The Impact of Consumer Purchase Behavior towards User Purchase at E-commerce (Tokopedia)

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ABSTRACT

With the rapid growth of e-commerce, businesses face the challenge of optimizing their strategies to attract and retain customers, while avoiding the common pitfall of burning money due to inefficient practices. Therefore, the treatment for digital customers is different from offline customers. This thesis explores the 7 main factors why users are convenient in shopping via Tokopedia. Through a comprehensive review of literature, the thesis provides insights into the concept of consumers’ reasons, needs and why it’s convenient to purchase via Tokopedia. The thesis then tries to give another insight into delivering the best services to its consumers by not only focusing on promotion but from another variable. In particular, the thesis focuses on the impact of trustworthiness, recommendation, promotion, brand ambassador, brand reputation, advertising, and delivery toward consumer purchase using quantitative methods. Quantitative data is obtained through a questionnaire survey with 350 respondents across Jakarta. The thesis will deliver new insights for Tokopedia for the further strategy to not only focus on promotion. The findings of the thesis demonstrate that Tokopedia strategy can focus on developing a more consumer-centric approach bigger than promotion.

Keywords: Brand Reputation, Consumer Purchase, Delivery, E-commerce, Promotion, Recommendation, Trustworthiness.

I. INTRODUCTION

E-commerce has become a big part of shopping in Indonesia, ranking 10th in the world in terms of online market size. Platforms like Tokopedia have made it easier for people to shop online. According to the Association of Internet Service Providers in Indonesia (APJII), approximately 77% of the total Indonesian population, or 210 million Indonesian people in 2022, has already become internet users (Arif, 2022). This behavior is expected and supported by Google, Temasek, and Bain & Company, the Indonesian e-commerce market is expected to reach 82 billion by 2025, with an estimated 100 million online shoppers.

The Covid-19 pandemic has also played a role in changing how people shop. With restrictions and limited interaction, many Indonesians started using e-commerce platforms for shopping. During the pandemic, the number of e-commerce users in the country increased by 110%, and even after the pandemic ended, about 93% of these users plan to continue using digital services. This trend has reshaped the retail industry and highlighted the importance of e-commerce.

To compete in this growing market, e-commerce companies use strategies like discounts and cashback to attract and keep customers. This is known as the “burning money” phenomenon. Despite the initial cost, it has been successful for many companies. However, as the situation changes, companies must also focus on cost optimization to ensure long-term success.

II. OBJECTIVES

This study aims to identify the primary drives behind consumer purchase decisions in Tokopedia. It aims to understand the variable which significantly impacts consumer purchase decisions in Tokopedia. This analysis will be using quantitative methods and PLS-SEM for the statistical method.

III. LITERATURE REVIEW

A. Theoretical Foundation

1) Online Marketplace

Indonesia is experiencing significant growth in its digital ecosystem, which includes various online services such as e-commerce, ride-hailing, logistics, and finance. In Southeast Asia, Indonesia has the highest number of billion-dollar technology start-ups known as unicorns, including companies like Tokopedia, Traveloka, Bukalapak, and Go-Jek. For the e-commerce industry, Shopee is the market leader in monthly traffic users for the fourth quarter of 2022 based on SimilarWeb.com.

2) The Purchase Decision Model: The Five Stages Model

According to marketing scholars, user’s purchase journey starts long before the actual purchase and has an impact long afterward. They created five-stages of purchasing choice cycle model to be utilized by marketers (Kotler & Keller, 2012). The model was reviewed based on the psychological process of the actual consumer’s purchase decision. The five stages are needing recognition, information search,
evaluation, purchase decision, and post-purchase behavior. However, the consumers only sometimes pass through all five stages if the products are a regular purchase. Consumers can entirely pass the stages when the consumers face a highly involving new purchase (Kotler & Keller, 2012).

