Analysis of Online Consumer Review and Online Consumer Rating to Consumer Trust and Purchase Decision on E-Commerce Jakmall.Com

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Abstract: This research aims to analyze the effect of Online Consumer Review and Online Consumer Rating variables on Consumer Trust and Purchasing Decisions at Jakmall.com. This research uses quantitative research methods with explanatory and survey approaches. The study population are consumers who have purchased products at E-commerce Jakmall.com and the number of research samples is 150 respondents. The sampling method is done by using the Purposive Sampling method. Hypothesis testing proposed in this study carried out with a Structural Equation Model (SEM) test tool using LISREL 8.8 software. The results of the structural model analysis show that the Online Consumer Review and Online Consumer Rating variables have a positive and significant effect on the Consumer Trust. In addition the Online Consumer Rating variable also has a positive and significant effect on Purchasing Decisions, while the Online Consumer Review variable has a positive and not significant effect on Purchasing Decision at Jakmall.com.

Keywords: Online Consumer Review, Online Consumer Rating, Consumer Trust, Purchase Decision.

I. INTRODUCTION

Before, shopping activities carried out offline by coming directly to scattered stores in several shopping centers are now increasingly widespread to do online through various E-Commerce. Research titled "e-Conomy SEA 2018" initiated by Google and TEMASEK, states that Indonesia is a country with the largest digital economic growth in the Southeast Asian Region.

Interestingly, in the E-Commerce sector, Indonesia is the market leader with a business value of $12 billion in 2018 and will contribute $53 billion in 2025. E-Commerce in Indonesia also have experienced an increase in transactions number is Jakmall.com. There is a phenomenon that although only 3 years old in 2019, in 2018 towards the first quarter of 2019 the number of paid transactions on Jakmall.com continued to increase positively.

Among the many features of E-Commerce, Online Consumer Review and Online Consumer Rating has attracted a lot of attention from academics and the public as one of the influential factors in determining purchasing
decisions for consumers in the world of E-Commerce. Klein (2017: 36 - 37) explains that with the seller’s reputation system in the E-Commerce platform, users of the platform as buyers can get a picture or knowledge related to seller behavior from the assessment of previous buyers. Researchers also want to find out whether Consumer Trust or Consumer trust factors become an Intervening that influences the relationship between Online Consumer Review and Online Consumer Rating on Purchasing Decisions at Jakmall.com.

This research also in line with research by Althaf and Andriani (2018) regarding the influence of Country of origin and Online Consumer Review on Consumer Trust and Purchasing Decisions, they find that Online Consumer Review has a significant effect on Consumer Trust and on Purchasing Decisions, even Consumer Trust variables also has a significant effect on Purchasing Decisions. Farki and Baihaqi (2018) also conducted research on the effect of Online Consumer Review and Rating on Trust and Purchasing Interests in Online Marketplace in Indonesia, but the findings were slightly different from the above research results, that Online Consumer Review and Rating did not have a relationship or influence significant to Consumer Confidence. To further strengthen the alleged factors causing an increase in paid transactions at Jakmall.com, then in the initial steps of the study, the researcher made a preliminary survey of 30 respondents, 30 consumers who had already bought products at Jakmall.com.

Results for pre-survey questions according to Table 1 above show that more consumers agreed that they buy products at Jakmall.com because they trust Jakmall.com. Interestingly, the data also shows that Consumers agree that they increasingly trust to buy products on Jakmall.com because they see Reviews (Reviews) and Product Ratings from other Consumers at Jakmall.com.

### Table 1: Pre-Survey Results Regarding Purchasing Decisions at Jakmall.com

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Answers</th>
<th>Total Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Are you buying products at Jakmall.com because you trust Jakmall.com?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2.</td>
<td>When you buy products at Jakmall.com, are you more Confident / Trust Because you see reviews of other consumer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>3.</td>
<td>When you buy products at Jakmall.com, are you more Confident / Trust Because you see Product Ratings of other consumer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Researchers data processed, 2019

II. THEORY STUDY

#### Online Consumer Review

European Paliament (2015) states that Consumer Review is an opinion or product experience provided by consumers from services obtained or products from a business, Consumer Review is usually found on websites that have many retailers, booking agents and trading schemes which is trusted and helps consumers to find their needs from producers. Mudambi (2010) explains that Online Review is a form of E-WOM which refers to a content created by consumers with experience that has been owned in making a purchase then posted on the Online site in written form or points given directly by consumers. Schepers (2015) measures the Online Consumer Review with the following indicators (1) Argument Quality, (2) Source Credibility, (3) Valence, (4) Timeliness.

