The Effect of Shopee User Interface Attributes on Indonesian Consumer Engagement

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Abstract

Consumer Engagement is the main goal to be achieved for most companies, especially E-Commerce businesses in allocating their investment in marketing and branding. In addition to making improvements to achieve this goal, the company not only increased its terms of customer service but now companies, especially online, are also competing to improve the quality and capabilities of their online stores, especially in terms of User Interface Attributes in their applications. These User Interface Attributes will provide a direct experience to customers in transacting at the online store, so its existence is quite mandatory, considering its position as the main gate. Therefore, the purpose of this research is to understand and examine more deeply the influence of one of the driving factors for customer engagement, namely "User Interface" with various attributes that are owned by the Shopee marketplace, as one of the e-commerce with "**decacorn**" level in Indonesia. Later this research will be carried out using an explanatory quantitative approach and online survey research instruments. The influence given by these User Interface Attributes on consumer engagement in the form of a percentage can be presented as follows, the influence of Visual Design on engagement is 23.3%, the influence of Navigational Design on engagement is 14.8%, the influence of Informational Design on the engagement of 41%, and finally Collaboration Design has no significant effect on engagement.

Keywords

Consumer Engagement, Consumer Brand Engagement, User Interface, User Interface Attributes, Shopee Marketplace

I. Introduction

Recently, consumer brand engagement has been seen and paid more attention to, both by practitioners and academics who are driven by a consensus that its existence is quite influential as one of the strategies in building and maintaining competitive advantages. (Brodie et al., 2013).

Ideally, there are driving factors that can encourage the presence of "consumer engagement", and make most companies move to allocate part of their investment (both huge and small) to these driving factors, especially in the sphere of communication. However, quite a lot of companies do not know exactly the right strategy and must prioritize the presence of consumer engagement in their company. Even they themselves do not know the procedure to measure consumer engagement. (Kumar et al., 2010). So, one of the goals of this research is to measure how much influence one of the drivers has on the achievement of consumer engagement in one of the Indonesian marketplace.

Consumer engagement itself by a brand has been investigated as a consumer psychological state (related to mentality) (Brodie et al., 2011; Hollebeek, 2011), in which their psychological aspects of feelings of enjoyment, pleasure, cognitive attention, and absorption may be involved in building that engagement. (Dessart et al., 2015). Thus, marketers often adopt "behavioral focus influence" to create this consumer engagement (Van Doorn et al., 2010). This influence will be inserted through activities that are indeed a driving force and are commonly done by consumers, such as: actively seeking information about brands or products, following updates from social media brands, participating in brand marketing activities, and making recommendations to friends or family.

Here, one of the driving factors that is studied in this research is the influence of User Interface Attributes in the Indonesian marketplace. The marketplace is certainly an effective communication channel between a collection of sellers and potential buyers, then studies show that the presence of mobile app attributes is an important cue that helps trigger consumer responses (Lee, Ha, & Widdows, 2011; Kapoor & Vij, 2018; Fang, 2017; Peters et al., 2016). User Interface Attributes were chosen because they represent the results of empirical and academic research that the presence of technology is very important in business. Technology adoption is the starting point in creating consumer engagement where a technology (computer, smartphone, mobile application) is chosen for use by consumers or companies (Pagani & Mirabello, 2011) and technology engagement is related to the state of engagement.

Shopee is the marketplace that researchers have chosen because of its growing presence among the Indonesian population. Shopee is run by Garena (now has changed to SEA Group) and was officially introduced in Indonesia in December 2015 under the auspices of PT Shopee International Indonesia. (Sulistiyawati, 2020).

1.1 Objectives

The aim of this research is to find out what is and how big the influence the Shopee marketplace User Interface Attributes has on consumer engagement in using Shopee. Where later the results can be a reference for the Shopee marketplace in expanding or reducing their application investment in the scope of the user interface. Not only that, but we will also examine which user interface elements will have the most influence on consumer engagement, both positively and negatively.

2. Literature Review

Consumer Engagement

In practice, consumer engagement existence has been investigated as the psychological state of the consumer (Brodie et al., 2011; Hollebeek, 2011). Consumer engagement, as other researchers define it consists of specific interactive experiences between the consumer and the seller that consist of cognitive, behavioral, and emotional resources by the consumer (Brodie et al., 2013; Harrigan et al., 2018). In social media, the measurement dimension

of consumer engagement often uses CEB (support tools) which shows their activities on social media as an indicator of behavioral engagement. (Oh et al., 2016).

