

Toward the Best Model of Purchase Decision Through Online Store in Indonesia from the Lens of Price Perception, Service Quality and Marketing Communication

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Abstract—This study aims to discuss the effect of purchasing decisions online in the marketplace. The object of research is a seller who has a good reputation and significant transactions in selling in Bukalapak e-commerce. The independent variables obtained from the preliminary survey results to the buyer are the perception of price, service quality, and marketing communication. This study uses SEM data analysis techniques and data processing using PLS. The population is e-commerce Bukalapak customers who shop at Farqi Cellular stores, with a sample of around 162 respondents. The results of testing the data using SmartPLS 3.0 software found that the perception of price has a positive relationship and no significant effect, service quality and marketing communication have a positive relationship and have a significant effect on online purchasing decisions. With the R-square value (R^2) = 0.729 shows that the ability of the independent variable (perception of price, service quality, marketing communication) in explaining the dependent variable variance (online purchase decision) is 72.9%. While the remaining 27.1% is explained by other factors outside the model.

Keywords: e-commerce, price perception, service quality, marketing communication, online purchasing decisions

I. INTRODUCTION

The phenomenon of rapid growth of e-commerce market in Indonesia is no doubt. With the number of internet users reaching 93.5 million people or about 35% of the total population in Indonesia, e-commerce market becomes a gold mine that is very tempting for some people who can see the potential for the future. This growth is supported by data from the Minister of Communication and Information which states that the value of e-commerce transactions in 2016 reached Rp. 394 trillion.

By using internet technology, e-commerce can be used as a solution to help companies in developing the company and face business pressures due to the high level of competition. E-commerce can improve the cost efficiency and productivity of the company, thereby improving the company's consistent capability. The development of e-commerce in Indonesia can

be seen from the increasing domain registrar Indonesia. In Domain Name Manager Internet Indonesia (PANDI), 2012 registered 103,882 domain names and a spike of 170% about 300,000 new domain names until the end of 2013.

Data from research institutes ICD said that the e-commerce market in Indonesia grew 42% from 2012-2015. This figure is higher when compared to other countries such as Malaysia (14%), Thailand (22%), and Philippines (28%) Surely this value is very tempting for some investors, both domestic and foreign. Some of the major VCs such as Rocket Internet, CyberAgent, East Ventures and IdeoSource have even invested in e-commerce companies based in Indonesia. Call it some of them are giants Lazada and Zalora, Berrybenka, Tokopedia, OLX, Bukalapak, Shopee and many more. They are some examples of successful e-commerce companies in taking advantage of the rising e-commerce market opportunities in Indonesia.

One of the leading e-commerce companies in Indonesia is Bukalapak. Based on web data alexa.com (provider of professional information related to web traffic) In one day, Bukalapak visited more than 2 million visits. Based on the information contained in liputan6.com, the number of daily transactions Bukalapak reach Rp 50 billion. Until now, Bukalapak has 7 million sold by users (as of December 2015) and is in the top 11 sites in Indonesia. Bukalapak is an online buying and selling service website with a customer-to-customer (C2C) business model, Bukalapak provides customer-to-consumer sales facilities everywhere. Anyone can open an online store to then serve prospective buyers from all over Indonesia either unit or in large quantities. Individual or corporate users may purchase and sell products, both new and used, such as bicycles, mobile phones, baby gear, gadgets, accessory devices, computers, slates (tablets), household items, clothing, electronics, etc.

Based on direct interviews with the owners of each online store of the 7 sample users who became sellers in Bukalapak. The Farqi Cellular store is the fastest rise in the reputation status of BL User into a Great Trader, which is only 2 months

and 17 days. As for the other sellers cannot achieve or get the reputation of the Great Trader in the first 3 months since first joining and selling online at Bukalapak market place. Through the data account Farqi Cellular, it is known there are about 3000 - 4000 visitors and transactions occur 50 - 160 transactions each month. From the preliminary survey conducted through broadcast application WhatsApp and filling questionnaire through google form to 50 buyers or customer Farqi Cellular, obtained data 3 major purchasing decisions based on price factor, service and reviews or feedback or testimonial of the store.

In previous research related to the influence of perception of price, service quality or service and marketing communication or promotion to online purchasing decision indicate that research result in various country tend to inconsistent or different between researcher one with other researcher. Furthermore, the results that states the perception of price, service quality and marketing communication is not a dominant factor and influential in the decision of online purchasing.

