

THE INFLUENCES OF WEBSITE DESIGN ON FORMATION OF E-TRUST, E- SATISFACTION AND E-LOYALTY OF BUKALAPAK.COM CONSUMERS: RELATIONSHIP MARKETING REVISITED

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Abstract—The development of online business has encouraged companies to interact intensively with their customers. The website represents a frontline employee who is considered to influence consumer loyalty by its design. Unfortunately, researchers who investigate how the actual role of website design shapes loyalty is still rare. This research tries to fill this void. Furthermore, this study examines the effect of website design on three dependent variables, namely e-trust, e-satisfaction, and e-loyalty. The mediation role test carried out simultaneously on e-trust and e-satisfaction. The sample criteria were consumer who filling out an online questionnaire within a maximum of 6 months after they shop. The analysis tool for measuring variables and hypothesis testing was Structural Equation Modelling. Findings, website design influenced consumer loyalty at www.bukalapak.com with mediation through e-trust and e-satisfaction. There was no support for the direct influences of website design on e-Loyalty. Definitely website design has a crucial role in this context. To apply these findings, future studies need to explain respondents' profiles and their choices on items in website design variables empirically and precisely with the RASCH model.

Keywords—website design, e-trust, e-satisfaction, e-loyalty, Human-Computer Interaction, RASCH Model

I. INTRODUCTION

In traditional business, customer loyalty, both attitude, and behaviour, are the main goals to be achieved and maintained by business organizations. To do so, front-line employees act as the company's spearhead face-to-face to serve consumers. The quality of interaction between front-line employees (FLE) and

customers will determine the continuation of the relationship between the company and its customers. In a broader scope, the orientation of the company to foster long-term relationships with its customers is the goal of relationship marketing.

On the other hand, in the network (online) market with a *Business to Consumer* (B2C) pattern, the importance of maintaining *e-loyalty* (eLoy) has been emphasized by most researchers regarding the goal of ensuring profitable customer relationships. The eLoy variable is important because the cost of acquiring new customers is higher than the cost of maintaining existing ones (Reichheld & Schefer, 2000). In the practice of online market business competition, eLoy is even more important because it is getting increasingly easy for consumers to change vendors, shops and services, without having to incur significant economic costs such as time, effort, money, and thought. Theoretically, eLoy is a loyalty construct in the online field, which therefore includes consumer psychological attributes that can be measured using the construct of customer loyalty that was adapted.

The creation of a long-term sustainable relationship between the company and its customers, requiring an exchange of mutual benefits with trust is the first step to realizing this good relationship. In relationship marketing literature, trust is a central variable which its concepts and empirical testing have been carried out by many scientists (Wibowo, 2014b). In addition to trust, customer satisfaction is also an important aspect that is responsible for forming customer loyalty attitudes and behaviour.

In this study, we raised the issue of FLE's analogy with websites within the relationship marketing framework. Re-mainstreaming relationship marketing due to this theme is increasingly relevant to the current situation of business competition that is tied to the advancement of Information and Communication

Technology (ICT). The website design was then tested for possible effects on the formation of eLoy with the mechanism of change of influence through two other variables. In this research, the website also included its version of a website app which is downloadable from the Google playstore. Both forms were equated because we assumed the purpose of manufacture and function the same. The difference lies only in the platform (operating system) which correlates with screen size, website accessibility using a PC or laptop while the app uses a mobile/tablet. This assumption, reinforced by the results of a preliminary interview, shows that respondents were unable to differentiate between using a website or app. The reason they chose was determined by whether or not a gadget/device was more portable.

