Consumer Intention Index in Batik Industry Using Structural Equation Modeling

Keni Keni1*, Lerbin R. Aritonang R.1, Ary Satria Pamungkas1

1Faculty of Economics and Business, Universitas Tarumanagara, West Jakarta, Indonesia, 11470
*Corresponding author. Email: keni@fe.untar.ac.id

ABSTRACT
This is a continuation of previous research conducted by the same researchers. However, apart from including subjects from Malaysia, the antecedent variables are different. All variables were measured using a Likert-scale with the scores ranging from 1 to 10. The convergent and discriminant validity, as well as the reliability of the instrument were tested empirically. From the results, it is known that trust has a direct effect on intention. In addition, both perceived value and perceived quality have a direct or indirect effect towards intention through trust. At the end of this article, suggestions for future research are also presented.

Keywords: Intention, Trust, Perceived Value, Perceived Quality, Consumer Intention Index

1. RESEARCH INTRODUCTION

Consumer satisfaction has been a trend in consumer behavior research, because satisfaction is considered to be able to explain and / or predict the loyalty or buying behavior [1][2][3]. In relation to that, consumer behavior researchers were motivated to develop consumer satisfaction indexes in several countries [4][5], even for Europe [6].

In further developments, it is known that satisfaction cannot be used to predict buying behavior unless through mediator and moderator variables [7][8][9][10][11].

In addition, according to the Theory of Reasoned Action, it is stated that the variable that can directly explain buying behavior is the intention [12]. However, consumer behavior researchers do not seem interested in developing a consumer intention index through a model such as the consumer satisfaction index, even though the consumer intention index should be more important for explaining or predicting consumer buying behavior.

After browsing the internet, only two studies have developed the consumer intention index. The first is the consumer intention index model developed through a model consisting of perceived benefits, knowledge of returned products, market characteristics, behavior after buying, perceived risk, and intention to return the products in the context of used products in India [13]. Then, there is the model developed in a study of Batik consumer intention index in Indonesia using a model consisting of intention, satisfaction, and previous buying behavior [14].

A company can survive if there is sufficient cash inflow. The cash inflow is obtained from the sale of the company’s products, through the purchase of the company’s products by buyers. The variable that is best for both explaining and predicting the product purchase is the intention to purchase it [12]. One measure of purchase intention is the consumer intention index. Explaining or predicting consumer intentions can be done by arranging several variables that precede it. The arrangement is usually expressed in form of a structural equation.

This research is a further development of a previous research conducted by [14]. This development includes increasing the coverage of the subject, such as from Malaysia, and by using a model consisting of intention, trust, perceived value, and perceived quality.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Intention. “Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” [15]. On that basis, it can be seen that people with high intention to perform a behavior have a strong motivation to realize that behavior. Therefore, the probability that the behavior will be realized increases [12].

Trust. Trust is defined as “...an expectancy held by an individual or group that the word, promise, verbal or written statement of another individual or group can be relied upon” [16]. This definition is often used as a reference for trust. From this definition, it can be seen that trust involves two different parties, namely those who trust and those who are trusted. Trust can relate to words, promises, oral or written statements from the trusted party. Therefore, trust refers to an expectation regarding the realization of these words, promises, and statements in the future.

Trust can also be defined as follow: “Trust is defined as a willingness to rely on an exchange partner in whom one has confidence” [17]. The emphasis in that definition is about a willingness to trust others. Trust occurs when one party has confidence in the reliability and integrity of its partners [18][19]. Therefore, trust is based on the willingness to trust the reliability and integrity of the trusted party. Trust is also related to hope, which is something that is yet to happen. It can be seen from the definition of trust, that is “...
generalized expectancy held by an individual that word of another. . . can be relied on" [16] Thus, trust is also related to the realization of the words of the trusted party. In relation with the expected results, this expectation includes the actions of other parties that lead to positive results and not negative results (benevolence) [20].

**Perceived value.** There are many definitions of perceived value [21][22][23][24]. However, the gist of it is that the value perceived by consumers is the consumer's perception of the comparison between the price or sacrifice to obtain the product, and the benefit of that product. In accordance with the word "perception" used in this variable, it means that the value is subjective. This is in accordance with a statement by [24] that perceived value is a comprehensive assessment of the benefits of goods or services based on consumers’ perceptions of what they receive and what they pay for it. The value can be expressed as the total value offered to consumers lower than the cost or sacrifice [25][26].