II. LITERATURE REVIEW

A. E-commerce

E-commerce is a business activity that runs electronically through an internet network or activity of buying and selling goods or services through digital communication channels. E-commerce as a new concept of marketing offers its own advantages and disadvantages for sellers and buyers. E-commerce not only opens up new markets for products or services offered and reaches new customers, but also makes it easier for vendors or sellers to do business. In the past, the business world engaged in activities between one and the other through a special network, but the drastic growth of e-commerce changed that paradigm and made it wider. With the current e-commerce, marketing can be done by new entrants with an international scale. E-commerce not only gives advantages to vendors or sellers, but also can provide harm to customers. E-commerce is a dynamic set of technologies, applications, and business process that link enterprise, customers, and communities through electronic transactions and the electronic exchange of goods, services, and information (Baum, 2000).

B. Perception of Price

Peter and Olson state that, in processing cognitive pricing information, consumers can make comparisons between a set price with a price or price range that has formed in their mind for the product [1]. The price in the mind of the consumer used to make this comparison is called the internal reference price. It can be deduced that price perceptions illustrate an approach to explain the impact of prices for a product or situation of purchase with a high degree of involvement. This has a strong influence on consumer buying interest in a product or satisfaction in the buying process. Price perception is the consumer's assessment and associated emotional form of whether the price offered by the seller and the price compared to the other party is logical, acceptable or justified [2].

C. Service Quality

Customer's best service and quality level can be achieved consistently by improving services and paying special attention to service performance standards of both internal service standards and external service standards. If the services received or perceived in accordance with the expected, then the quality of service perceived good and satisfactory, if the service received exceeds consumer expectations, the quality of service is perceived with excellent and quality. Conversely, if the services received are lower than expected, then the quality of service is perceived poorly [3]. Quality of service can be interpreted as an effort to meet the needs and desires of consumers and delivery accuracy in balancing consumer expectations [4].

D. Marketing Communication

Explain that the company is made up of senders and recipients of messages from the target market. The sending party of a market in its business competition should try to attract consumers to buy the product. The recipient of the company must adapt to the target market in order to convey the message to the relevant market situation and must be able to create a new communication. Marketing is a social process by which individuals and groups get what they need and want by creating, offering and freely exchanging valuable goods and services with others [5]. AIDA concept model is widely used to compile the basic framework of the marketing communications process for the sale of a product or service in many organizations. The more down, the smaller and more focused. The shrinking shape shows the process being done to get buyers.

E. Purchasing Decisions

The purchase decision is the conversion of the evaluations that have been made by the consumer to further decide to make a purchase [6]. Purchasing decisions are the ultimate choice made by consumers in fulfilling their wants or needs. The buying decision process for everyone is basically the same, it's just that all the processes are not all implemented by consumers. The specific purchase process consists of the following sequence of events: problem identification, information search, alternative evaluation, purchasing decisions, and post-purchase behavior [5]. Decision-making is the process of determining the best, logical, rational and ideal decisions based on facts, data and information from a number of alternatives to achieve satisfactory decisions.

F. Theoretical Perspective and Hypothesis Development

Research conducted by Ristania and Justianto, states that the role of price is often considered too excessive, consumers do not always look for prices as cheap as possible or even the best quality [7]. But there are other factors such as, reference promotions in the form of testimonials of other buyers' experiences that may be more important and consumers often disclose a little price consideration when making decisions.

The results of research in online sales that the price of the amount of money charged to a product or service or the amount of value exchanged by consumers for the benefits of owning or

using a product or service the [8]. The price will affect the purchase decision if the price of a product is in accordance with quality, affordable, and in accordance with the benefits. From the above explanation then, can be explained the hypothesis as follows:

1) *Hypothesis 1.1:* Price perceptions is positively related and significant impact on purchasing decisions. According to research conducted by Yee and Yazdanifard there is an influence between service quality and purchasing decisions [9]. This study examines the effect of website quality, commitment factor, and service quality. Setiyaningrum and Hidayat [10], disclosed that the quality of good service will encourage consumer buying interest, further service quality and satisfaction in purchasing a website, the results of this study found that the dimension of empathy is a service quality dimension that became the main determinant of customer satisfaction of the store on line. Another study conducted by Harjati and Venice states that there is a significant and strong relationship between service quality and buying interest [11]. Furthermore, to increase consumer buying interest should not only think of one of the indicators, but the whole indicator because each indicator has an important role in the field that offers high-impact services.