#### Online Consumer Rating

Online Rating is a part of Online Review that has a certain rating scale. Forms of Online Rating on existing E-commerce sites or platforms are usually displayed in the asterisks form (Auliya, Umam and Prastiwi, 2017: 92). Ratings, according to Farki, Baihaqi, and Wibawa (2016: 615) are part of consumer reviews given in the form of star symbols that can express opinions of consumers. Ranking or Rating of products online is one way consumers think about the quality of products online, although there is a bias occurs in the measurement, this is mainly due to product ratings by consumers that reflect global customer satisfaction, not only on the product alone, but also on how consumers are served by online sellers (Engler et al., 2015).

#### Consumer Trust

According to Mowen and Minor (2002) consumer trust implies that all knowledge possessed by consumers and all conclusions made by consumers regarding objects, attributes and benefits. Dutta et al (2011) in Trisnawati, et al (2012) define trust as the person who is most often guarded about their privacy when they do not have trust in others. There are 3 important dimensions of Consumer Trust according to Chen and Dhillon (2003), namely (1) Competence, (2) Integrity, (3) Benevolence.
Purchase Decision

Schiffman and Kanuk (2007: 485) say that according to the most common understanding a decision is a selection of two or more alternative choices. In other words, alternative choices must be available to someone when making a decision. If someone has a choice between making a purchase and not making a purchase, a choice between brand X and brand Y, or the choice to use the act of doing "A" or "B", that person is in a position to make a decision. The dimensions of the purchase decision variable used in this study based on Kotler and Keller (2012: 178) are (1) Product selection, (2) Number of purchases, (3) Time of purchase.

Framework for Thinking

Based on the problem formulation, a description of the theories and previous studies of variables Online Consumer Review, Online Consumer Rating and its effect on Consumer Trust and Purchasing Decisions, the theoretical framework proposed in this study is illustrated as follows:

III. METHOD

Hypotheses

Based on the relationship between research objectives and theoretical frameworks on problem formulation, hypotheses can be formulated as follows:

H₁: Online Consumer Review (X₁) effect on Consumer Trust (Y₁) in Jakmall.com
H₂: Online Consumer Rating (X₂) influences Consumer Trust (Y₁) on Jakmall.com
H₃: Online Consumer Review (X₁) influences the Purchasing Decision (Y₂) at Jakmall.com
H₄: Online Consumer Rating (X₂) influences the Purchasing Decision (Y₂) at Jakmall.com
H₅: Consumer Trust (Y₁) influences the Purchasing Decision (Y₂)

Data Collection Methods

Primary data were obtained from distributing questionnaires to consumers who had bought products at Jakmall.com E-commerce. The questionnaire was arranged in closed questions covering form of Online Customer Review, Online Consumer Rating, Consumer Trust, and Purchase Decisions using Likert scale. Respondent’s answers weighted and processed with statistical measurement tools to get a quantitative approach to the research question. Secondary data in this study refers to information collected from sources that already exist, such as Hair et al. (2006: 197), in Mulya Yunisya (2015), that the number of study samples that were unknown to the exact population must be at least five times the analyzed variables or indicators. The design of this study has 22 indicators, so the number of samples taken in this study is a minimum of 110 samples with the following calculation:

Number of indicators = 22 indicators
Number of samples = number of indicators x 5
= 22 x 5 = 110 samples

to avoid incomplete samples or unprocessed, the number of samples taken is 150 research samples. The sampling method is done by Purposive Sampling method.
as company records or documentation, government publications, industry provided by the media, websites and others.