**Perceived quality.** Quality is the "conformance to requirements" [27]. Therefore, something is declared on quality if it is in accordance with the demands. Another definition proposed that perceived quality is "the customer’s judgement of the overall excellence, esteem, or superiority of a brand (with respect to its intended purposes) relative to alternative brand(s)" [28]. From Netemeyer’s definition, it is known that customer’s judgements on excellence, esteem, or superiority of a brand determine its perceived quality compared to its competitors. Regarding the subject that determines the quality of a product, it is stated that "Quality is a multifaceted concept. For us, it is a matter of satisfying the needs and meeting the expectations of three main groups: customer, staff and owners" [29]. Therefore, the subjects that determine the quality of a product are consumers, workers, and product owners.

**Intention and Trust.** In the Theory of Reasoned Action [12] and Theory of Planned Behavior [15], it is stated that an individual's intention to do something begins with their trust that the behavior is possible. Consumers’ trust in the competence, reliability, and integrity of parties associated with a product will determine the consumers’ intention to keep buying the product in the future [30][31][32]. Research on the relationship between trust and intention has been tested by several researchers [30][31][33][34][35][36][37][38]. From the results of these studies and the previous explanations, a hypothesis (H₁) can be formulated that trust is a positive predictor of consumer intention to keep purchasing the same product.

**Trust and Perceived Value.** One of the goals of buying and consuming a product is to obtain the value or benefits of that product. If the buyer perceives that the value they seek can be fulfilled through a product, then they will trust that product. This is in accordance with the opinion of [18] that the benefit obtained from a product is a prerequisite for trust in that product. Therefore, the value obtained from the purchase of a product will be an antecedent of trust in that product [9][39][40].

Several research results show that perceived value is a positive predictor of trust [33][36][41][42][43]. Based on the previous explanation and the results of these studies, a hypothesis (H₂) can be formulated that perceived value is a positive predictor of trust.

**Trust and Perceived Quality.** Consumers buy and consume products based on the intensity of the attributes of that product. Products with the attribute intensity desired by consumers will create trust, which is in accordance with several research results [41][43][44][45][46][47][48][49]. On that basis, a hypothesis (H₃) can be formulated that perceived quality is a positive predictor of trust.

**Trust as Mediator.** From several research results, it is known that trust mediates the relationship between perceived value and perceived quality, and intention [33][41][43]. It means that perceived value and perceived quality might be indirectly related to intentions through trust. On this basis, a hypothesis (H₄) can be formulated that trust can mediate the relationship between perceived value and perceived quality, and intention.

3. RESEARCH METHODOLOGY

**Research Design.** This study was intended to explain the relationship between variables without treatment variable, therefore it is classified as a descriptive research [50]. This design is characterized by hypothesis testing with a relatively large number of subjects using classical instruments.

**Research Subjects.** This research subjects consist of 208 Batik consumers in Indonesia and 204 batik consumers in Malaysia. This amount exceeds the minimum subject size to use Structural Equation Modeling (SEM) in this study, which is at least 200 [51].

**Research Instrument.** This research instrument used a modified Likert-scale, with options from 1 to 10 [4][52]. The response options ranged from strongly disagree to strongly agree. Each variable is measured by six statements. Intention and Trust variables used instruments developed by [50]. The instruments for Perceived Value and Perceived Quality were developed by the researchers themselves.

**Data Analyses.** All analyses in this study were conducted by SEM using the LISREL application. The overall conformity statistics between the model and the data is still relatively good, as known from the RMSEA (Root Mean Square Error of Approximation) of 0.094 which is still smaller than 0.10 [53]. Likewise, the CFI (Comparative Fit Index) is 0.97, which is still greater than 0.90 [54]. On that basis, further analysis regarding the measurement model (validity and reliability) and the structural model (hypothesis) in this study can be continued and applied.

**Validity and Reliability.** The convergent validity of the statements of each instrument is presented in Table 1, whereas it can be seen that the factor load of each statement on each variable ranges from 0.570 to 0.860 for Intention, from 0.490 to 0.780 for Trust, from 0.730 to 0.830 for the Perceived Value, and from 0.660 up to 0.890 for Perceived Quality. (The path diagram is presented in Figure 1.) Therefore, the factor load of each statement is still relatively high. In addition, each statement has a very small probability of Type I error (rejecting the correct statistical hypothesis), which is 0.000. Likewise, in Table 1 the
convergent validity statistics of each variable can be seen, which is the AVE (Average Variance Extracted) for each variable that is greater than or equal to 0.500, therefore it is still adequate [55].