More explanation of consumer engagement is referred to as a three-dimensional, second-order construct, these constructs are enthusiasm, conscious participation, and social interaction. The three-factor consumer engagement scale was proposed by Harrigan et al (2017). Absorption is considered an influential characteristic, wherein customers are immersed while being with the brand, they are so absorbed or with the brand that they do not pay attention to the amount of time devoted (Scholer & Higgins, 2009). Dwivedi (2015) in a study on mobile phone users in India suggested that absorption with the brand leads to consumer engagement with the brand. Identification – (King & Sparks, 2014) defined identification as the level to which the consumer feels one with the brand. It is the extent of belongingness that a consumer has toward the brand. Identification is an emotional aspect of consumer engagement. Interaction directly with the brand and other members of the community is a behavioral element of customer engagement. Such interactions make consumers positively engage with the brand and all the activities (Harrigan et al., 2017).

Stimuli: User Interface Attributes

User interfaces (UI) involve a hierarchy of objects with multimodal and positional attributes. The hierarchy objects are applications, screens, view class, and other types of design objects. The multimodal such as textual and visual content, and lastly followed by positional attributes such as spatial location, sequence order, and hierarchy level. (Gary Ang et al., 2022). Cited from Thomas Schmidt et al journal "The Influence of User Interface Attributes on Aesthetics", aesthetics of user interface have an influence on important factors in human-computer interaction. Studies showed that an aesthetically designed user interface leads to a higher, subjective recognition of usability (Tracktinsky, N, 1997, Tracktinsky et al. 2006).

The mentioned aesthetic design of the user interface may consist of the following elements: User Interface Attributes: Visual Design, Navigation Design, Information Design, and Collaboration Design. Visual Design - The visual design of mobile applications includes esthetics, attractiveness, and the consistency of the application's appearance. Color, images, fonts, animations, and the layout of the app form part of visual design (Li and Yeh 2010). Visually appealing mobile application leads to a positive user experience. Users exposed to an ultra-defined image interface expressed higher levels of enjoyment and involvement. Navigation Design - The structural framework of the page and content on the mobile application is referred to as the navigational design (Kapoor & Vij, 2018). Navigational design plays an important role in predicting the extent of users' confidence in mobile commerce technology (Vance, Elie-Dit-Cosaque, & Straub, 2008). Information Design - A mobile application's informational design relates to the updated, accurate, relevant, and easy-to-understand inputs presented in an easy-to-use layout (Feindt, Jeffcoate, & Chappell, 2002; Lee & Kozar, 2006). The design of the information displayed on the mobile application can increase the engagement of the consumers with the travel mobile application (Peters et al., 2016; Kim & Baek, 2018). Collaboration Design - The collaboration of the particular application with the other players in the industry or the related industry is known as collaboration design (Kapoor &Vij, 2018).

Shopee Marketplace

Shopee is an online shopping application launched by Chris Feng in 2015 in Southeast Asia and Taiwan. In Indonesia, Shopee is the number 1 marketplace of choice with 33.27 million daily visitors or daily active users (DAU) according to data from Similar Web for App Performance about Indonesian e-commerce (Research by world market research company, IPOS, 2021). Its existence is also top of mind for Indonesian people with a percentage of 54% of people reminding Shopee. They claimed that it has a huge contribution to serving education and logistic. Overall, it makes Shopee successfully achieved a high percentage on their share of orders in the past few months that reaching 41%. All facts and achievements by Shopee above become our marketplace of choice followed by huge enthusiasm.

In this article, we analyze the influence of User Interface Attributes on Shopee consumer engagement, by testing a research model that shows the relationship between User Interface Attributes as an independent variable. Virtual design (X1), navigation design (X2), information design (X3), collaboration design (X4), and dependent variable Indonesian consumer engagement.

