E-WOM in creating purchasing decisions on online hotel reservation

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Abstract
The purpose of this research is to find out the influence of e-WOM towards purchasing decision on visitors of online hotel reservation sites in Indonesia. This research used cross sectional method and verification approach with survey explanatory method, and the sampling was 200 respondents. E- WOM consists of 3 dimensions with 17 indicators. Meanwhile, purchase decision consists of 4 dimensions with 10 indicators. The results show that e- WOM has a positive and significant influence on purchasing decisions on visitors of online hotel reservation sites. Thus, the online hotel reservation sites must maintain, supervise and enhance e- WOM by providing experience through e- WOM quality, e- WOM quantity, and sender's expertise to support the business development.

Keywords:
E-wom; Purchase Decision; Online Hotel Reservation

1 Introduction
Purchasing decisions become a study that continues to be examined in researches and marketing practices (Chakraborty, 2016). In the last few decades, purchasing decisions are very popular because many companies are aware of the importance of
purchasing decisions (Bowie & Francis, 2004). In 1994, purchasing decision was first conceptualized by Engel. Schiffman and Kanuk (2008) also examined purchasing decisions in 1997. Until now the issue of purchasing decisions is still relevant to study, as one of the most recent studies of purchasing decisions was carried out by (Tan, Lv, Liu, & Gursoy, 2018). Companies that are not able to have a positive impact are considered to be lagging behind their competitors and unable to provide consumer appeal in making purchasing decisions (Chakraborty, 2016).

The e-commerce start-up industry is one of the fastest growing industries in Indonesia. According to data from the Center for Human Genetic Research (CHGR) research institute, there are at least 2,000 local start-ups in Indonesia in 2016, the highest in Southeast Asia. In 2020, CHGR projects that the number could reach 6.5 times or 13,000 start-ups. The emergence of local start-ups in Indonesia has resulted in increased business competition, and hence the public's perspective and reviews of the performance and services of a start-up are important and are one of the benchmarks of a company's success in sales and competitive advantage (Ozturk, Nusair, Okumus, & Singh, 2017). Companies need to differentiate products and provide the best service to persuade consumers to make a purchase (Han & Hyun, 2017).

Research on the e-commerce start-up industry to date has been busy (Maity & Dass, 2014; Yan et al., 2016; Escobar-Rodríguez & Bonsón Fernández, 2017; Tan et al., 2018). The largest potential of e-commerce sales lies in the travel industry. Since 2014, the top five products or services that Indonesians want the most are purchased online. The progress of e-commerce is also transferred by advances in Internet technology that change habits and consumer protection from conventional purchases to online shopping (Weisberg, Te'eni, & Arman, 2011).

The emergence of many distribution channels that provide hotel reservation sales online is because consumers find this way to be easier, more practical and efficient and offers relatively cheaper prices. Some of the most popular online hotel reservation sites for consumers are Traveloka, Tiket.com and Nusatrip (www.id.techinesia.com). Traveloka, Tiket.com and Nusatrip are the biggest competitors in online hotel reservation sites in Indonesia. While Valadoo and Tripvisto are examples of online hotel reservation companies that have gone bankrupt. Valadoo is one of the startup pioneers in the field of travel that has officially closed its service at the end of April 2015. That is because the business model is unclear and Valadoo has not succeeded in creating services that fit the needs of consumers. Tripvisto has stopped its service since July 2017 because their profit and loss ratio does not allow them to continue operational activities. Tripvisto has done several ways to survive but still failed.

The above phenomenon shows that the purchasing decision has not been optimal, resulting in a period of profit decline, and can cause companies to go out of business, move consumers to competitor companies that are able to provide more value, reduce investors who want to work together, and decrease site traffic rank which results in a decline in popularity and image company (Che & Cheung, 2017).
The approach used to overcome the problem of purchasing decisions in this study is the theory of consumer behavior from (Dash et al., 1976; Hirschman, 1981; Darley et al., 2010) which states that consumer behavior is defined as the behavior of using, evaluating, spending on products and services that they expect will satisfy their needs. Consumer behavior explains that there are three perspectives on consumer behavior research, namely the decision making perspective (decision making perspective), the experience perspective (experiential perspective) and the behavioral influence perspective (behavioral influence perspective). Purchasing decisions are one of the aspects of decision making perspectives. Three variation factors that underlie purchasing decisions are environmental influences, individual differences and influences, and psychological processes.