- **Data Analysis Techniques**

  Analysis techniques used in this study are *Structural Equation Modeling* (SEM). According to Ghozali (2012) SEM is a second generation analysis technique *multivariate* that allows researchers to examine the relationship between complex variables both *recursive* and *non-recursive* to obtain a comprehensive picture of the whole model.

### IV. RESULTS

- **Respondents Characteristics**

  Characteristics of gender based respondents result in 141 men (94.00%) than 9 women (6.00%). Furthermore, from the respondents age, 6 people (4.00%) of respondents aged between 21-25 years, 16 people (10.67%) of respondents aged between 26-30 years, 106 people (70.67%) of respondents aged between 31-50 years, and 22 people (14.67%) of respondents aged between 51-80 years. By profession, 3 respondents (2.0%) are students, 113 respondents (75.33%) are private employees, 16 respondents (10.67%) had jobs as civil servants / BUMN, 13 respondents (8.67%) had jobs as entrepreneurs / entrepreneurs, and 5 respondents (3.33%) had retired / other jobs.

- **Validity Test**

  Validity test is done by testing the factor analysis of the variables in this study, said to be valid if the value of KMO ≥ 0.5. The validity test results in this study indicate that all latent variables in this study have good validity because the KMO value is greater than 0.5.

<table>
<thead>
<tr>
<th>Number</th>
<th>Variable</th>
<th>KMO and Bartlett’s Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Online Consumer Review (X₁)</td>
<td>0.742</td>
<td>Valid</td>
</tr>
<tr>
<td>2</td>
<td>Online Consumer Rating (X₂)</td>
<td>0.806</td>
<td>Valid</td>
</tr>
<tr>
<td>3</td>
<td>Consumer Trust (Y₁)</td>
<td>0.820</td>
<td>Valid</td>
</tr>
<tr>
<td>4</td>
<td>Purchase Decision (Y₂)</td>
<td>0.799</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Table 2: Validity Test Results
Source: Data Processed from SPSS 25 (2019)

- **Reliability Test**

  Reliability test shows the indicators have good consistency in measuring the latent variable if the value of *Cronbach’s alpha* (α) ≥ 0.6. The validity test results in this study indicate that all latent variables in this study are reliable because the value of *Cronbach’s alpha* (α) is greater than 0.6.

<table>
<thead>
<tr>
<th>Number</th>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Online Consumer Review (X₁)</td>
<td>0.814</td>
<td>Reliable</td>
</tr>
<tr>
<td>2</td>
<td>Online Consumer Rating (X₂)</td>
<td>0.875</td>
<td>Reliable</td>
</tr>
<tr>
<td>3</td>
<td>Consumer Trust (Y₁)</td>
<td>0.865</td>
<td>Reliable</td>
</tr>
<tr>
<td>4</td>
<td>Purchase Decision (Y₂)</td>
<td>0.863</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

Table 3: Reliability Test Results
Source: Data Processed from SPSS 25 (2019)

- **Overall Model Match Analysis**

Fig 3: Overall Variable Model
Source: Analysis results using Lisrel 8.8
The research data were conducted using maximum likelihood method in the Lisrel 8.80 application. Based on data processing, goodness of fit is the structural equation that described in Table 4 below:

<table>
<thead>
<tr>
<th>Goodness of Fit</th>
<th>Fit</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normed Chi-Square (χ²/ df)</td>
<td>&lt;2.0</td>
<td>1,371</td>
</tr>
<tr>
<td>P Value</td>
<td>0.05 &lt; p ≤ 1.00</td>
<td>0.01 &lt; p ≤ 0.05</td>
</tr>
<tr>
<td>Root Mean Square Error (RMSEA)</td>
<td>≤0.08</td>
<td>0.80 - ≤0.09</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>≥ 0.90</td>
<td>0.70 ≤0.90</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
<tr>
<td>Normal Fit Index (NFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
<tr>
<td>Non-normed Fit Index (NNFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
<tr>
<td>Incremental Fit Index (IFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
<tr>
<td>Relative Fit Index (RFI)</td>
<td>≥ 0.90</td>
<td>0.80 - &lt;0.90</td>
</tr>
</tbody>
</table>

Table 4: Goodness of Fit Full Model

Source: Lisrel Output (2019)