In the model in Figure 1 below, we proposed the following hypotheses:
  H1: Visual Design influences consumer engagement
  H2: Navigational Design influences consumer engagement
  H3: Informational Design influences consumer engagement
  H4: Collaboration Design influences consumer engagement H5: User Interface Attributes altogether influence elements of consumer engagement
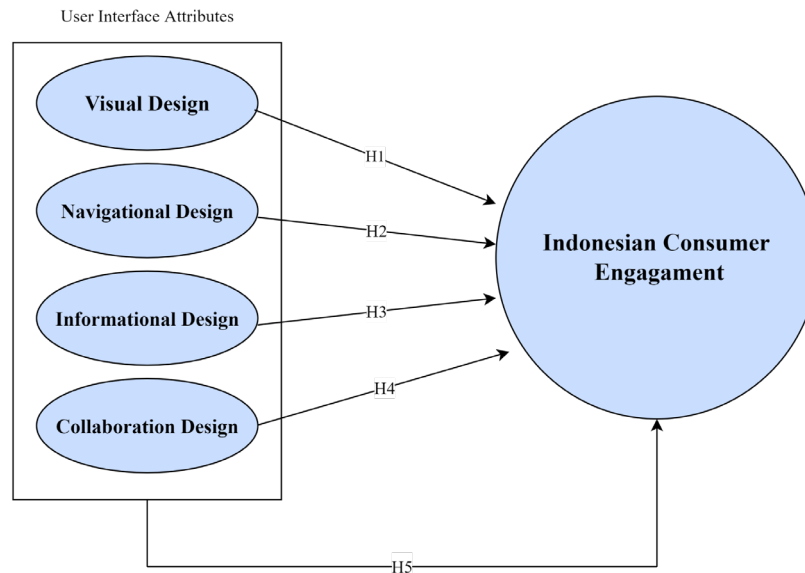

Figure 1

Hypothesized Model of the Relationship Between User Interface Attributes and Indonesian Consumer Engagement

3. Methods

The research approach used to achieve the objectives of this research is a quantitative approach with a research instrument in the form of an online survey. The quantitative The 10th International Conference on Cyber and IT Service Management (CITSM 2022) Yogyakarta, September 20-21, 2022 method itself is a research method based on the philosophy of positivism, used to examine certain populations or samples, collect data using research instruments, and analyze quantitative or statistical data to test the established hypothesis. (Sugiyono, 2017). The quantitative method was chosen by the researcher because the focus of this research is to investigate the amount of influence given between the independent and the dependent variable.

In finding the effect of each independent variable on consumer engagement, we used the SPSS version, which was followed by the following 4 steps:
  Step 1: Data Preprocessing. A process of sorting data into nominal numbers to calculate the mean of each variable for further calculations.

Step 2: Reliability and Validity Test. A concept that is used to evaluate the quality of my research through my data's validity.

Step 3: Correlation Analysis. A statistical calculation that is measured by the strength of the relationship between the relative movements of two variables

Step 4: Simple and Multiple Regression Analysis. Both calculations will enter the calculation stage of the extent to which the causal relationship between the variable X and the variable Y

For the instrument's validity test, we are using Pearson's correlation to count how subscales correlated with constructs with valid values signed >0.128 as their N=400- 500 at the significance level of 0.05. The results can be valid since there is internal consistency for each subscale (see Table 1). Cronbach's Alpha has been used for the reliability test to evaluate the consistency between items as well as each of its subscales with combined calculation. The constructs show reliability when Cronbach's Alpha value is higher than 0.60 (Sekaran & Bougie, 2013). The results in Table 1 below show that all variables are reliable based on all their Cronbach's Alpha scores higher than 0.7.

Table 1. Validity, Reliability, And Descriptive Statistics

Variables	No. Of Items	Pearson's Correlation R (Validity)	Cronbach's Alpha (Reliability)	Mean	SD
Visual Design	5	0.608-1**	0.791	4.10	1.01142
Navigational Design	5	0,735-1**	0.868	4.23	0.78897
Informational Design	7	0.657-1**	0.855	4.17	0.94164
Collaboration Design	5	0.711-1**	0.841	4.36	0.82273
Identification	2	0.496-1**	0.695	4.18	0.97277
Absorption	4	0.767-1**	0.856	3.96	1.04816
Interaction	5	0.702-1**	0.840	3.84	1.05809
Behavioral Engagement Intention	4	0.808-1**	0.834	3.98	0.96830

N = 413; α = 0.05; **p < 0.01

The validity measurement, as seen in Table 1, all question items are valid because the Pearson's Correlation value of all items is greater than 0.128 (based on the r-table). Cronbach's Alpha value indicates a relevant internal consistency if the result is greater than 0.60, where the entire table has a Cronbach's Alpha value greater than 0.70. The provisional mean value shows that so far Collaboration Design (M=4.36) is the most observed thing by customers. Followed by Navigational Design (M=4.23).