3) Need Recognition

Need recognition is the starting line of the consumer’s purchasing process, it’s when the consumers recognize they need something (Kotler & Keller, 2012). This process can happen from internal or external stimuli. Internal stimuli are a person’s normal needs like hunger, thirst etc. A person’s needs also can be aroused by the external stimuli like a person’s admired a friend’s iPad or a house that can inspires a person to make a purchase. Marketers needs to collect the information from consumers that can have an insight that can triggers a consumers need. In order to create a serious potential purchase, marketers should create marketing campaign that can increase consumer motivation.

4) Information Search

The second stage of purchase decision is the information search. This happened after the consumers recognize their needs and decided to have a serious step, consumers start to search for information and look for alternatives that can satisfy their needs. According to Kotler & Keller in marketing management book 14th edition, there are two levels of the information search stage. The milder search stage is heightened attention where a consumer become more receptive to information about a product. The higher level is when a consumers enter an active information search: asking a friend or relatives, reading reviews from several resources or visiting store to learn more about the product. Generally speaking, information search is an important stage for consumers, it can define the consumers intention from all the information gathered by the consumers. Since the information is coming from personal or experimental sources or public sources. Consumers get a great amount of information about a product, it’s called marketing.

5) Evaluation

Evaluation alternatives is the third stage of the purchasing process. In this stage the consumers will make a final value judgement of the products or services. The consumers starts to have critical thinking with a lot of questions asking themselves “Do I need this product?” “Is the best value from a product?” “Is the best from any other brand/competitors?” At this stage, the consumer is looking for the best benefit they can get from a product or services to satisfy their needs. Consumer’s wants to make sure they can get the best value in the form of price, quality, accessibility and etc. This process can be influence by beliefs and attitudes, which will affect the consumer purchase. Belief is a descriptive thoughts that a person has about something and attitudes are favorable and unfavorable evaluations, emotional feelings, and action tendencies toward some idea (Kotler & Keller, 2012).

6) Purchase Decision

Purchase decision is the fourth stage, not the last. The consumers have final judgement and stops to evaluate alternatives and moves to the purchasing process. After the consumer have a final judgement on which products or services they want to purchase, they still have to decide and move to the actual process. There are still a lot of consideration before the actual purchase happen like how much money to spend, when and where to purchase and etc. There can be a delay of time between the purchase decision and the actual purchase. For big purchase like houses, cars or land it is common to have a delay of time between purchase decision and the actual purchase. The delay won’t be too long if the purchase is for low-involvement items such as daily needs and primary needs. Marketers should know that it’s important to provide information and reduce the time of delay during this stage (Kotler & Keller, 2012).

7) Post-Purchase Behavior

The fifth stage is the post-purchase, time for consumer decided they are satisfying or dissatisfy. The consumers have tried and tested the product. Is the product right for the consumers? Does the product meet the consumers expectations? If the product has meet or exceed the consumers expectations, most likely they will be the free brand ambassador for the products that can affect other future consumers purchase decision and increase the possibility to repurchase the product. However, if the consumers are not satisfied, it will be the last stage of the consumer purchase decision process. After the post-purchase behaviour stage, we can conclude that loyal customer is come from a satisfied customer (Kotler & Keller, 2012).

8) Factors That Influence the Purchase Decision

From the purchase decision process above, we can conclude that the process can be different from each consumer is vary and can quickly changed depends on several factors that can significantly impact the process. However, there are also more insight from Introduction to Electronic Commerce and Social Commerce book, the factors that influence consumer purchasing decisions are as follows:

9) Consumer Characteristics

Consumer traits make reference to demographic elements. Gender, age, place of residence, occupation, and monthly income are the main demographics that these websites monitor (Turban, 2017). The main internal factor resulting from a person’s condition is this one. Marketers have been choosing possible target customers using demographic information for a number of years. Each variation in the demographic data will have an impact on the campaign they create.

10) Consumer Characteristics

Social factors have a significant impact on consumer behaviour. Every consumer has a decision-maker who can sway their purchasing behaviour. Significant social influence includes the reference community, family, position, and status (Perrau, 2014). Relatives may have an impact on consumer’s purchase decision.

