CONSTRUCTION OF ONLINE BUYING DECISION OF HAND TOOLS

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ABSTRACT

The purpose of this paper is to construct a model for factors affecting online buying decision of hand tools by using various models discussed in previous articles. The paper uses sample from customers of an online hand tool shop in Surabaya using purposive sampling and PLS-SEM hypotheses testing. The study finds that web experience is not a statistically significant variable in the construction of online buying decision. Brand image and marketing stimuli affect buyer decision with buyer attitude and buyer intention as the mediating variable. The paper combines different theories and discusses many variables with limited sample, so the explanation of the model might not be complete. It is suggested that further researches be done with fewer variables and aiming for a deeper and more comprehensive understanding. This paper gives useful and practical suggestions for traditional stores aiming to enter the online market

Keywords: Quantitative, PLS-SEM, Buying Behavior, Online Shopping

INTRODUCTION

The internet has been one of the biggest inventions of the 20th century. Since its inception in the 1990s a new model of trade was also created, a model where a company doesn't need to have a physical presence to conduct in a trade with other parties called e-commerce. E-commerce can be categorized into 3 main categories according to the involvement of the site. First is a low-involvement online forums which only acts as a host for different individuals to trade. Examples of these sites are online forums where the user can trade with other users. Second is a medium-involvement marketplace which makes sure that the vendors selling are reliable, usually these sites provides a money back guarantee to increase buyer confidence in doing a trade. Examples of these sites are eBay. Third is a retail type, which is an online shop owned by a single company, these company usually provides a more limited array of goods compared to the other 2 types. Examples of these sites are Amazon.com

Online trade volume in Indonesia has reached a significant amount. By 2009 IDC has stated that Indonesian online trade volume has reached 35 billion IDR and will still be experiencing a 42% increase during the 2012 – 2015 period. This increase in volume is due to the increasing ease of

connecting to the internet (Torero, et al., 2002) and increase of middle class consumer (Djusan, 2013). According to the data provided by the BPS, the average per capita household spending during the 2012 – 2014 period shows that spending allocated for housing and household facilities are stable at around 20%, this indicates that the market for hand tools used for building and home improvements was stable and will remain stable for quite some time.

Table 1. Per capita spending of Indonesian household (in percentage)

Period	March 2012	Mach 2013	March 2014
Percentage on food related spending	52.08%	50.66%	50.04%
Percentage of non-food related spending	48.92%	49.34%	49.96%
percentage of housing and household improvement spending (relative to non-food spending)	21.05%	20.20%	20.75%

Combining this information, it is important for business owners that haven't established an online presence to set up online shops that can increase their sales volume if they are not to be left out of the current online trend. To effectively build an online shop, business owners must know the factors constructing buyer decision of online consumers

LITERATURE REVIEW

Consumer behavior is defined the buying behavior of final consumers, both individuals and households, who buy goods and services for personal consumption (Schiffman, 2014) and during their decision making, consumers go through 4 stages which are decision-process stage, information input stage, information processing stage and variables influencing the decision process stage (Engel, et al., 1995)

Online purchase decision making process is affected by the experience felt by customers during their online session (Constantinides, 2004) stated in that study that web experience is constructed by 3 variables which are functional, psychological and aesthetic variables. Consumers experiencing a positive online session will be more likely to have a positive attitude towards online shopping; hereby the following assumption can be made

H1: Web Experience has a positive effect on Buyer Attitude

Other factors affecting buyer attitude towards shopping are brand image and marketing mix offered by the seller (Wenbao, 2008). In his study, Wenbao uses Theory of Planned Behavior as a base and augment the theory by introducing various other variables which are assumed to affect consumer buying decision, but essentially he states that better brand image and marketing stimuli in the form of marketing mix will make it more likely for customer to have a better attitude towards the seller of the product; hereby the following assumption can also be made