4. Data Collection and Sample

The research instrument itself is a measuring tool used to obtain quantitative information about variations in the characteristics of variables objectively. (Ibn Hadjar, 1996). As stated above, the research instrument used is a survey with a questionnaire that is distributed online. The selection of the "online survey" method was considered because of the limited time and research costs. Most online surveys utilize a non-probability sampling method to make them more segmented (Amia Luthfia et al., 2021; Poynter 2010).

In this case, we look for specific respondents that filled the below characteristics:
1. Age not below 17 years old.
2. Actively using Shopee marketplace as one of their online shopping platforms
3. They have shopped through Shopee at least 3 times.

This online questionnaire has been distributed from April to May 2022 to Shopee application users of various ages, either through friends to friends to various online groups from the Shopee user community on several social media, such as Line and Facebook. For the region itself, we have reached almost all provinces in Indonesia and so far, we have collected 413 responses which have reached our target of respondents to fulfill this research. The questionnaire that we created consisted of 22 questions about User Interface Attributes from Shopee and was followed by 15 questions about consumer engagement, a total of 37 questions with a 5-point Likert scale. A 5-point Likert scale was used there, where 1 = strongly agree and 5 = strongly disagree, the same condition applied to the consumer engagement section also.(Table 2)

Table 2. Characteristics of Respondent (N= 413)

Characteristics	Factors	Frequency	Percentage(%)
Gender	Male	100	10.0
	Female	313	31.4
Age	≤ 17 years	16	1.6
	18-23 years	224	22.4
	24-30 years	83	8.3
	31-35 years	90	9.0
Education	Junior High School	9	0.9
	Senior High School	45	4.5
	College Student	223	22.3
	Working	131	13.1

	Others	**5**	**0.5**
Years of Experience with Applications	**< 1 year**	**32**	**3.2**
	1-3 years	**154**	**15.4**
	3-5 years	**160**	**16.0**
	> 5 years	**67**	**6.7**

From a total of 413 respondents, it is quite predictable that 31.4 percent of them are filled by female users with a difference of almost 10 percent from the male one. Where indeed Shopee users in Indonesia are identical to female users, judging from the promotions offered and various attractive discounts. The average age of Shopee users themselves ranges between 18-23 years (22.4%) which is the active age of students to workers. This is reinforced by the two main occupations, which were college students (22.3%) and real workers (13.1%) who already have an ID card so they can use one of the additional features on Shopee, namely Shopee Pay Later. The average Shopee user is continuously in the range of 3-5 years (16.0%), where for every additional month, their Shopee loyalty level will also increase with the option of Gold, up to Platinum with each different benefit obtained.

Overall, the respondent's data shows a real condition that most Shopee users in Indonesia are really into it because of the discount and promotion services to various other benefits that are used. So far, the benefits provided by Shopee seem to be really doing their job effectively to meet various daily needs without disturbing the monthly cash flow.

5. Results

5.1 Correlations

Table 3. Correlation Statistics Between Shopee User Interface Attributes and Consumer Engagement

Variable	User Interface Attributes	Visual Design	Navigational Design	Informational Design	Collaboration Design	Consumer Engagement	Mean
User Interface Attributes	1	0.662**					4.176
Visual Design	0.662**	1	0.594**	0.588**	0.408**	0.555**	4.048
Navigational Design	0.764**	0.594**	1	0.659**	0.605**	0.547**	4.133
Informational Design	0.806**	0.588**	0.659**	1	0.672**	0.634**	4.109
Collaboration Design	0.764**	0.408**	0.605**	0.672**	1	0.445**	4.249
Consumer Engagement	0.628**					1	3.881

** Correlation is significant at the $p < 0.01$; 2-tailed; N=413

From Table 3, the Collaboration Design displays are the most observed by Shopee users with a mean value of 4,249, but their correlation to consumer engagement is the lowest at 0.445**. Navigational Design display (4,133) becomes the second display that has a high mean value following the Collaboration Design. The displays that are less observed by consumers are Informational Design (4,109) and Visual Design (4,048). But here, Informational Design has the strongest correlation with consumer engagement with r= 0.634** among all elements.