II. LITERATURE REVIEW

A. *Effect of website design on e-trust, e-satisfaction, and e-loyalty*

Concerning the relationship marketing perspective, trust is needed in every relational exchange of the company with its *stakeholders* (Wibowo, 2014b). Once trust is formed, *mutual benefit* and long-term oriented relationships will efficiently execute. In the context of *relationship marketing*, FLE's competency, and operational benevolence affect the formation of consumer trust in the company (Wibowo, 2014b). On a website, the design must have characteristics that can trigger site visitors' trust. The website design must achieve effectiveness regarding the purpose of making it. Effective website design includes navigation capabilities or visual appeal of a website (Cyr, 2008). The relationship between website design and online consumer trust is also proposed by (Wen, 2009) in his literature review. Therefore, we proposed a hypothesis in this study.

H1. Website design influences the formation of consumer e-trust

The visual appeal of a website will also generate expectations in the minds of visitors, which will then be confirmed by them regarding the condition of whether or not these expectations were met. As FLE's physical appearance when serving customers, website design will give website visitors the impression of how the service will be provided by the vendor, which in turn will bring hope. In line with this idea is a statement that the website user interface design is closely related to customer satisfaction (Alam & Yasin, 2010). Unfortunately, (Jin-xiang, Fang-hui, & Li-sheng, 2006) did not support this assertion after the results of empirical research failed to support the influence of the website on visitor e-Satisfaction (eSat). Nevertheless, empirical support for the influence of website design on eSat is more commonly found, including (Alam & Yasin, 2010); (Guo, Ling, & Liu, 2017); (Fatemeh, Afshari, & Esmaili, 2014); (Ting, Md Ariff, Zakuan, &

Sulaiman, 2016), etc. Therefore, we continued to propose the hypotheses as follows.

H2. Website design influences the formation of consumer e-satisfaction

In the field of e-commerce, the effectiveness of company services supported and determined by how the website was designed. Website design is an essential component in determining the success of online shopping, especially in the B2C market. Therefore, customer satisfaction influenced by the quality of the user interface with the online seller's website. There are not many empirical studies that support this argument. However, the relationship between the design of the site and the intention to buy online was proposed by (Wen, 2009). Intention to buy is one proxy/indicator of consumer loyalty. Attractive website design and ease of product search navigation can encourage consumers to change their exploration activities into transactions. Therefore, we proposed the hypothesis as follows

H3. Website design influences the formation of consumer e-loyalty

B. *Effect of e-trust on consumer e-satisfaction*

In B2C online retail, eSat is considered as customer satisfaction that comes from previous real buying experiences from *e-commerce* companies (Anderson & Srinivasan, 2003). The establishment of eSat is also determined by how trust in the company is represented by the company's website and directs consumer perceptions regarding the expectation of positive results from their interactions. Consumers form expectations by evaluating website design and trust in the website. Regarding online customer satisfaction measurements in the B2C market, the indicators include: 'wise decisions, shopping experience, overall satisfaction, satisfaction in online transaction services, enjoyment of online sellers' website performance and products provided by the website (Yao & Liao, 2011) (Guo et al., 2017). Therefore, we proposed the hypothesis as follows.

H4. *E-trust influence consumer e-satisfaction*

C. *Effect of e-satisfaction of the consumer to consumer e-loyalty*

Empirically, the relationship between eSat and eLoy was found to have been applied in offline and online stores (Zhang & Prybutok, 2005). The variable eSat is an antecedent of Eloy in B2C e-commerce. Several studies have revealed that there is support in the B2C e-commerce context about the positive impact of eSat on eLoy (Lin & Sun, 2009). The relationship between customer satisfaction and eLoy has proven significant in many studies, and this will result in a positive predisposition to long-term loyalty (Gee, Coates, & Nicholson, 2008). There is a valuable contribution from (Wibowo, 2014a), (Wibowo & Widikusyanto, 2016), (Wibowo, 2016) who succeeded in disconfirming the

effect of satisfaction on loyalty when switching cost variables were included in the model. Nevertheless, we still carry the idea of the influence of satisfaction on loyalty.