The discriminant validity of each variable is presented in Table 2, which shows that the AVE of each variable is greater than the coefficient of determination of each variable with other variables, therefore the discriminant validity of each variable is considered good [55].

<table>
<thead>
<tr>
<th>Table 1 Convergent Validity and Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>AVE</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

*p = 0.000

<table>
<thead>
<tr>
<th>Table 2 Discriminant Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVE</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Intention</td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>Perceived value</td>
</tr>
<tr>
<td>Perceived quality</td>
</tr>
<tr>
<td>RC**</td>
</tr>
</tbody>
</table>

* the values in the column of each variable is the determinant coefficient
** Reliability coefficient

In Table 2, it is illustrated that each variable has a reliability coefficient greater than 0.7, so it is considered reliable [55]. From the validity and reliability statistics above, it can be concluded that the instruments used in this study are viable for use, therefore, this study can proceed with hypothesis testing presented in the structural model.

4. RESULTS AND DISCUSSIONS

Descriptive statistics regarding the participants of this study are presented in Table 3, Table 4, and Table 5. In Table 3, it can be seen that the sample is amounted to 412 respondents, consisting of 182 men and 230 women. The mean age was 18.5 years old with a standard deviation of 12 years old. The occupations demography (Table 4) consists of 53 state employees, 68 private employees, 11 police / army, 44 entrepreneurs, and 236 students. In Table 5, the mean of each variable is presented, ranging from 7,081 to 7,880, with the standard deviation ranging from 1,341 to 1,746. The score ranges from 1,000 to 10,000.
The path diagram in this study is presented in Figure 1. A description of the overall suitability and measurement model has been presented in the previous article. The results related to the structural model, other than in Figure 1, are also presented in Table 6. Based on the Figures and Tables, it can be seen that the total effect of trust on intention is equal to 0.55, with the t-statistics equal to 5.70 (> 1.96) so that the effect was empirically supported. In other words, this result is in accordance with the H1 of this study. The direct effect of perceived value on trust is 0.55 with the t-statistics equal to 5.70 (> 1.96). This means that H2 was empirically supported. The direct effect of perceived quality on trust is 0.27 with the t-statistics equal to 3.18 (> 1.96), therefore H3 was empirically supported.

### Table 5 Descriptive Statistics Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Average</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>412</td>
<td>1.00</td>
<td>10.00</td>
<td>7.081</td>
<td>1.746</td>
</tr>
<tr>
<td>Trust</td>
<td>412</td>
<td>1.67</td>
<td>10.00</td>
<td>7.493</td>
<td>1.341</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>412</td>
<td>1.83</td>
<td>10.00</td>
<td>7.880</td>
<td>1.445</td>
</tr>
<tr>
<td>Perceived Quality</td>
<td>412</td>
<td>1.67</td>
<td>10.00</td>
<td>7.612</td>
<td>1.460</td>
</tr>
</tbody>
</table>
The indirect effect of Perceived Value on Intention through Trust is 0.23 with the t-statistics equal to 3.93 (> 1.96). The indirect effect of Perceived Quality on Intention through Trust is 0.11 with the t-statistics equal to 2.63 (> 1.96). Thus, $H_3$ was empirically supported.

The direct effect of Perceived Value on Intention is equal to 0.35, which is greater than the indirect effect of Perceived Value on Intention through Trust (0.23). The direct effect of Perceived Quality on Intention is equal to -0.07, which is smaller than the indirect effect of Perceived Quality on Intention through Trust (0.11). In addition, Table 7 presents the results of a statistical comparison of all variables between the subjects from Indonesia and Malaysia using the independent t-test. Statistically, the Intention variable did not differ between the two subject groups, as known from the p-value (Type I Error probability, rejecting the true $H_0$) greater than 0.05, which is 0.977. The Trust variable ($p = 0.001$), the Perceived Value ($p = 0.042$), and the Perceived Quality ($p = 0.000$), all have p-values less than 0.05 so that the mean values of the three variables between the two subject groups were statistically different.

Another result is the Consumer Intention Index (CII). The combined CII obtained is equal to 70.8, while the CII for Indonesia is 71.8, and the CII for Malaysia is 70.8. So, all three CIIIs are practically the same, including when being compared to the previous research conducted by [14] in Indonesia, which was 73.6. The results regarding $H_4$ which states that there is a direct effect on intention were empirically supported, and this is in accordance with the results of previous studies by [30][31][32][33][34][35][36][37][38]. Therefore, if the prospective buyers or users of a product have trust in that product, they will have an intention to buy it. Conversely, if the trust in the product is low, then the intention to buy the product is also low.