2) *Hypothesis 1.2:* Serviceis positively related and significant impact on purchasing decisions. Research conducted by Tyagi and Agarwal with the title explaining about the influence of marketing communications to consumer purchasing decisions in India [12]. The results of this study indicate that the promotion significantly influence consumer buying interest and the most dominant variable to consumer interest to shop. Research Ristania and Justianto states in an ad must dare to offer something interesting and unique, so that the eyes of the consumer look different from other ads and in the delivery of the message must be clear and directed [7]. This can create a special attraction that causes viral marketing of the products advertised, so that will create consumer interest to buy the product. Ristania and Justianto [7] conducted research on marketing communication to online purchase decision. Obtained variable promotion and viral marketing is the biggest factor in purchasing decisions, further revealing the number of comments, feedbacks and testimony in the form of positive and negative to the product will have a significant effect for purchasing decisions.

3) *Hypothesis 1.3:* Marketing communicationsis positively related and significant impact on purchasing decisions.



Fig. 1. Research framework.

III. METHODOLOGY

A. Population and Sample

Population is an area of generalization consisting of objects or subjects that have certain qualities or characteristics set by the researcher to be studied and then drawn conclusions [13]. Population refers to entire group of people, events, or things of interest that researcher wishes to investigate given a problem on hand [14]. In this study selected research population is a buyer who has made a purchase transaction at Farqi Cellular online store (Bukalapak Marketplace, 2018).

Sample is part of the number and characteristics possessed by a population. If the population is large, and researchers are not likely to study everything in the population, then researchers can use samples taken from the population. What is learned from the sample, the conclusion will be applicable to the population. For that sample taken from the population must be truly representative [13]. The sample is a subgroup of the planned target population investigated by researchers to correlate about the target population [15]. Due to the very large population, the method becomes very sensitive so it is difficult to get good measures, therefore the sample is needed in this study.

In accordance with the analysis tool to be used, namely Partial Least Square (PLS), the determination of a representative minimum sample number is dependent on the number of indicators multiplied by five to ten. Referring to this, the number of samples in this study uses 31 indicators, multiplied by five [16], the number of samples used in this research is at least 155 respondents. The sampling technique in this study is to use purposive sampling method, which is a method of taking with certain conditions by determining specific criteria for the sample. The criteria used in this study were buyers who made transactions from May 2017 up to 6 months running on Bukalapak online market place at Farqi Cellular store.

B. Measurement Instrument

The questionnaire was divided into five sections with each section separated by a specific heading. Instructions were clearly and precisely stated after each heading for case of the respondents. The background of the respondent was presented in the beginning section of the questionnaire.

1) *Online purchasing decisions:* The online purchasing decision is the dependent variable in this study. The conceptualization and instruments for purchasing decisions was adapted from Kotler [5]. This instrument consists of five items, concerning on the buyer understands the problem, searches for information, evaluates, and reaches a purchase decision and gets the product in accordance with the purpose or need. Respondent's assessment of the effectiveness of strategy implementation items was obtained on a 5-point Likert-type scale.

2) *Price perceptions:* The conceptualization and instruments for price perceptions was adapted from Stanton [2]. In his conceptualization, price perceptions is proposed as a dimensional construct that consists of four dimensions,

namely ‘affordability’, ‘price suitability with quality’, ‘price competitiveness’ and ‘price suitability with benefits’. The instrument comprises four items. The respondent’s assessment of the price perceptions items was obtained based on a 5-point Likert-type scale.

3) *Service quality*: The conceptualization and instruments for service quality was adapted from Lovelock and Wirtz [4]. In their conceptualization, service quality is proposed as a dimensional construct that consists of five dimensions, namely ‘tangibles’, ‘reliability’, ‘responsiveness’, ‘assurance’ and ‘empathy’. The instrument comprises 12 items whereby two items are for measuring the service quality on tangibles, two items for measuring the reliability, two items for measuring the responsiveness, three items for measuring the assurance and three for measuring the empathy. The respondent’s assessment of the service quality items was obtained based on a 5-point Likert-type scale.

