line with previous research that there is significant impact of interactivity on hedonic shopping [19].

The second accepted hypothesis, interactivity has a positive and significant impact on utilitarian shopping. Live-streaming shopping platforms are designed to facilitate transactions quickly and efficiently. Consumers who have a utilitarian orientation are more interested in clear information about product specifications, usability, and performance. Live streaming shopping interactivity that provides in-depth product explanations can fulfill this informational need. Utilitarian buyers tend to seek immediate clarification about a product before deciding. Live question-and-answer facilities in live streaming sessions can fulfill this need by providing additional information or explaining the product in more detail. This result support previous research, there is significant impact of interactivity on utilitarian shopping [20].

Third, hedonic shopping has a positive and significant impact on impulse buying. Live streaming has elements of emotional appeal, such as an entertaining atmosphere, exclusive offers, and the opportunity to feel involved in an engaging session. This triggers a

hedonic response, encouraging impulse purchases in response to feelings of excitement or emotional satisfaction. Fourth, utilitarian shopping has a positive and significant impact on impulse buying. Impulse buyers are influenced by utilitarian aspects, such as ease of purchase, speed of transactions, and functional benefits of the product. Although impulsive, these purchases can still be triggered by practical needs, such as discounts or special offers during live streaming. It supports previous research, there are significant impact of hedonic and utilitarian on impulse buying [21].

The fifth accepted hypothesis, utilitarian shopping has a mediating impact between demand and impulse buying. Utilitarianism is related to practical needs and specific goals, and this factor can act as a mediator in understanding how needs can lead someone to carry out impulsive shopping. Consumers feel that impulse shopping can fulfill practical needs or specific goals, such as getting goods at discounts or taking advantage of limited offers during live streaming. Consumers can immediately compare prices and product specifications and offer more quickly. This increases spontaneous purchases. In addition, the ease and efficiency of the fast transaction process cause impulse buying.

Sixth, hedonic shopping has a mediating impact on interactivity and impulse buying. Consumers feel that interactivity can provide practical benefits, such as making the transaction process easier or providing more accurate information about products. Interactivity that provides a fast and efficient transaction process can satisfy utilitarian needs, and in some cases, increase impulse purchases during live streaming. Seventh, utilitarian shopping has a mediating impact between interactivity and impulse buying. Consumers experience a shopping experience that is enjoyable, emotional, or interesting during live streaming so emotionality can mediate between interactivity and impulsive shopping behavior. Engaging visual content, enjoyable user experiences, and entertaining interactions can generate emotional appeal, which can motivate impulse buying.

4. Conclusion

The study results reveal that online purchasing behavior on live streaming platforms is stimulated by interactivity factors. It turns out that the higher interaction between the seller or streamer and the consumer, the more it can stimulate consumers to know the product in detail and gain a deeper understanding of the product. Hedonic and utilitarian can mediate impulse buying in live-streaming shopping. Viewers are captivated by products or services that provide aesthetic satisfaction (hedonic) or functional solutions (utilitarian) and impulsively buy because of the visual or emotional impact of live streaming. Interactive experiences can increase the desire to immediately own the product or service. The availability of exclusive offers during live streaming can motivate impulse purchases, regardless of whether the product is hedonic or utilitarian in nature. As a practical implication for marketers, a live-streaming platform offers the opportunity to directly influence and motivate consumers to make purchasing decisions without prior planning. Live streaming provides an opportunity to create deep impulses and desires that can drive consumers to immediate action. Live streaming is real-time, creating a sense of urgency. Time constraints can speed up the decision-making process and encourage impulse purchases during or after a live-streaming session. This research is limited to interactivity as a stimulus factor, hedonic and utilitarian factors as organismic factors, and impulse buying as a response to purchasing behavior. Further research can use other variables that stimulate purchasing behavior, such as social preferences, psychological, and other aspects. On the other hand, future research can generate other sample criteria to gain a result that is more generalized.

References

[1] CNN Indonesia. (2023). Makin Sengit, Shopee Masih Unggul dari Pesaing Live Shopping Lainnya. Retrieved from https://www.cnnindonesia.com

[2] Lin, S. C., Tseng, H. T., Shirazi, F., Hajli, N., & Tsai, P. T. (2022). Exploring factors influencing impulse buying in live streaming shopping: a stimulus-organism-response (SOR) perspective. *Asia Pacific Journal of Marketing and Logistics*. https://doi.org/10.1108/APJML-12-2021-0903

[3] Widyastuti, P. (2018). Does visual merchandising, store atmosphere and private label product influence impulse buying? Evidence in Jakarta. *Journal of Business and Retail Management Research*, *12*(3). https://doi.org/10.24052/JBRMR/V12IS03/ART-12