The second hypothesis, which states that perceived value has a direct effect on trust was empirically supported in this study. If the buyers or consumers of a product have the perception that the product can meet the expected value, this means that they have trust in such product. This is supported by the findings of [9][18][39][40] which claimed that perceived value is the beginning of the emergence of trust in a product. These results are also consistent with previous studies conducted by [33][36][41][42][43].

Meanwhile, perceived quality is also found to have a direct effect on trust in this study, confirming the third hypothesis. The results are consistent with the existing similar studies [41][43][44][45][46][47][48][49]. This means that there will be trust in a product, if it is perceived as a quality product.

Fourth hypothesis, which states that the effect of perceived value and perceived quality on intention is mediated by trust in this study was empirically supported, of which this result is in line with those from the studies conducted by [33][41][43]. In this study, it was found that both perceived value and perceived quality has a direct effect on intention. The direct effect of perceived value on intention (0.35) is greater than its indirect effect on intention (0.23). This means that the total effect of the perceived value on intention is rather strong, which is 0.58. The direct effect of perceived quality on intention is negative and considered small (-0.07), while the indirect effect is positive (0.11), which means that the total effect of perceived quality on intention is 0.04. The indirect effect far outweighs the direct effect on intention. The change in the direct effect from a negative value to a positive indirect effect with a sufficiently large value, is an indication that the mediating role of trust is important.

The CII obtained in this study (70.8) is not quite different from the one obtained in the previous study (73.6) even though it uses different variables, except for the intention variable. The CII between the subjects from Indonesia (71.8) and those from Malaysia (70.8) only show minor differences.

In order for the external validity of the CII to be more widely tested, the formula for calculating the CII needs to be adjusted to the formulas commonly used internationally such as for the Consumer Satisfaction Index [5][56]. Thus, the contribution of each variable related to CII can be identified specifically, so it can be known what variables should be used to construct the CII model. In addition, it is necessary to apply CII to other products in order to improve their external validity.

<table>
<thead>
<tr>
<th>Table 6 Effect: Total, Direct, and Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention (TE)</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Intention</td>
</tr>
<tr>
<td>t-statistics</td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>t-statistics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 7 The Results of Independent t-Test: Indonesia and Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTA</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Intention</td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>Perceived Value</td>
</tr>
<tr>
<td>Perceived Quality</td>
</tr>
</tbody>
</table>
Aside from that, it is necessary to compare the CII model between countries. This is based on the results of the t-test in this study which shows that the mean value of trust, perceived value, and perceived quality is statistically different between the subjects in Indonesia and Malaysia. Thus, the results can be used as a basis for formulating product marketing strategies in the various countries studied.

5. CONCLUSION

Based on the discussions above, it can be concluded that all the research hypotheses are empirically supported, which are (1) Trust has a direct impact on Intention, (2) Perceived Value has a direct impact on Trust, (3) Perceived Quality has a direct impact on Trust, and (4) the impacts of Perceived Value and Perceived Quality on intention are mediated by Trust.

Furthermore, there are some identified limitations in this research which will help identify the suggestions for future research. First, the subjects of this research are only in Indonesia and Malaysia. Regarding that, future research has to expand the subject in other countries. Second, this research focused on one product, which is Batik. Batik is only known in a few countries, so another kind of products can be considered to be tested using this research model. Third, the method used to calculate the consumer intention index in this research is simple, which did not calculate the contributions of all research variables. For future research, the use of a method that is applied internationally needs to be adopted in order to find a result that can be compared with those of other researches. Fourth, this research model only covers trust, perceived quality, and perceived value, so it is suggested for future research to identify other variables, especially those which are more closely related to intention.

ACKNOWLEDGMENTS

This research is funded by the program known as the Basic Superior Research Grant for Higher Education (or PDUPT) for the Budget Year of 2020, with the Contract Number: 1081-SPK-KLPPM/UN TAR/VII/2020. Thus, the authors of this research would like to thank The Indonesia Ministry of Research and Technology especially The Board of National Research and Innovation (Kementerian Riset dan TeknologiBadan Riset dan Inovasi Nasional), The Director of Research and Community-Engagement Services of Universitas Tarumanagara, The Dean of Faculty of Economics and BusinessUniversitas Tarumanagara, as well as other parties who cannot be mentioned one by one.

REFERENCES


of Marketing Science, 16(1): 74-94.
https://doi.org/10.1007/BF02723327.