H2: Brand image has a positive effect on buyer attitude

H3: Marketing stimuli has a positive effect on buyer attitude

Attitude doesn't have an immediate effect on buying decision. In a study by Della Vazquez and Xingang Xu, it is found that buyer intention is the variable that directly affects buying decisions, and buyer attitude is only an antecedent variable to it (Vazquez and Xu, 2008). A more favorable buyer attitude leads to better buyer intention and in turn will make buying decision more likely to be made; hereby the following assumption can be made

H4: Buyer attitude has a positive effect on buyer intention

H5: Buyer intention has a positive effect on buyer decision

Using the assumptions made before, an analytical model can be devised for this study

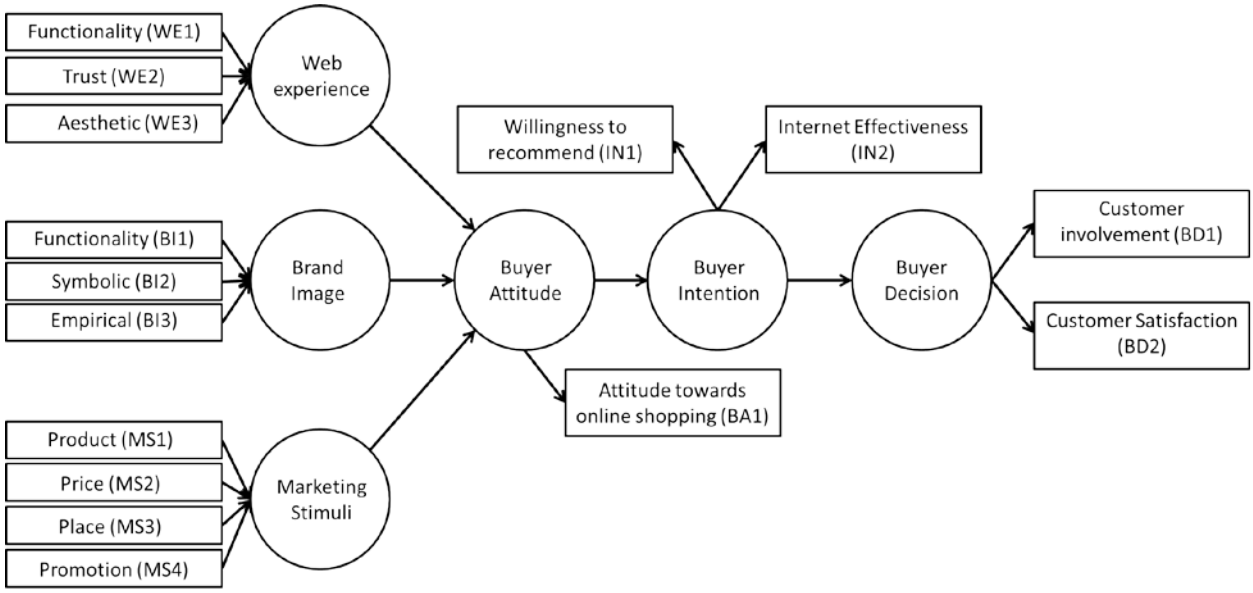

Figure 1. Analytical Model

RESEARCH METHODS

Data for this study is collected through a non-probabilistic purposive sampling using an internet user segmentation done in a previous study (Aljukhadar and Senecal, 2011) as screening questions to target the lurking shopper segment. A preliminary survey on 30 respondents was held to check the validity and reliability of the measuring instrument used in the study, after the instrument check was completed 40 respondents who passed the screening questions was surveyed

Indicators used in the survey were chosen from previous studies using 5-point likert scale to measure responses from survey takers on each given statement. The following provides information about the samples: 82.5% are male; all respondents are from middle class Indonesian; all respondents had done 6 times or more online shopping during the past 12 months; all respondents uses the internet for more than 1.5 hours each day. Age is distributed as follows: 22.5% are from 26 – 35 group; 57.5% are from 36 – 45 group; 20% are from 46 – 54 group.