[4] Wu, L., Chiu, M. L., & Chen, K. W. (2020). Defining the determinants of online impulse buying through a shopping process of integrating perceived risk, expectation-confirmation model, and flow theory issues. *International Journal of Information Management*, *52*, 102099. https://doi.org/10.1016/j.ijinfomgt.2020.102099

[5] Liu, Y., Li, H., & Hu, F (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support System*, *55*(3), 829-837. https://doi.org/10.1016/j.dss.2013.04.001

[6] Huo, C., Wang, X., Sadiq, M. W., & Pang, M. (2023). Exploring Factors Affecting Consumer's Impulse Buying Behavior in Live-Streaming Shopping: An Interactive Research Based Upon SOR Model. *SAGE Open*, *13*(2). https://doi.org/10.1177/21582440231172678

[7] Armawan, I., & Sudarmiatin, A. H. (2022). The Application SOR Theory In Social Media Marketing And Brand Of Purchase Intention In Indonesia: *Systematic Literature Review. Journal of Positive School Psychology*, *6*(10), 2656-2670.

[8] Lina, Y., Hou, D., & Ali, S. (2022). Impact of online convenience on generation Z online impulsive buying behavior: The moderating role of social media celebrity. *Frontiers in Psychology*, *13*, 951249. https://doi.org/10.3389/fpsyg.2022.951249

[9] Abdelsalam, S., Salim, N., Alias, R. A., & Husain, O. (2020). Understanding online impulse buying behavior in social commerce: a systematic literature review. *IEEE Access*, *8*, 89041-89058. https://doi.org/10.1109/ACCESS.2020.2993671

[10] Liu, F., Lim, E. T., Li, H., Tan, C. W., & Cyr, D. (2020). Disentangling utilitarian and hedonic consumption behavior in online shopping: An expectation disconfirmation perspective. *Information & Management*, *57*(3), 103199. https://doi.org/10.1016/j.im.2019.103199

[11] Ozturk, A. B., Pizam, A., Hacikara, A., An, Q., Chaulagain, S., Balderas-Cejudo, A., ... & State, O. (2023). Hotel customers' behavioral intentions toward service robots: the role of utilitarian and hedonic values. *Journal of Hospitality and Tourism Technology*. https://doi.org/10.1108/JHTT-07-2022-0223

[12] Calvo-Porral, C., & Otero-Prada, L. M. (2021). The emotional influence on satisfaction and complaint behavior in hedonic and utilitarian services. *International Journal of Quality and Service Sciences*, *13*(3), 471-488. https://doi.org/10.1108/IJQSS-02-2020-0019

[13] Çerçi, M., & Seyfi, M. (2021). Hedonic and utilitarian consumption in COVID-19 process. *Erciyes İletişim Dergisi, 8*(1), 23-36. https://doi.org/10.17680/erciyesiletisim.806374

[14] Rana, S., Bag, S., Ghosal, I., & Prasad, B. (2023). How Do Influencers Moderate Purchase Motives? An Application of SOR Model to Assess the Effects of Reviewers' Rating on Online Purchase. *Journal of Promotion Management*, 1-30. https://doi.org/10.1080/10496491.2023.2279771

[15] Le, T. Q., Wu, W. Y., Liao, Y. K., & Phung, T. T. T. (2022). The extended SOR model investigating consumer impulse buying behavior in online shopping: a meta-analysis. *Journal of Distribution Science*, *20*(2), 1-9. https://doi.org/10.13052/jicts2245-800X.1131

[16] Hussain, A., Hooi Ting, D., Zaib Abbasi, A., & Rehman, U. (2023). Integrating the SOR model to examine purchase intention based on Instagram sponsored advertising. *Journal of Promotion Management*, *29*(1), 77-105. https://doi.org/10.1080/10496491.2022.2108185

[17] Levy, P. S., & Lemeshow, S. (2013). *Sampling of populations: methods and applications*. John Wiley & Sons.

[18] Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, *295*(2), 295-336.

[19] Xu, X., Wu, J. H., Chang, Y. T., & Li, Q. (2019). The investigation of hedonic consumption, impulsive consumption and social sharing in e-commerce live-streaming videos. *PACIS 2019 Proceedings*, 43.

[20] Cai, J., Wohn, D. Y., Mittal, A., & Sureshbabu, D. (2018, June). Utilitarian and hedonic motivations for live streaming shopping. In *Proceedings of the 2018 ACM international conference on interactive experiences for TV and online video* (pp. 81-88). https://doi.org/10.1145/3210825.3210837

[21] Zheng, X., Men, J., Yang, F., & Gong, X. (2019). Understanding impulse buying in mobile commerce: An investigation into hedonic and utilitarian browsing. *International Journal of Information Management*, *48*, 151-160. https://doi.org/10.1016/j.ijinfomgt.2019.02.010