An individual’s surroundings are framed by their family in order to acquire values, develop, and define character. This environment offers the chance to develop opinions and feelings in a few areas. A family forms initial judgements regarding a brand or product’s appeal to consumers (Kotler & Keller, 2012).

11) Brand Reputation

A brand is a name, strategy, characteristic or additional attribute that distinguishes one brand from another. It is
something that goes beyond tangible assets or services because it may be influenced by the customer’s feelings and appreciation for the products. A reputable brand is preferred over a generic one (Djatmiko & Pradana, 2016). This claim is corroborated by study done in 2017 by Rani and Suradi, who discovered that consumers are more likely to purchase a product with a positive brand reputation.

According to YouGov Buzz BrandIndex research (YouGov, 2022) Shopee is the most known brand for online marketplace among Indonesian people. The methodology of ranking are based on asking respondents about the overall brand health of a particular industry to obtain the score, calculated by subtracting the percentage of negative responses from the percentage of positive responses for each brand including Impression, Quality, Value, Satisfaction, Recommendation, and Reputation. YouGov compiled the respondent’s answer, and the score can range from 100 to 100. A zero score indicates that there are equal negative and positive feedbacks from the respondents.

12) Trustworthiness

For online visitor to become customers, trust is considered to be essential in the marketplace industry. Customers must rely on the guarantees provided by the online store while engaging in online exchanges. According to Harris and Goode (2010), customer’s trust has a significant impact in regard to online purchase. Customers favor brands that are more trustworthy, dependable, honest, safe, and reliable (Rani & Surani, 2017).

In this new digital environment, Dev Dhiman, Managing Director at GBG Plc of Asia Pacific, believes that trust is crucial. Online marketplace must retain a high degree of consumer trust in their digital products as Indonesia and the region continue to digitize it (Sidik, 2017).

13) Advertising

Advertising is any form of compensated non personal introduction and promotion of ideas, products, or services by exceptional support (Kotler & Keller, 2012). A notice is an announcement sent to the general public using a media that they are likely to access about a certain thing, service, or idea. The medium may be electronic (radio, TV, link telephone), print (papers, flags, and billboards), or some other type. Brand image, high quality product characteristics, and informativeness of advertising are still important components of traditional advertising that apply to e-commerce advertising (Kowang et al., 2019). While low-quality marketing would have the opposite effect, decent advertising will likely have an impact on buyers buying the products.

The tremendous advertising expenditure rise of Tokopedia was reflected by the enormous surge in advertising expenditures for television and print media, according to Nielsen (Diela, 2015).

14) Brand Ambassadors

A brand ambassador is someone who is closely affiliated with a product, a famous person, or an entity that is used to promote and advertise a product. The presence of a celebrity or well-known person who serves as a brand ambassador is necessary to boost brand recognition, brand image, and capture or maintain market share. Additionally, brand ambassadors can strengthen consumer relationships with the product by encouraging customer interaction. Brand ambassadors can help close the information gap that prevents businesses and the target market from learning more about the product. Brand ambassadors facilitate advertising initiatives on a global and local level (Greenwood, 2012).

According to researcher Naulul Huda at the institute for Development of Economics and Finance (INDEF), Indonesia’s current e-commerce marketing strategy is focused on growing the user base. E-commerce uses events as part of its marketing strategy, luring celebrities to serve as brand ambassadors. They selected Korean singers like BTS for Tokopedia (Setyowati, 2020).

15) Promotion

Promotion is a marketing way to encourage customer to acknowledge or purchase products or services. Promotion has a vary ways to attract customers, sometimes it can be a cashback by collecting any number of points or a reward, or price reduction known as discounts, implemented in a various ways to gain competitive advantage or aid to consumer purchase. Those promotion programs can significantly affect customer’s emotions and behaviour that can be seen through impulsive buying behavior (Vannisa, 2020). These promotion programs should not be a permanent strategy, or else in the mind of the customers it will not be seen as incentives. Moreover, if the price reduction is used too often, customer will think that it’s the real price.