Separate validity and reliability tests were done on the formative and reflective indicators as outer model evaluation. Reflective indicators were checked on their internal consistency, significance, convergent validity and discriminant validity while formative indicators were checked on their convergent validity, colinearity, significance and relevance of the outer weights (Hair, 2014). After running the outer model evaluation, several formative indicators were found to be statistically insignificant and were dropped from the study

Inner model evaluations were done after completing the outer model evaluations and the following result were produced

Table 2. Summary of inner model evaluation

ENDOGENOUS LATENT VARIABLE	t-value	R^2	Q^2
BA	5.0479	0.2717	0.1655
IN	18.7118	0.7344	0.4189
BD	2.1058	0.1079	0.0774

All endogenous latent variables have a t-value over 1.65 which shows that the variables are significant with 90% confidence level. Buyer intention (IN) shows the highest coefficient of determination (R^2) while buyer decision (BD) shows the lowest coefficient of determination. In studies done in the field of marketing R^2 value of 0.75; 0.5; and 0.25 are interpreted as variables which have significant, moderate and weak effect on the model as a whole respectively (Hair, 2014). IN also shows the highest predictive relevance (Q^2) while BD shows the lowest predictive relevance. In studies done in the field of marketing Q^2 value of 0.35; 0.15 and 0.03 are interpreted as variables which have high, moderate and low predictive relevance in the model respectively (Hair, 2014)

Findings

Table 3. Hypothesis Test

	PATH COEFFICIENTS	t VALUES	Remark
WE TO BA	-0.055	0. 1159	H1 not accepted
BI TO BA	0.34	2.3827	H2 accepted
MS TO BA	0.331	2.7764	H3 accepted
BA TO IN	0.857	17.8446	H4 accepted
IN TO BD	0.329	2.1178	H5 accepted

The previous table shows that all hypothesis are accepted except H1 because it has a t-value lower than 1.65.

The t-value of web experience (WE) to buyer attitude (BA) path is only 0.1159 which means that the path is not statistically significant. While Constantinides showed in his study that web experience is one of the main variables affecting buyer attitude (Constantinides, 2004) that relationship is not proven here. The cause of this might be because good web experience has becoming more and more common these days, that in Herzberg theory it is no longer a motivating factor but rather merely a hygiene factor. Studies about this was already conducted and the results shows that privacy, safety, technical details and content of an online seller site has indeed became hygiene factors (Zhang and von Dran, 2000)

The path coefficient from brand image (BI) to buyer attitude (BA) and from marketing stimuli (MS) to buyer attitude (BA) is similar showing that their effect on buyer attitude is about the same. This result is also shown in the study done by Wenbao (2008). From empirical studies held separately image about functionality is the most important indicator for brand image variable and promotion is not so important to the marketing stimuli variable

The path coefficient from buyer attitude to buyer intention is very high (0.857) in this model, which is supported by the study done by Li and Zhang (2002). In that study it is mentioned that attitude is a direct antecedent variable to buyer intention. Buyer intention (BI) also has the highest coefficient of determination in this model, which shows that the variable has the most effect compared to the other variables to the model as a whole

The path coefficient from buyer intention (BI) to buyer decision (BD) is significant and has an acceptable value, but the low predictive relevance (Q^2) of buyer decision variable shows that there are other factors which have not been explored in this study. Variables like after sales service (Chen and Chang, 2003) existence of different buyer segment (Chowdhury, 2009) and subjective norms (Wenbao, 2008) might be explored in future studies to understand better the factors affecting buyer decision

CONCLUSION

Business owner will want to not over focus on the quality of the company site, but instead reach an acceptable level comparable to other good company sites because web experience has

become a hygiene factor over the year. Good product image and favorable marketing stimuli creates a good buyer attitude which in turn will make it more likely for that particular customer to convert their intention to actual buying behavior

Future studies can be done focusing on a more specific variable as an in-depth check of consumer buying decision process. Consumer loyalty and repeat consumer retention can also be checked in their relation to attitude towards a brand or company and buying decision that have been made

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