5.2 Regression

Table 4. Linear and Multilinear Regression Table for Hypothesis 1-5

Model	Sig	R	Adjusted R Square	B	Standardized Coefficients Beta
1 (Constant)	.000[b]	0.680[b]	0.458	0.559	
Mean VD	.000			0.238	0.233
Mean ND	.006			0.146	0.148
Mean ID	.000			0.443	0.410
Mean CD	.767			-0.016	-0.015

a. **Dependent Variable: YCE (Total Mean of Y variable - Consumer Engagement)**
b. **Predictors: (Constant), Mean Collaboration Design, Mean Visual Design, Mean Navigational Design, Mean Informational Design**

From column standardized coefficients beta in Table 4, we can determine the statistical significance of both linear and multilinear regression models toward all variables. Using $p < 0.05$ indicates that overall, the regression model is statistically significant. From that, all independent variables are significant except the mean of Collaboration Design, which is not significant, (sig. $0.767 > 0.05$).

The interactions and influences between variables will be shown in Figure 2 below:
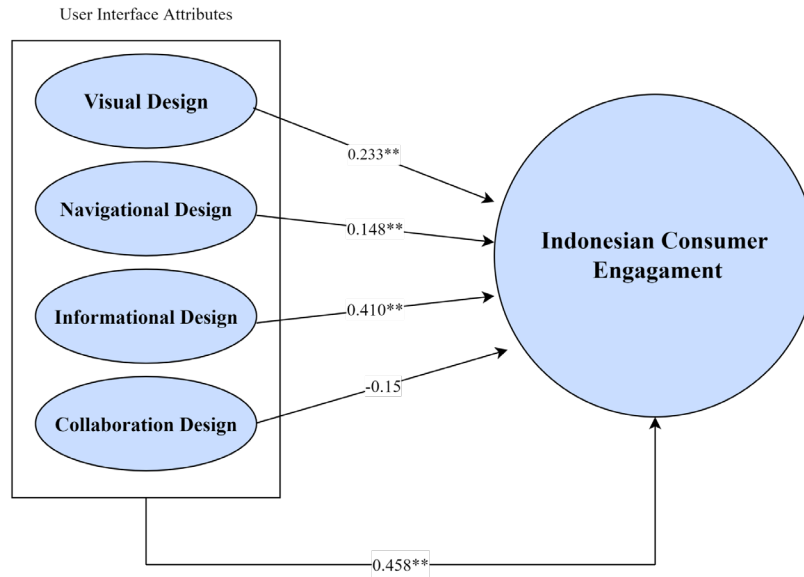
Figure 2 Influence of Shopee User Interface Attributes on Indonesian Consumer Engagement

The model above shows that three User Interface Attributes elements as the independent variables have a positive interaction and a significant influence on consumer engagement, the dependent variables. However, one element is that Collaboration Design's display which has the highest observation value based on their mean in the correlation table (4,249) has no significant influence on consumer engagement (sig. 0.767) [H4 is rejected].

The Informational Design display has the biggest and most significant influence with Standardized Coefficient Beta 0.410** followed by Visual Design at 0.233**. From the Figure 2 above, it can be concluded that the influence is given by the independent variable, User Interface Attributes on consumer engagement in the form of a percentage can be presented as follows, the influence of Visual Design on engagement is 23.3%, the influence of Navigational Design on engagement is 14.8%, the influence of Informational Design on the engagement of 41%, and finally Collaboration Design has no significant effect on engagement.

Based on Table 4, the regression equation is as follows:

$$Y= (0.559) + 0.238X1+ 0.146X2 + 0.443X3 − 0.016X4 + e$$

Y = Consumer Engagement
X1 = Visual Design
X2 = Navigational Design
X3 = Informational Design
X4 = Collaboration Design
e

The regression equation of x on y is to describe the variations in consumer engagement from the given changes in the value of User Interface Attributes elements. It can be explained as follows:

1. The constant value (a) has a positive value of 0.559. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable.

2. The regression coefficient value for the Visual Design variable (X1) has a positive value of 0.238. This shows that if Visual Design increases by 1%, then consumer engagement will increase by 0.238 assuming other independent variables are held constant. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable.

3. The regression coefficient value for the Navigational Design variable (X2) has a positive value of 0.146. This shows that if Navigational Design increases by 1%, then consumer engagement will increase by 0.146 assuming other independent variables are held constant. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable.

4. The regression coefficient value for the Informational Design variable (X3) has a positive value of 0.443. This shows that if Navigational Design increases by 1%, then consumer engagement will increase by 0.443 assuming other independent variables are held constant. A positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable.