The results of SEM analysis illustrate the value of GFI 0.89 approaching 0.90 (model fit), RMSEA value of 0.05 <0.08 (model fit), this shows that the structural equation model satisfies the absolute fit measure requirements, which means the model the structural equation in this study as a whole is in conformity with the data. In the incremental fit measure requirements NNFI / TLI value 0.97 ≥ 0.90 (model fit), CFI value 0.99 ≥ 0.90 (model fit), and IFI 0.99 ≥ 0.90 (model fit), indicating that the structural equation model meets the incremental fit measure requirements, then for parsimonious fit measure requirement normed chi-square value of 1,371 <2.0 (model fit), and p value 0.0031 > 0.05 (Marginal Fit), shows that the structural equation model meets the parsimonious fit measure condition which means that the overall equation model Structural in this study has a comparative suitability with the baseline model (null model). Thus overall the structural equation model in this study is considered fit and is able to provide a good picture of the research data.

Hypothesis Testing

Based on the results of hypothesis testing it is found that all hypotheses are accepted.

<table>
<thead>
<tr>
<th>Relationship Between Constructive</th>
<th>Estimates</th>
<th>T-Values</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Consumer Review -&gt; Consumer Trust</td>
<td>0.250</td>
<td>2.280</td>
<td>Significantly Positive</td>
</tr>
<tr>
<td>Online Consumer Rating -&gt; Consumer Trust</td>
<td>0.610</td>
<td>5.150</td>
<td>Significantly Positive</td>
</tr>
<tr>
<td>Consumer Trust -&gt; Purchasing Decisions</td>
<td>0.510</td>
<td>3.330</td>
<td>Significantly Positive</td>
</tr>
<tr>
<td>Online Consumer Review -&gt; Purchasing Decision</td>
<td>0.074</td>
<td>0.670</td>
<td>Positive</td>
</tr>
<tr>
<td>Online Consumer Rating -&gt; Purchasing Decision</td>
<td>0.430</td>
<td>2.940</td>
<td>Significantly Positive</td>
</tr>
</tbody>
</table>

Table 5: Hypothesis Testing

V. DISCUSSION

Effect of Online Consumer Review (X1) Against Consumer Trust (Y1)

The research hypothesis (H1) states that the Online Consumer Review has a positive effect and significant directly on Consumer Trust. Test results with SEM show that Online Consumer Review influences positively and significantly on Consumer Trust, this can be seen from the t-value 2.28 greater than 1.96, and the estimated value of 0.25 or 25.0% influence on Consumer Trust. In other words, Consumer Trust at Jakmall.com is significantly influenced by Online Consumer Reviews or product reviews. These results indicate that the better the Online Consumer Review given by other consumers to the product, the Consumer Trust will also increase.

The results of this study also confirm the results of research from Revi Althaf (2018). The results showed that the Online Consumer Review variable had a positive and significant effect on Consumer Trust (Y1). This means that reviews given by other consumers online can lead to trust for consumers. Based on these empirical facts and supported by the results of previous studies it can be concluded that the research hypothesis (H1) can be accepted that the Online Consumer Review variable had a positive and significant effect directly on Consumer Trust.

Effect of Online Consumer Rating (X2) Against Consumer Trust (Y1)

Research hypothesis (H2) states that Online Consumer Rating has a positive and significant effect directly on Consumer Trust. Test results with SEM show that the Online Consumer Rating has a positive and significant influence on Consumer Trust, this can be seen from the t-value 5.15 greater than 1.96, and the estimated value of 0.61
or 61.0% influence on Consumer Trust. In other words, Consumer Trust at Jakmall.com is significantly influenced by Online Consumer Rating. These results indicate that if the Online Consumer Rating has increased it will affect the Consumer Trust. Based on these empirical facts it can be concluded that the research hypothesis (H2) can be accepted that the Online Consumer Rating has a positive and significant effect directly on the Consumer Trust.