16) Delivery Option

In order to win customers satisfaction and loyalty and increase delivery effectiveness, marketers must understand how customers prefer to respond to delivery options. According to a previous study, online shoppers may desire greater delivery control, a thorough understanding of the delivery cycle, helpful return policies, and confirmation of their delivery status. Services offered and delivery circumstances were proven as new elements in consumers decisions regarding online shopping by the proved factor analysis (Baurova, 2018). According to study by Ipsos Indonesia, free delivery options are a person’s top factor when deciding which online retailer to choose (Wallard, 2019).

B. Conceptual Framework

Based on literature review, there are several factors affecting the consumer purchasing decision process that will conduct conceptual models in this study. This conceptual model is adapted from Introduction to Electronic Commerce and Social Commerce by Turban (2017).

Based on the conceptual model above, the hypothesis for this research:

H1: Brand Reputation positively related to consumer purchase decision.
H2: Delivery positively related to consumer purchase decision.
H3: Trustworthiness positively related to consumer purchase decision.
H4: Advertising positively related to consumer purchase decision.
H5: Social Variable positively related to consumer purchase decision.
H6: Brand Ambassador positively related to consumer purchase decision.
H7: Promotion positively related to consumer purchase decision.

IV. RESEARCH METHODOLOGY

A. Data Collection Method

Author uses quantitative methods in this study to determine the relationship between variables. Quantitative research is usually referred to as hypothesis-testing research. The study starts with the theory from which hypotheses are generated. Data will be collected and analysed by statistical tests according to the hypotheses. The conclusion can be attracted from results to affirm or conflict with the hypothesis. The quantitative examination technique is applied in this thesis. Quantitative research provides data from a large number of units. The data that is collected from the units are known as variables. For data, the researcher uses primary data obtained through questionnaires.

The questionnaire used in this research to conduct statistical findings on factors that affect the purchase stage. In these surveys, respondents are asked to answer inquiries and answer by choosing various numbers of alternatives provided, and all inquiries recorded are about variables. The questionnaire consists of several questions, which are divided into two parts. The first part was to collect the respondents’ demographic information, while the second part of the questionnaire was to assess respondents’ agreement level on social variables, brand reputation, trustworthiness, advertising, brand ambassador, and delivery option.

All survey questions use a Likert scale of 1 to 5 by measuring their agreement with our question stated in the questionnaire. Strongly Disagree with (1), Disagree with (2), Neutral with (3), Agree with (4), Strongly Agree with (5). The research model understands the picture of the relationship of variables used in the study (Suhartanto, 2014). In this research model, each indicator participated was tested separately to achieve the purpose of this research.

B. Population and Samples

The population of this research is all of Tokopedia users in Indonesia. The number is unknown since the users’ level data is only available in the internal company. The minimum number of samples needed can be calculated without any information about the number of populations by using the inverse square root method. Kock and Hadaya (2018) proposed the inverse square root method, which considers the probability that the ratio of a path coefficient and its standard error will be greater than the critical value of a test statistic for a specific significance level. Assuming a common power level of 80% and significance levels of 5%, the minimum sample size ($n_{min}$) is given by the following equation, where $p_{1.2}$ is the value of the path coefficient with the minimum magnitude in the PLS path model:

$$n_{min} > \left( \frac{2.486}{p_{1.2}} \right)^2$$  \hspace{1cm} (1)

C. Data Analysis Method

1) PLS-SEM

Partial Least Squares Structural Equation Modeling (PLS-SEM)
SEM) is a non-parametric, multivariate approach based on iterative OLS regression to estimate models with latent variables and their directed relationships (Avkiran & Ringle, 2018). PLS-SEM models consist of two main components, namely, the structural model (or inner model) and the measurement models (or outer models). PLS-SEM estimates composite indicator models as proxies of the latent variables. A group of indicators (manifest variables) associated with a latent construct is referred to as a block, and an indicator can only be associated with one construct. The primary goal of PLS-SEM is to estimate the latent variable scores that maximize the explained variance of the endogenous (i.e., dependent) latent construct(s) in the path model. These results are also used for predictive purposes.