E-WOM is used as a way to overcome purchasing decisions. E-WOM is a type of communication which can be done through stories. Companies must also know how to deliver key messages or messages that are relevant to consumers’ situation. Online hotel reservation sites need to not only display the services offered but need to also provide customer care services and provide positive impulses to consumers to do e-WOM as one way of corporate branding and growing purchasing decisions in consumers (Yeboah-asiamah, Quaye, & Buame, 2016). This research paradigm is shown in Figure 1 below:

![Research Paradigm](image)

Figure 1: Research Paradigm

Based on the description above, the purpose of this study is to obtain a clear description of purchasing decision and e-WOM visitors of online hotel reservation sites in Indonesia and determine the effect of e-WOM on purchasing decisions of visitors of online hotel reservation sites in Indonesia.

Criteria for making decisions on statistical hypothesis testing in order to make decisions about accepting or rejecting hypotheses according to Sugiyono (2013: 188) are:
1. If \( t_{\text{count}} > t_{\text{table}} \), then \( H_0 \) is rejected and \( H_1 \) is accepted
2. If \( t_{\text{count}} \leq t_{\text{table}} \), then \( H_0 \) is accepted and \( H_1 \) is rejected

2 Literature Review

2.1 Purchasing Decisions

Purchasing decisions are one of the areas of consumer behaviour. Purchasing decisions made by consumers through five stages, namely: introduction of needs, information search, alternative evaluation, purchase decisions, and post-purchase behaviour (Chakraborty, 2016). Purchasing decision is a decision-making process used to choose an action as a way of solving a problem (Che & Cheung, 2017).

Four factors that influence consumers in purchasing decision making behaviour are culture, social, personal and psychology (Kotler & Armstrong, 2015). 1) Culture with sub dimensions namely culture, subculture and social class, 2) social with sub dimensions namely reference group, family, role and status, 3) personal with several sub dimensions such as age and level of life, position, economic condition, lifestyle, and personality and self-concept, and 4) psychology with several sub dimensions, namely motivation, views, learning, beliefs and attitudes.

Decision making is an important process that influences consumer behaviour and it is very important for marketers to understand (Shiffman & Kanuk, 2008). The decision-making process can be viewed as three different stages but are related to each other. The stages are the input stage, the process stage, and the output stage (Shiffman & Kanuk, 2008).

2.2 e-WOM

Companies need marketing activities to achieve their goals in meeting their target market. Another view holds that having a competitive advantage is not enough. Companies compete to create an unforgettable experience for customers and generate positive word-of-mouth both online and offline to rebuild and recommend products or services. E-WOM is a digitalization of traditional WOM (word-of-mouth). WOM is delivered directly from one party to another party while the e-WOM submission requires intermediary media, namely electronic media (Humaira & Wibowo, 2016). Internet word of mouth (e-WOM) is a kind of real conversation between consumers about products and services.

Research related to the dimensions of e-WOM (Higie et al., 1987; Bone, 1992; Mangold, Miller, and Brockay, 1999). Harrison-Walker (2001) studied that the dimensions related to e-WOM are focused into 4, namely: 1) frequency / frequency, 2) number of contacts / number of contacts, 3) details / details, 4) word of mouth prize / words of praise. The four dimensions serve as a guide in conducting interviews with four open questions about e-WOM, namely: 1) their reasons for engaging e-WOM, 2) the
credibility of this conversation, 3) their tendency to start a positive conversation or a negative conversation, 4) content electronic message.

The advent of the internet has made e-WOM an important influence on the evaluation of consumer products. Prospective customers visit the website and read reviews from other customers. This gives rise to the involvement of consumers with the prior knowledge they have and new information provided by other consumers.

3 Methodology

The research method used was an exploratory survey method. Exploratory surveys are conducted to explore problem situations, namely to get ideas and insights into problems faced by management or researchers.