- The Effect of Online Consumer Review (X1) on Purchasing Decisions (Y2)

The research hypothesis (H3) states that Online Consumer Review influences Purchasing Decisions. The test results with SEM show that the Online Consumer Review has a positive effect but does not significantly influence the Purchasing Decision, this can be seen from the t-value 0.67 smaller than 1.96. In other words, the Purchasing Decision at Jakmall.com is influenced positively but not significantly by the Online Consumer Review. The results of this study also confirm the results of research from Fransiska (2017) with a sample of 150 respondents taken by purposive sampling techniques and data analysis techniques using multiple linear regression analysis accompanied by the F test (in unison) and t test (partial). Research from Fransiska (2017) shows that product reviews (Online Consumer Review) have a positive and not significant effect on online purchasing decisions. Based on these empirical facts and supported by the results of previous studies it can be concluded that the research hypothesis (H3) can be accepted that the Online Consumer Review influences the Purchasing Decision.

- Effect of Online Consumer Rating (X2) on Purchasing Decisions (Y2)

The results of this study also confirm the results of research from Farki, et al (2016) which also uses structural equation sampling (SEM) analysis. The results obtained from the study are Online Consumer Rating proven to have a significant effect on Purchasing Decisions. Furthermore, in a previous study conducted by Yayli, et al. (2012), the results showed that the Online Consumer Rating variable had a significant effect on Purchasing Decisions. This means that Rating given by other consumers online can improve consumer purchasing decisions. Based on these empirical facts and supported by the results of previous studies it can be concluded that the research hypothesis (H4) can be accepted that the Online Consumer Rating has a positive and significant effect directly on Purchasing Decisions.

- Effect of Consumer Trust (Y1) on Purchasing Decisions (Y2)

The research hypothesis (H5) states that Consumer Trust has a positive and significant direct effect on Purchasing Decisions. Test results with SEM show that Consumer Trust positively and significantly influences Purchasing Decisions, this can be seen from the t-value 3.33 greater than 1.96, and the estimated value of 0.51 or 51.0% influence on Purchasing Decisions. In other words, the Purchasing Decision at Jakmall.com is significantly influenced by the Consumer Trust. These results indicate that the increasing Online Consumer Trust will further increase Purchasing Decisions.

The results of this study also confirm the results of research from Jianfeng, et al (2016) which states that the Consumer Trust is proven to have a significant effect on Purchasing Decisions. Furthermore, in a previous study conducted by Revi Althaf (2018) showed that the Consumer Trust variable had a positive and significant effect on Purchasing Decisions. Based on these empirical facts and supported by the results of previous studies it can be concluded that the research hypothesis (H5) can be accepted that the Consumer Trust has a positive and significant direct effect on the Purchasing Decision.

VI. CLOSING

- Conclusions

The conclusions that can be drawn from the study are as follows:
1. Online Consumer Review has a significant positive effect on Consumer Trust at Jakmall.com. Thus, if the Online Consumer Review increases, there will also be an increase in Consumer Trust at Jakmall.com.
2. Online Consumer Rating has a significant positive effect on Consumer Trust at Jakmall.com. Thus, if the Online Consumer Rating increases, there will also be an increase in Consumer Trust at Jakmall.com.
3. Online Consumer Review has a positive but not significant effect on Purchasing Decisions at Jakmall.com. Thus, if the Online Consumer Review increases, it will positively influence the increase in Purchasing Decisions at Jakmall.com.
4. Online Consumer Rating has a significant positive effect on Purchasing Decisions at Jakmall.com. Thus, if the Online Consumer Rating increases, there will also be an increase in Purchasing Decisions at Jakmall.com.
5. Consumer Trust has a significant positive effect on Purchasing Decisions at Jakmall.com. Thus, if Consumer Trust increases, there will also be an increase in Purchasing Decisions at Jakmall.com.

- Advice

Based on the results of research conducted, the authors provide the following suggestions:
1. Online Consumer Rating and Consumer Trust turned out to be a purchasing decision at Jakmall.com. Thus, Jakmall.com needs to further improve the quality and development of these two things. For example, by presenting a Product Filter based on the Number of Online Consumer Ratings to make it easier for buyers to be more confident buying a product on Jakmall.com.
2. After this research and similar studies have been conducted on buyers in e-commerce, then for further researchers, it is recommended to be able to conduct research on the Trust of Sellers in deciding to sell in e-commerce.
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