Formative indicators of measurement model (outer model) with three latent constructs

Reflective indicators of measurement model (outer model)

Structural model (inner model) with three latent constructs

Exogenous or independent latent construct

Endogenous or dependent latent construct

Fig. 2. Illustrative Example of PLS-SEM Model.

Fig. 2 is an illustrative depiction of PLS-SEM modeling. Circles represent the latent variables or constructs that comprise the structural model; left-hand rectangles (X₁-X₅) house the formative indicators (composite indicators) theorized as underlying sources of the two exogenous latent constructs; right-hand rectangles (X₆-X₁₀) house the reflective indicators theorized as the consequences of the endogenous or target latent construct. W₁-W₆ are the outer relationships.

These are often called outer weights or regression weights when the relationship is from the indicators to the construct (see constructs X₁ and X₂ and their outer weights W₁ and W₂). Otherwise, when the relationship is from the construct to the indicators, they are called outer loadings or correlation weights (see construct X₃ and the outer loadings W₃ and W₄) with P₁ and P₂ as the path coefficients for Y₁ and Y₂ (exogenous latent constructs) explaining Y₃ (endogenous latent construct). The number of indicators represented in Fig. 2 is illustrative only. Furthermore, when the latent variables are defined using composite indicators model, they are usually depicted by hexagons (Rademaker, 2020).

Formative indicators are considered to represent sources that form associated exogenous latent constructs, whereby one distinguishes causal-indicator models and composite indicator models. PLS-SEM estimates composites as proxies of (formative) composite indicator models. To establish composites, the overlap among indicators is minimized because they are considered to be complementary. The exogenous latent constructs illustrated in Fig. 3 become the dependent variables in multiple regression where the associated composite indicators are the independent variables (i.e., path relationships from the indicators to the constructs).

Reflective constructs, in effect, are consequences or manifestations of the underlying target latent construct (i.e., path relationships from the construct to the indicators). Because of substantial overlap among reflective indicators, they are treated as interchangeable (i.e., they are expected to be highly correlated). The PLS-SEM method estimates composites as proxies of the (reflective) effect indicator models. The endogenous latent construct becomes the independent variable in single regression runs where the reflective indicators individually become the dependent variables in each run.

No matter if the PLS-SEM composites are used to represent (formative) composite indicator models or (reflective) effect indicator models, the methods either uses correlation weights or regression weights to determine the scores that serve as proxies for the theoretically/conceptually established constructs. Usually, correlation weights are employed to obtain proxies of (reflective) effect indicator constructs while regression weights are used to obtain proxies of (formative) composite indicator models. This research analysis will be focused on the reflective measurement model since the relations between the latent variable and its indicators are reflective.

2) Reflective Measurement Model

Each reflective indicator is related to a specific construct or latent variable by a simple regression:

\[ x' = \pi' + \pi' \xi + \epsilon' \] (2)

where \( x_{h} = 1, \ldots, p \) is the \( hh \) regression where a reflective indicator is the dependent variable and \( p \) equals the number of reflective indicators per construct, \( \pi_0 \) is the intercept, \( \pi \) is the (single) regression parameter (outer loading) to be estimated and \( \xi \) is the latent variable. The residual \( \epsilon \) is uncorrelated with the latent variable.

- **Indicator reliability**: Outer loadings greater than 0.7 are desirable. Square of this standardized outer loading represents **communality**, that is, how much of the variation in the indicator is explained by the endogenous construct, and 1 minus communality reveals the **measurement error variance**. When an outer loading is between 0.4 and 0.7 the decision on whether to keep or delete the item depends on the (high) outer loadings of the other items and the results of criteria such as composite reliability and convergent validity.