5. The regression coefficient value for the Collaboration Design variable (X4) is -0.016. This value indicates a negative (opposite direction) effect between the Collaboration Design variables and consumer engagement. This means that if the Collaboration Design variable has an increase of 1%, then on the contrary the consumer engagement variable will decrease by 0.016. Assuming that the other variables are held constant.

6. Discussion

From the data analysis, first, we can see that Collaboration Design is the most observed feature even though its correlations to consumer engagement are the lowest and has no significant influence at all on engagement. It supports the fact that it becomes users' most observed feature strengthened by data obtained from respondents because it contains a collection of promotions, benefits, and other vouchers from the merchant's collaboration with Shopee. But indeed, it isn't a driver for consumers to use or engage with Shopee, instead, this feature being's an extended user's favorite.

The outcome shown in Figure 2 indicates that the Informational Design feature has the biggest influence and highly significant driver of consumer engagement, even though it is included as one of the less observed features by the consumer from the correlations table. It shows that it isn't for extended users, but this display successfully attracted consumers to use or engaged with Shopee for the first time.

More about Informational Design as the main driver with high influence, the consumer surprisingly engages with Shopee's easily accessible display in placing an order. Where the orders are clear, and not confusing. Product information and pictures are placed in real condition, accurate, attractive, but not exaggerated. Consumer engagement is also influenced by attractive and not confusing visuals. So, for further development, Shopee can keep this on track as it used to for the Informational Design display, and hopefully, more consumers will pass by again and again.

For customer retention, Shopee can create more and more promotions, discounts, or any other programs on the Collaboration Design displays and make them more variated as it is the most observed by the extended consumer. But, if Shopee wants to explore more and make it one of the main drivers of consumer engagement, they need to make creative improvements to build it up, maybe through collaboration with top-of-mind brands and merchants or any other eye-catching collaborations. So, consumers will be engaged, feel attracted to experience it, and continuously take more advantage of the discounts and other benefits they got from the Collaboration Design

display. So that more customers are engaged to use Shopee and on the other hand increase the retention numbers as well. It cannot be forgotten that other supporting displays can also be continuously upgraded with more advanced quality as a supported driver.

And overall (3 out of 4) User Interface Attributes elements from Shopee have a fine influence in engaging consumers to use the Shopee marketplace, then h5 is declared accepted. This can be seen from the linear regression analysis with a qualified score. These findings strengthen the previous studies (Preeti Tak & Mansi Gupta, 2021 ; Fang, J., Zhao, Z., Wen, C., & Wang, 2017). In this article, we have examined a significant influence between consumer engagement and User Interface Attributes that include all 4 elements. All three factors were significant except the Collaboration design. It shows that each of the platforms created its own User Interface branding for customers to identify themselves with the User Interface Attributes success of their chosen platforms. So, the User Interface feature is valid to be one of the things that are included in the investment in increasing consumer engagement in the future, because it stands as a shield or the front line of an application. Through this investment strategy, a company like Shopee or any other can pay attention to each element included in the user interface and can be more observant of which elements can drive the most engagement. Given the significant relationship generated, this can be a reference for other beginner marketplaces as well, to pay close attention to the elements of User Interface Attributes followed by their futuristic and efficiency. This driver will attract more consumers to try and experience the product and company so that the marketplace competition in Indonesia can be more widespread and many more "decacorn" titles will be generated to bring Indonesia into the frontline in the worldwide business circle. Especially in terms of digital improvisation and technology to be better known in the eyes of the world.

7. Conclusion

The use, needs, and objective of this research are to analyze how big the influence the Shopee marketplace User Interface Attributes has on consumer engagement in using Shopee. Where later the results can be a reference for the Shopee marketplace in expanding or reducing their application investment in the scope of the user interface.

Moreover, User Interface Attributes have a significant influence on consumer engagement. In summary, the most influential element of their user interface is the Informational Design display (41%) followed by Visual Design (23%). Its performance and quality must be maintained by Shopee. The information provided remains organized, complete, and accurate with a real but attractive visual appearance. The influence of navigational design (14.8%) is a challenge for Shopee to make the user interface easier and more enjoyable for consumers to navigate. The rest, Shopee needs to think about how the Collaboration Design elements can have an impact on consumer engagement. The total percentage of the influence given by User Interface Attributes on consumer engagement is 45.8% and can be one of the things that are considered in investment related to consumer engagement by other newcomer marketplaces in Indonesia.