4) *Marketing Communication*: The conceptualization and instruments for marketing communication was adapted from Kotler [5]. In his conceptualization, marketing communication is proposed as a dimensional construct that consists of four dimensions, namely ‘attention’, ‘interest’, ‘desire’ and ‘action’. The instrument comprises 10 items whereby three items are for measuring the attention, two items for measuring the interest, two items for measuring the desire and three for measuring the action. The respondent’s assessment of the marketing communication items was obtained based on a 5-point Likert-type scale.

IV. ANALYSIS

A. Profile of the Respondent

A total of 162 responses were received at the end of the data collection process. Based on initial expectation of 560

respondents from the customer Farqi Cellular online store, the response rate was approximately 28.93%. Most of respondents aged between 25 to 40 years were 83 respondents or 51.23%, respondents aged between 18 to 25 years were 46 respondents or 28.40%, respondents aged over 40 years were 24 respondents or 14.81% and respondents under the age of 18 were 9 respondents or 5.56%. There were 5 respondents (3.09%) who had a junior high school, there were 41 respondents (25.31%) with high school, there were 31 respondents (19.14%) who were educated by Associate’s degree, there were 77 respondents (47.53%) who were educated Bachelor degree, there are 6 respondents (3.70%) who have Master’s degree, there are 2 respondents (1.23%) with doctorate degree. From 162 respondents there were 16 respondents (9.88%) who worked as civil servants, there were 67 respondents (41.36%) who worked as employees, there were 28 respondents (17.28%) who worked as entrepreneurs, there were 35 respondents (21.60%) were students and there are 16 respondents (3.70%) with other professions.

V. RESULTS

The Smart-PLS Version 3.0 and two-step analysis approach as suggested by Gerbing and Anderson [17] were adopted to analyze the data. Following the suggestion of some studies Chin [18] the bootstrapping method (500 resample) was also carried out to determine the significance levels for the loadings, weight and path coefficients. Figure 2 illustrates the research model.

A. Measurement Model

1) *Convergent validity*: First, the convergent validity, which is the degree to which multiple items that are used to measure the same concept agree, was tested. The factor loadings, composite reliability and average variance extracted were indicators used to assess the convergent validity [16].

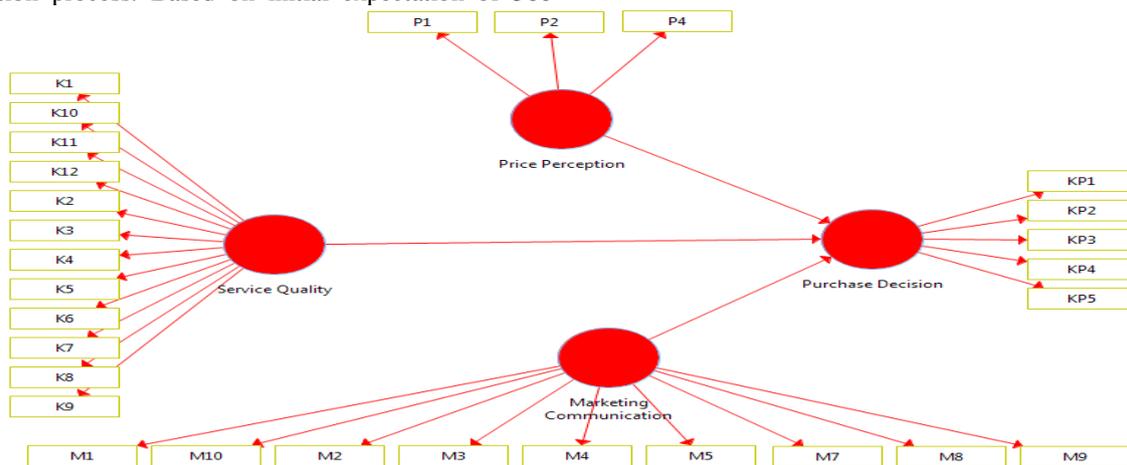


Fig. 2. Research model.

The loadings for all the items exceeded the recommended value 0.6 [18]. The composite reliability (CR) values (see Table 1), which depict the degree to which the construct indicators indicate the latent construct, ranged from 0.842 to 0.965, which exceeded the recommended value of 0.7 [16]. The average

variance extracted (AVE), which reflects overall amount of variance in the indicators accounted by the latent construct, were in the range of 0.640 to 0.738, which exceeded the recommended value of 0.5 [16]. Table 2 depicts the results of convergent validity.