- **Internal consistency**: The **composite reliability** criterion allows assessing the construct’s internal consistency. The composite reliability should have a value of 0.7 and higher. Composite reliability formula is as follow:

\[ \rho = \frac{\left( \sum \lambda_i \right)^2 \var F}{\left( \sum \lambda_i \right)^2 \var F + \sum \Theta_i} \] (3)

where \( \lambda_i, F, \) and \( \Theta_i \) are the factor loading, factor variance, and unique/error variance, respectively, where \( i \) represents the indicator variable for a specific construct.

- **Convergent validity**: Average variance extracted (AVE) greater than 0.5 is preferred; this ratio implies that greater
than 50% of the variance of the reflective indicators have been accounted for by the latent variable. AVE is only relevant for the reflective measurement model. When examining reflective indicator loadings, it is desirable to see higher loadings in a narrow range, indicating all items are explaining the underlying latent construct. AVE formula is as follow:

\[ AVE = \frac{\left(\sum \lambda_i^2\right) \text{var} F}{\left(\sum \lambda_i^2\right) \text{var} F + \sum \Theta_i} \]  

- **Discriminant validity**: The heterotrait-monotrait ratio of correlations (HTMT) has become the primary criterion for assessing discriminant validity since it offers superior performance compared with the Fornell-Larcker criterion and the assessment of cross-loadings. HTMT can be computed for reflective measurement models against the threshold value of 0.90 (i.e., for discriminant validity to be established, the HTMT values should not exceed 0.90).

3) **Structural Model**

If the measurement (or outer) model evaluation substantiates the estimated constructs, the assessment of the structural (inner) model follows. **Analysis of the structural model** is an attempt to find evidence supporting the theoretical model (i.e., the theorized relationships between exogenous constructs and the endogenous construct):

\[ \xi_i = \beta_{ij} + \sum_j \beta_j \xi_j + \nu_j \]  

If where \( \xi_j \) is the endogenous construct and \( \xi_i \) represents the exogenous constructs, while \( \beta_{ij} \) is the constant terms in this (multiple) regression model, \( \beta_{ij} \) are the regression coefficients, and \( \nu_j \) is the error term.

- **Collinearity**: the variance inflation factor (VIF) values above 5 are indicative of probable collinearity issues among predictor constructs, but collinearity can also occur at lower VIF values of 3–5. If collinearity is a problem, a frequently used option is to create higher-order constructs. VIF is calculated as:

\[ VIF_j = \frac{1}{(1-R_j^2)} \]  

where \( R \) is the proportion of variance of construct \( i \) associated with other constructs that has the same endogenous construct.

- **Significance of path coefficients**: 95% bias-corrected and accelerated (BCa) bootstrap confidence intervals should be used to assess the significance of path coefficients in the structural model.

- **Coefficient of determination (R2)**: This statistic indicates to what extent the exogenous construct(s) are explaining the endogenous construct. \( R^2 \) values of 0.25, 0.50, and 0.75 represent weak, moderate, and substantial levels. This coefficient can be upward-biased in complex models where more paths are pointing towards the endogenous construct. More importantly, coefficient of determination needs to be judged in the context of a research project’s discipline to assess if the obtained \( R^2 \) value is substantial. In some disciplines, \( R^2 \) values of 0.2 are already relatively high.

4) **Multigroup Analysis for Modeling Heterogeneous Data**

Heterogeneity exists when two or more groups of respondents exhibit significant differences in their model relationships (the focus is usually on the relationships between the latent constructs in the PLS path model). Comparing several groups of respondents is beneficial from a practical and theoretical perspective. But the most important reason for understanding group-specific effects is that it facilitates obtaining further differentiated findings (Hair et al., 2014). The aim of multigroup analysis is therefore to disclose the effect of this categorical moderator variable.