Regarding measurement, eLoy in B2C e-commerce, eLoy variables must include a number of indicators, among others: first choice in using a website, positive comments, encouraging someone to surf the website, like to use websites, recommendations to others, intention to buy, care about the best websites and retail sites (Yanmie & Ching, 2012). The hypothesis that to test next is as follows:

H5: *e-satisfaction* influences consumer *e-loyalty*

III. RESEARCH METHODS

This survey study took samples *purposively* with the criteria of the sample consisting of site visitors / bukalapak.com app users who spent the last six months shopping. Of the 912 respondents, only 495 were eligible to be analyzed. There were 152 eliminated because they had the same answer (interitem zero variance), 28 people because they responded with one different response only and as many as 236 people were eliminated for shopping for more than six months. One respondent was removed because we filled in ourselves to test the success of the online questionnaire version of this form.

The questionnaire distributed online using *Google Forms*. The eLoy scale was developed by adopting scale from Yanmie & Ching's (2012). The eSat scale was developed by adopting and combining indicators from Yao & Liao (2011) and Guo et al., (2017) scale. Likewise, website design scale was developed by adopting and combining dimension from the eTailQ scale (Wolfenbarger & Gilly, 2003) and the latest WebQual scale (Barnes & Vidgen, 2002). E-Trust variables was developed with indicators of the ES-QUAL scale (Parasuraman, Zeithaml, & Malhotra, 2005). Authors applied confirmatory factor analysis (CFA) with valid indicator criteria which have a loading factor > 0.5 and statistically significant. Construct reliability was tested using Construct reliability (CR) with reliable criteria if the value > 0.7 and Average Variance Extracted (AVE) 0.5 (Hair Jr., Black, Babin, & Anderson, 2014). The hypothesis test is determined by the significant paths from the Maximum Likelihood estimation. If the value of t statistics was greater than 1.96 at $\alpha = 5\%$, the research hypothesis is accepted

IV. RESULTS AND DISCUSSION

A. Sample description

As many as 53.3% of the respondents were women. Sequentially the platform used to access company website are bukalapak apps, websites, and joints, with a percentage of 65.5%; 14.3%; and 20.2%. Education of undergraduate respondents was 68.5%, then junior high school was 29.3%. One hundred percent of respondents

can remember when they were involved with site design with a percentage of 34.5% approved in 6 months, 47.1% carried out within one month, and 18.4% done within the renewal period.

Respondent characteristics and variations in them are ideal for this study so that the contextuality of this study can be logically accepted. However, we suggest adding details of the explanation empirically with the Rasch Model.

B. Validity and Reliability

TABLE 1. VALIDITY AND RELIABILITY TEST RESULTS

Variables	Indicators	SLF	errors	CR	AVE
Design	Des1	0,74	0,45	0,91	0,62
	Des2	0,78	0,39		
	Des3	0,73	0,47		
	Des4	0,83	0,32		
	Des5	0,83	0,32		
	Des6	0,83	0,31		
eTrust	eT1	0,78	0,4	0,89	0,66
	eT2	0,75	0,44		
	eT4	0,86	0,26		
	eT5	0,86	0,27		
eSat	eS1	0,77	0,41	0,91	0,68
	eS2	0,83	0,31		
	eS3	0,82	0,33		
	eS4	0,84	0,29		
eLoy	eL1	0,72	0,48	0,88	0,65
	eL2	0,84	0,29		
	eL3	0,85	0,28		
	eL4	0,8	0,36		

(Source: Results of data processing)

Table 1 presented very satisfying results from the validity and reliability test. By selecting only valid indicators presented in table 1, the authors eliminate observable variables/indicators that are do not meet significant criteria with a value of > 0.5 (Hair Jr. et al., 2014). The intended indicators include T3, eSat6, eL5, and eL6. Cumulatively, the researcher can conclude that all indicators in table 1 validly represents the construct because the loading factor is far above 0.5. The instrument for measuring all four constructs also has satisfactory reliability because the value is relatively large, namely CR of 0.9 in one decimal with AVE above 0.5.