The population in this study was the number of visitors of online hotel reservation sites in Indonesia. Total visitors of online hotel reservation sites are 42,800,000 visitors, with Traveloka website visitors amount to 29,400,000 visitors, Tiket.com as many as 9,700,000 visitors and Nusatrip with 3,700,000 visitors.

This study probability sampling technique was a simple random sampling with a sample size of 200 respondents. Data collection techniques used were literature study and field studies with questionnaires. Meanwhile the data analysis technique used is descriptive analysis using frequency distribution.

This study examines the effect of e-WOM on purchasing decisions. The measurement scale used in this study was the semantic differential scale which usually shows a seven-point scale with a bipolar attribute measuring the meaning of an object or concept for respondents. The independent variables or exogenous variables found in this study were e-WOM with dimensions of quality of e-WOM, quantity of e-WOM and sender’s expertise. While the dependent variables or endogenous variables in this study were purchasing decisions with dimensions of convenience, information, available products and services and cost and time efficiency.

4 Findings

SEM-based testing requires testing the assumptions of data and variables under study with a normality test. Data distribution must be analyzed to see whether normality assumptions are met so that the data can be further processed for modeling. Requirements for normally distributed data are stated with the critical ratio skewness value produced smaller than (≤) 2.58. The results of normality test data are presented in Table 1 below:
Table 1: Data Normality Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Skew</th>
<th>Critical Ratio</th>
<th>Kurtosis</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE</td>
<td>6,000</td>
<td>14,000</td>
<td>-379</td>
<td>-2.187</td>
<td>-711</td>
<td>-2.053</td>
</tr>
<tr>
<td>APS</td>
<td>6,000</td>
<td>14,000</td>
<td>-203</td>
<td>-1.171</td>
<td>-617</td>
<td>-1.782</td>
</tr>
<tr>
<td>IN</td>
<td>5,000</td>
<td>14,000</td>
<td>-598</td>
<td>-3.451</td>
<td>-262</td>
<td>-0.758</td>
</tr>
<tr>
<td>CE</td>
<td>11,000</td>
<td>28,000</td>
<td>-423</td>
<td>-2.445</td>
<td>-123</td>
<td>-0.354</td>
</tr>
<tr>
<td>E_QUAN</td>
<td>22,000</td>
<td>56,000</td>
<td>-206</td>
<td>-1.191</td>
<td>-596</td>
<td>-1.719</td>
</tr>
<tr>
<td>E_QUAL</td>
<td>17,000</td>
<td>42,000</td>
<td>-176</td>
<td>-1.014</td>
<td>-484</td>
<td>-1.399</td>
</tr>
<tr>
<td>SE</td>
<td>6,000</td>
<td>21,000</td>
<td>-401</td>
<td>-2.316</td>
<td>326</td>
<td>0.942</td>
</tr>
<tr>
<td>Multivariate</td>
<td>18,699</td>
<td>11,779</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The AMOS 22 output results show that the critical ratio skewness value indicates that the data set is normally distributed because each critical ratio value of the variable is between -2.58 to 2.58. Meanwhile, the multivariate critical ratio value is 1.322 so it can be concluded that this study has normal distribution data.

Table 2: Data Outliners Testing Results

<table>
<thead>
<tr>
<th>Asumsi</th>
<th>Mahalanobis Distance (d2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maks.</td>
</tr>
<tr>
<td>Outliers</td>
<td>25,538</td>
</tr>
</tbody>
</table>

Table 2 shows that the outliers data which can be seen from the mahalanobis distance value have the values of $\rho_1$ and $\rho_2$. Outliers data have one of the values $\rho_1$ and $\rho_2$ produced that is worth <0.05. Based on the test results in Table 4.17, Outliers Data Testing Results, the farthest distance from the d-square mahalanobis value is 25.538 and the closest distance is 5.684. The $\rho_1$ and $\rho_2$ values of the data with the farthest mahalanobis value are 0.01 and 0.115 where one of the $\rho_1$ and $\rho_2$ values means <0.05 so it can be said that there are no outliers data.