References

Ang, G., & Lim, E., Learning User Interface Semantics from Heterogeneous Networks with Multimodal and Positional Attributes. IUI '22: 27th International Conference on Intelligent User Interfaces, pp. 433-446, 2022.

Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L., Consumer engagement in a virtual brand community: An exploratory analysis. Journal of Business Research, vol.66, no.1, pp. 114, 2013.

Dwivedi, A., Wilkie, D., Johnson, L., & Weerawardena, J., Establishing measures and drivers of consumer brand engagement behaviors. Journal of Brand Management, vol. 23, no.5, pp. 41–69, 2016.

Fang, J., Zhao, Z., Wen, C., & Wang, R., Design and performance attribute driving mobile travel application engagement. *International Journal of Information Management*, vol. *37*, no.4, pp. 269–283, 2017.

Feddema, K., Harrigan, P., Nekaris, K. A. I., & Maghrifani, D., *Consumer engagement behaviors in the online wildlife trade: Implications for conservationists. Psychology & Marketing, vol. 37, no.12, pp. 1755–1770, 2020.*

Feindt, S., J. Jeffcoate, and C. Chappell., Identifying success factors for rapid growth in SME e-commerce. Small Business Economics, vol.19, no.1, pp. 51–62, 2002.

Ismet, K., Inanc, E, and Ufuk, C., A Comprehensive Integration of RFM Analysis, Cluster Analysis, and Classification for B2B Customer Relationship Management, 4th European International Conference on Industrial Engineering and Operations Management, 2021.

Kim, D. J., D. L. Ferrin, and H. R. Rao., A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. Decision Support Systems, vol.44, no.12, pp. 544–64, 2008.

Kim, S., and T. H. Baek., Examining the antecedents and consequences of mobile app engagement. Telematics and Informatics, vol. 35, no.1, pp. 148–58, 2018.

Lee, Y., and K. A. Kozar., Investigating the effect of website quality on e-business success: An analytic hierarchy process (AHP) approach. Decision Support Systems, vol. 42, no.3, pp. 1383–401, 2006.

Li, Y. M., and Y. S. Yeh., Increasing trust in mobile commerce through design aesthetics. Computers in Human Behavior, vol. 26, no. 4, pp. 673–84, 2010.

Linear Regression Analysis in SPSS Statistics - Procedure, assumptions and reporting the output. (2018). Laerd Statistics. https://statistics.laerd.com/spss-tutorials/linear-regression-using-spss-statistics.php

O'Brien, H. L., & Toms, E. G., What is user engagement? A conceptual framework for defining user engagement with technology. *Journal of the American Society for Information Science and Technology*, vol. *59*, no.6, pp. 938–955, 2008.

Oh, C., Roumani, Y., Nwankpa, J., & Hu, H., Beyond likes and tweets: Consumer engagement behavior and movie box office in social media. Information & management, vol.54, no.1, pp. 37, 2016.

Peters, T., O. Is € ̦ık, O. Tona, and A. Popovic., How system quality influences mobile BI use: The mediating role of engagement. International Journal of Information Management, vol. 36, no.5, pp.773–83, 2016.

Preeti Tak & Mansi Gupta., Examining Travel Mobile App Attributes and Its Impact on Consumer Engagement: An Application of S-O-R Framework, Journal of Internet Commerce, 2021.

Schmidt, Thomas, and Wolff, Christian., The Influence of User Interface Attributes on Aesthetics, *i-com*, vol. 17, no. 1, pp. 41-55, 2018.

Sekaran, U., & Bougie, R., Research method for business: A skill-building approach (6th ed.). John Wiley & Sons, Ltd, 2013.

Sulistiyawati, E. S., & Widayani, A., Marketplace Shopee Sebagai Media Promosi Penjualan UMKM di Kota Blitar. *Jurnal Pemasaran Kompetitif*, vol.*4*, n.1, pp. 133-142, 2020.

Tractinsky, N., Cokhavi, A., Kirschenbaum, M. & Sharfi, T., Evaluating the consistency of immediate aesthetic perceptions of web pages. International Journal of Human-Computer Studies, vol. 64, pp. 1071–1083, 2006.

Tractinsky, N., Aesthetics and apparent usability: Empirically assessing cultural and methodological issues. In: Conference on Human Factors in Computing Systems, pp. 115–122, 1997.

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