C. Goodness of Fit

The five indexes which are Root Mean Square Error of Approximation, Normed Fit Index, Comparative Fit Index, Incremental Fit Index, Relative Fit Index, Goodness of Fit Index, of the structural model were 0.069, 0.98, 0.99, 0.99, 0.98 and 0.91. All indexes indicated that the research model has a good GoF. These indexes indicated that the sample of our study confirmed the sample of theory.

TABLE 2. HYPOTHESIS TEST RESULTS

Hypothesis	Paths	Estimates	Std. solution	t stats.	Decisions
H1	Des=> eTrust	1,41	0,81	13,39	Accepted
H2	Des=> eSat	1,71	0,72	9,35	Accepted
H3	Des=> eLoy	0,33	0,14	1,66	Rejected
H4	eTrust=> eSat	0,31	0,22	3,94	Accepted
H5	eSat=>eLoy	0,74	0,77	7,04	Accepted

(Source: Results of data processing)

In table 2, hypothesis 3 which is website design has an effect on e-Loyalty is not empirically supported, even though all of the other four hypotheses supported. The website is FLE which represents companies in their interactions with consumers. The website design is crucial for starting the establishment of long-term relationships within the framework of relationship marketing. In this study, our hypothesis regarding the direct effect of website design supported by empirical data for eTrust (H1) and eSat (H2) variables but not for eLoy (H3). It means, in e-commerce the formation of consumer trust and satisfaction can be explained by how the website designed.

D. Discussion

In scientific literature, consumer perceptions came from looking at website design will increase their trust as proposed by Wen (2009), and empirically supported by the results of the H1 test in this study. Likewise, online customer satisfaction, which propositioned by Wen (2009), is influenced by website design which is reinforced by the H2 test results of this study which are empirically supported. Also, there is empirical support for the influence of website design on eSat was provided by Alam & Yasin, 2010; Guo et al., (2017); Fatemeh et al., (2014); Ting et al., (2016).

In addition to directly influencing eSat, website design also affects eSat with mediation from eTrust. It means eSat is directly influenced by both website design (H4) and eTrust after seeing website design. The eSat variable in turn singularly affects loyalty (H5). Then, the direct influence of website design to eLoy is not empirically supported. It means that website design cannot directly influence the variations in eLoy. The occurrence of two-stage mediation indicated that eTrust and eSat mediate and involved in the formation of website design influences on eLoy. Specifically, the occurrence of two-stages mediation on website design (FLE) influence on eLoy, in line with Wibowo's finding (2014b) which negates the notion that FLE's psychological characteristics (operational competency, problem-solving orientation, and operational benevolence) directly influence customer loyalty. In the case of e-commerce bukalapak.com, it seems that eSat has a crucial role in mediating the influence of website design and eTrust influences.

Thus, the analogy of website design as an FLE of the company, based on the results of this study, has implications for observing aspects of effective site design that will have a direct influence on trust, satisfaction and in turn encourage the formation of loyal behaviour. In doing so, we need Rasch model. Attention to good & effective site design emphasized by Vila & Kuster (2011), Cyr (2008) who in this study, the website is an FLE company whose primary function is to serve consumer face to face, raising interest, trust, and satisfaction even though it is tentative to achieving the goal of relationship marketing, namely customer loyalty.

V. CONCLUSION

This research has succeeded in providing support for the importance of website design related to the company's efforts to influence customer loyalty. As a variable that represents the company in its interaction with consumers, website design influences the formation of important variables by the framework of relationship marketing paradigm. These variables include trust, satisfaction, and loyalty.

Suggestions for further research, related to the limitations of this study are to increase the coverage of the sample so that it can be generalized to a broader population. The results of this study can only be applied to the case of bukalapak.com. Furthermore, even though the research model provides a large number of weights, other variables from the online business context such as website usefulness or in the relationship marketing framework, namely customer value, may provide better predictive contributions. Also, its possible for applying Rasch Model analysis to draw a more detail description about what proxy/indicator of website design that do really impact the dependence variables.

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