Path coefficients based on different samples are almost always different (in a mathematical sense), but the question is whether these differences are statistically significant. Specifically, when conducting a multigroup analysis, we want to test the null hypothesis \( H_0 \) that the path coefficients are not significantly different which amounts to the same as saying that the absolute difference between the path coefficients is zero. The corresponding hypothesis \( H_1 \) is that the path coefficients are different in the population. To find out whether there is a significant difference between coefficients, researchers need to run a PLS-SEM multigroup analysis (PLS-MGA). PLS-MGA refers to a set of different techniques that have been developed for comparing PLS model estimates across groups of data. The parametric approach of PLS-MGA is a modified version of a two-independent-samples t-test to compare path coefficients across two groups of data.

V. **RESULT AND DISCUSSION**

The assessment of reflective measurement model is done by assessing the loadings values. The reasonable minimum loading values are greater than 0.4 with a desired one being greater than 0.7. BR1, T3, A3, A4, D2, R1, A1, D1, and P3 have loadings below 0.4. Thus, they will be excluded from the measurement model. The final iteration of evaluating loadings is shown in Table II along with the re-computed composite reliability and convergent validity in Table III. The issue has already solved because all of the constructs are having \( R_{cv} > 0.7 \) and AVE > 0.5.

Finally, the discriminant validity evaluation using HTMT of 0.90 (i.e., for discriminant validity to be established, the HTMT values should not exceed 0.90) is shown in Table III. The measurement model has fulfilled the criteria since all of the heterotrait–heteromethod correlations are below the threshold value.

A. **Structural Model**

The measurement model evaluation has substantiated the estimated constructs; hence the analysis can be continued to assess the structural model. **Analysis of the structural model is an attempt to find evidence supporting the theoretical model** (i.e., the theorized relationships between exogenous constructs and the endogenous construct). The full estimated PLS-SEM model of this study can be seen in Fig. 2. The only constructs that have statistically significant path coefficients are **Trustworthy, Brand Ambassador, Delivery, and**
TABLE II: ITERATION OF MEASUREMENT MODEL EVALUATION

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Recommendation</th>
<th>Brand Reputation</th>
<th>Trustworthy</th>
<th>Advertising</th>
<th>Brand Ambassador</th>
<th>Delivery</th>
<th>Promotion</th>
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<td></td>
<td>0.859</td>
<td></td>
</tr>
</tbody>
</table>

TABLE III: HTMT OF MEASUREMENT MODEL

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Recommendation</th>
<th>Brand Reputation</th>
<th>Trustworthy</th>
<th>Advertising</th>
<th>Brand Ambassador</th>
<th>Delivery</th>
<th>Promotion</th>
<th>Purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation</td>
<td>0.299</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Reputation</td>
<td>0.242</td>
<td>0.432</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trustworthy</td>
<td>0.808</td>
<td>0.075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>0.454</td>
<td>0.102</td>
<td>0.098</td>
<td>0.603</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Ambassador</td>
<td>0.491</td>
<td>0.801</td>
<td>0.808</td>
<td>0.29</td>
<td>0.447</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>0.841</td>
<td>0.385</td>
<td>0.453</td>
<td>0.34</td>
<td>0.266</td>
<td>0.627</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>0.203</td>
<td>0.223</td>
<td>0.737</td>
<td>0.16</td>
<td>0.26</td>
<td>0.649</td>
<td>0.278</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 3. Estimated Bootstrapped PLS-SEM Model.
**Recommendation.** Trustworthy has the highest path coefficients with 0.577 followed by Brand Ambassador (-0.238), Delivery (0.177), and Recommendation (0.1). This finding is not affected by multicollinearity since its VIF for each construct is below 0.3 as shown in Table III. The model’s explanatory power is nearly moderate since its coefficient determination value is nearly 0.5 as shown in Table IV. This is quite a high explanatory power in the field of perception measures like this particular study.

The interpretation of each statistically significant are:

1. **Trustworthy:** an increase in Trustworthy by 1 unit will results in an increase of Purchase Decision by 57.7%, holding other constructs constant.