Multicollinearity can be seen through the determinant of the covariance matrix. Very small covariance matrix values give an indication of multicollinearity or singularity problems. Multicollinearity shows the conditions in which between causal variables there is a perfect linear relationship, exact, perfectly predicted or singularity (Kusnendi, 2008: 51). The output results provide a determinant of sample covariance matrix value = 8015,348. This value is far from zero so it can be interpreted that there is no multicollinearity and singularity in the analysed data.

The model used in this study was taken based on the theory from the research of Amjad Shamim and Muhammad Mohsin Butt in 2013 and Mohsin Altaf, Naveed Iqbal, Sany Sanuri Mohd Mokhtar, Maqbool and Hussain Sial in 2017 who obtained the findings of e-wom creation through variable purchase decision. The initial model specifications in this study are shown in Figure 2 below:
After the model was made, the data that had been through the basic assumption testing stage can be added to the research model for the next SEM testing phase. The data added consisted of 200 samples with a total of 27 question items, 17 items for e-wom variable questions and 10 items for purchase decision variable questions.

The measurement model estimation test results show that the overall model is fit and structural testing can be performed. All indicators and constructs that form each other in this research model can be said to be valid, because it shows the results of loading factors with a value > 0.5. The loading factor with the highest yield is e-wom quantity in forming e-wom with a value of 0.959. The lowest result is shown by e-wom quality in forming the e-wom dimension with a value of 0.820. Based on the measurement model estimation testing that shows the results of all dimensions and valid constructs (> 0.5), the test can be carried out to the next stage, namely structural model testing through testing fit.

Table 3: Measurement Model Estimation Test Results

<table>
<thead>
<tr>
<th>Estimate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>KPEM &lt;--- EWOM</td>
<td>.933</td>
</tr>
<tr>
<td>E_QUAL &lt;--- EWOM</td>
<td>.820</td>
</tr>
<tr>
<td>E_QUAN &lt;--- EWOM</td>
<td>.959</td>
</tr>
<tr>
<td>SE &lt;--- EWOM</td>
<td>.824</td>
</tr>
<tr>
<td>CE &lt;--- KP</td>
<td>.913</td>
</tr>
<tr>
<td>IN &lt;--- KP</td>
<td>.899</td>
</tr>
<tr>
<td>APS &lt;--- KP</td>
<td>.896</td>
</tr>
<tr>
<td>CTE &lt;--- KP</td>
<td>.896</td>
</tr>
</tbody>
</table>

The suitability of the measurement model is carried out for each construct (the relationship between latent variables and some observable variables/indicators) separately through an evaluation of the validity and reliability of the measurement model. The exogenous construct of e-wom is shown in the following figure 3.
Figure 3: Exogenous Constructive Measurement Model of e-WOM

Based on Figure 3 it can be seen that the overall e-wom construct measurement model can be said to be fit because it has a P-value = 0.00 > 0.05, an RMSEA value of 0.855 < 0.008 and a GFI and AGFI value greater than 0.9.

Figure 4: Endogenous Constructive Measurement Model of Purchase Decision

Based on Figure 4 it can be seen that the overall model can be said to be fit even though the value of P-value = 0.027 < 0.05 and the RMSEA value 0.114 > 0.080, and a GFI and AGFI value greater than 0.9.

Model analysis is related to the evaluation of parameters that shows a causal relationship or the effect of one latent variable on another latent variable. The following is an illustration of the standardized loading factor structural model estimation parameter. The structure of the e-wom model for purchasing decisions after the goodness of fit test is shown in Figure 5 is as follows:

Figure 5: Structure of the E-wom Model for Purchasing Decisions
Based on Figure 5 it can be seen that the estimated value of the parameters of each variable as presented in table 4 below:

<table>
<thead>
<tr>
<th>Model</th>
<th>( \text{Estimate}^* ) RW</th>
<th>SE</th>
<th>( \text{cr} )</th>
<th>( P )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP ( \leftarrow ) EWOM</td>
<td>1.263</td>
<td>0.933</td>
<td>0.087</td>
<td>14,562</td>
<td>***</td>
</tr>
</tbody>
</table>

The results of the significance test of the estimated path coefficients in the model after trimming are all significant at the 5% error rate or the \( P \)-value has a value < 0.05.

The overall model fit test is carried out to evaluate in general the degree of compatibility or goodness of fit. In testing the goodness of fit, the evaluation criteria can be done according to the opinions of various experts. In Table 5 the results of the goodness of fit testing show that all measures of goodness of fit are in accordance with recommendations and greater than the cut-off value, hence it can be concluded that the overall model is fit because the RMSEA value is 0.032 ≤ 0.08 (good fit), AGFI value is 0.953 ≥ 0.90 (good fit), and TLI value is 0.99799 0.90 (good fit).

In the goodness of fit test of this research model, there is a criterion value that has fulfilled the requirements by having a good fit value. So it can be said that this model is declared marginally feasible to be used as a tool in confirming a theory that has been built based on existing observational data or it can be said that this model is fit or acceptable.

<table>
<thead>
<tr>
<th>No</th>
<th>Goodness-of-Fit Measures</th>
<th>Cut-off value</th>
<th>Result</th>
<th>Model Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute Fit Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Probabilities</td>
<td>&gt; 0.05</td>
<td>0.295</td>
<td>Good Fit</td>
</tr>
<tr>
<td>2</td>
<td>Goodness of Fit Index (GFI)</td>
<td>GFI ≥ 0.90 good fit, 0.80 ≤ GFI &lt; 0.90 marginal fit</td>
<td>0.987</td>
<td>Good Fit</td>
</tr>
<tr>
<td>3</td>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>≤ 0.08</td>
<td>0.032</td>
<td>Good Fit</td>
</tr>
<tr>
<td></td>
<td>Incremental Fit Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Trucker-Lewis Index (TLI)</td>
<td>TLI ≥ 0.90 good fit, 0.80 ≤ TLI &lt; 0.90 marginal fit</td>
<td>0.997</td>
<td>Good Fit</td>
</tr>
<tr>
<td>2</td>
<td>Adjusted Goodness of Fit Indices (AGFI)</td>
<td>≥ 0.90</td>
<td>0.953</td>
<td>Good Fit</td>
</tr>
<tr>
<td>3</td>
<td>Comparative Fit Index (CFI)</td>
<td>CFI ≥ 0.90 good fit, 0.80 ≤ CFI &lt; 0.90 marginal fit</td>
<td>0.999</td>
<td>Good Fit</td>
</tr>
<tr>
<td></td>
<td>Parsimonious Fit Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis testing is done using t-value with a significance level of 0.05 and a degree of freedom of n (sample). The t-value in the IBM SPSS AMOS version 22 program is a Critical Ratio (CR) value. If the Critical Ratio (CR) ≥ 1.967 or the probability value (P) ≤ 0.05, then H0 is rejected (research hypothesis is accepted). The criteria for acceptance or rejection of the main hypothesis in this study can be written as follows:

\[ H_0 \quad \text{CR} \leq 1,967 \text{ meaning that there is no influence between e-wom and the purchasing decision} \]

\[ H_1 \quad \text{CR} \geq 1,967 \text{ meaning that there is an influence between e-wom and the purchasing decision} \]

The AMOS 22 data processing obtained CR values of 14.568 from the e-wom variable to the purchasing decision. The CR value is ≥ 1,967 so H0 is rejected and H1 is accepted, meaning that there is an influence of e-wom on the purchasing decision. The magnitude of the influence of e-wom on purchasing decisions is positive at 0.870 seen from the total effect output. With this value it can be said that there is a significant positive influence between e-wom on the purchasing decision of 0.870 one unit of value. The results of testing these hypotheses are in line with previous researches conducted in the social media context which suggested that the purchasing decision is influenced by the existence of e-WOM (Chun Lin et al., 2016; Chen et al., 2015).

5 Conclusion

E-WOM has a positive and significant influence on purchasing decisions on visitors of online hotel reservation site. This shows that the better the relationship built, the better the purchasing decision. Thus, online hotel reservation sites must maintain, supervise and enhance e-WOM by providing experience through e-WOM quality, e-WOM quantity, and sender’s expertise to support business development.

Companies should be more intimate with consumers by being more active in social media to provide information about the latest products and various types of promotions available on online hotel reservation sites. Through social media, companies can build the intensity of good relationship with customers and build quality trust with customers.
6 References