2. **Brand Ambassador:** an increase in Brand Ambassador by 1 unit will results in a decrease of Purchase Decision by 23.8%, holding other constructs constant. This interpretation can be neglected since the indicators for this construct are mainly assessing whether Tokopedia’s brand ambassador makes their users to decide on buying product or not, hence the interpretation is not making sense. Other than that, Tokopedia could utilize this finding to evaluate their brand ambassador program to assess whether their current program is effective or not. It could also be affected by the fact that less of the respondents are aware of the influential brand ambassador hence they have less possibility to buy product from the brand ambassador influence.

3. **Delivery:** an increase in Delivery by 1 unit will results in an increase of Purchase Decision by 17.7%, holding other constructs constant.

4. **Recommendation:** an increase in Recommendation by 1 unit will results in an increase of Purchase Decision by 10%, holding other constructs constant.

**B. Multigroup Analysis**

To enable multigroup analysis, the minimum of samples per group needed is at least 155 respondents based on the consideration if the minimum patch coefficient is 0.2 based on the population sample calculation. The understanding of respondent’s characteristics distribution needs to have a minimum number of 155 respondents so that the multigroup analysis can be seen in Table VI until Table VII. Gender and Monthly Income are the only characteristics could fulfill the minimum samples if two groups are derived in each of them. Gender can have 208 male and 158 female, then the monthly income can have 204 with income 1–15,000,000 and 162 with income > 15,000,000.

The PLS-MGA results for Gender and Monthly Income can be seen in Table VI and Table VII, respectively. Based on those two tables, it is shown that there is no heterogeneity in the data based on Gender and Monthly Income because there is no statistically significant difference between the groups in each characteristic, i.e., P-values are greater than 5% significance level.

### VI. CONCLUSION

Based on the results above, factors that have significant influence on Tokopedia’s users to make their purchase in Tokopedia are Trustworthy, Brand Ambassador, Delivery, and Recommendation. Trustworthy has the highest path coefficients with 0.577 followed by Brand Ambassador (-0.238), Delivery (0.177), and Recommendation (0.1). The interpretation are follows:

1. **Trustworthy:** an increase in Trustworthy by 1 unit will results in an increase of Purchase Decision by 57.7%, holding other constructs constant.

2. **Brand Ambassador:** an increase in Brand Ambassador by 1 unit will results in a decrease of Purchase Decision by 23.8%, holding other constructs constant. Tokopedia could utilize this finding to evaluate their brand ambassador program to assess whether their current program is effective or not. It could also be affected by the fact that less of the respondents are aware of the influential brand ambassador hence they have less possibility to buy product from the brand ambassador influence.

3. **Delivery:** an increase in Delivery by 1 unit will results in an increase of Purchase Decision by 17.7%, holding other constructs constant.

4. **Recommendation:** an increase in Recommendation by 1 unit will results in an increase of Purchase Decision by 10%, holding other constructs constant.

This result shows that promotions is not the main driver for making Tokopedia users to purchase product in their platform, instead there are other factors that need to be concerned more to improve business strategy. By increasing the platform trustworthiness, delivery options and benefits, and make users willingly to recommend Tokopedia to their network could help Tokopedia to win the e-commerce market in Indonesia because it will drive more users to purchase in their platform. Besides, Tokopedia also need to evaluate their brand ambassador program to assess whether their program is effective or not since the samples in this research does not show a positive incremental effect.
CONFLICT OF INTEREST

I declare that I possess no competing interests that could potentially impact or undermine the objectivity, integrity, or impartiality of my research. I affirm that I do not possess any financial stakes, personal associations, or professional affiliations that could introduce bias or influence the results or interpretation of the subject under investigation. I am dedicated to upholding transparency and adhering to ethical principles throughout the entire research process.

REFERENCES


Hastuti, R. (2020). It turns out that this is the reason why Start Ups are willing to "burn money" a lot. cnbcindonesia.com: https://www.cnbcindonesia.com/tech/2020/01/12/1251510-37-129406/temyata-ini-alasan-start-up-rela-bakar-uang-yang-banyak.


Jones, G.W. (2015). The 2010 – 2035 Indonesian population projection understanding the causes, consequences and policy options for population and development. UNFPA.