2) *Discriminant validity*: Discriminant validity is the extent to which the measures do not reflect other variables and it is indicated by low correlations between the measure of interest and the measures of the other constructs [19].

TABLE I. FACTOR LOADINGS AND RELIABILITY

Items	Loadings ^a	CR	AVE	Cronbach α
K1	0.823	0.965	0.699	0.961
K10	0.842			
K11	0.880			
K12	0.850			
K2	0.832			
K3	0.862			
K4	0.787			
K5	0.798			
K6	0.825			
K7	0.902			
K8	0.863			
K9	0.760			
KP1	0.863	0.933	0.735	0.910
KP2	0.875			
KP3	0.891			
KP4	0.836			
KP5	0.821			
M1	0.882	0.962	0.738	0.956
M10	0.866			
M2	0.835			
M3	0.877			
M4	0.898			
M5	0.857			
M7	0.820			
M8	0.833			
M9	0.863			
P1	0.787	0.842	0.640	0.724
P2	0.822			
P4	0.789			

CR composite reliability, AVE average variance extracted

^a. Standardized loading

TABLE II. DISCRIMINANT VALIDITY OF CONSTRUCT FORNELL-LARCKER CRITERION

	Purchase Decision	Marketing Communication	Service Quality	Price Perception
Purchase Decision	0.858			
Marketing Communication	0.857	0.859		
Service Quality	0.775	0.801	0.836	
Price Perception	0.418	0.397	0.56	0.8

Note: Diagonal elements are the square root of the AVE of the reflective scales while the off diagonals are the squared correlations between constructs

Discriminant validity can be examined by comparing the squared correlations between the constructs and the variance extracted for construct [20]. As shown in Table 2, the squared correlations for each construct were less than the square root of the average variance extracted by the indicators measuring the construct, indicating adequate discriminant validity. Thus, the measurement model demonstrated adequate convergent and discriminant validity.

B. Structural Model

The structural model represents the relationships between latent variables hypothesized in the research model [21]. After computing the path estimates in the structural model, a bootstrap analysis was performed to assess the statistical significance of the path coefficients. The bootstrapping method has been defined as a non-parametric approach that makes statistical inferences without any distributional assumptions.

The procedure used 500 re-samples to test the significance of regression coefficients because, according to Chin, this was the usual recommendation when using bootstrapping to estimate parameters [18]. Table 3 and Figure 3 show the results of the structural model from the output of PLS. Price perception, service quality and marketing communication were positively related to the online purchasing decision, explaining 72.9 % of the variance.

As shown in Table 3, Service quality and marketing communication revealed a significant relationship with the purchase decision. And price perception revealed a not significant relationship with the purchase decision.

TABLE III. SUMMARY OF THE STRUCTURAL MODEL

Path	Description	Hypothesis	t value	Result
M → KP	Marketing communication → Purchase decision	H1	7.034	Support
K → KP	Service quality → Purchase decision	H2	2.232	Support
P → KP	Price perception → Purchase decision	H3	0.384	Not support

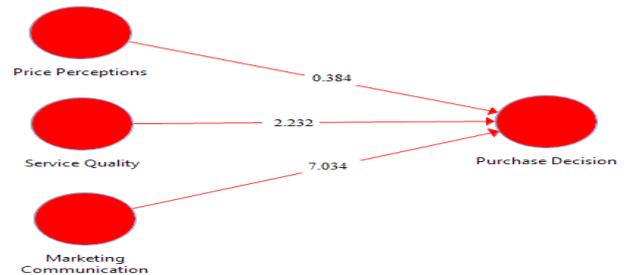


Fig. 3. The structural model.

VI. DISCUSSION AND IMPLICATIONS

Based on the hypothesis test in this study, the results show that price perception has a positive relationship and has no significant effect on purchasing decisions in Bukalapak's online marketplace. The results of this study are different from research conducted by Mohamed et al. [8], which found that price perception has a significant effect on purchasing decisions. The inconsistency of the research results obtained occurs because prices are not the most important factor that influences purchasing decisions in the online marketplace. This can happen because buyers do not always look for the cheapest prices. However, there are other factors such as promotions, references in the form of product testimonials and reviews, and information on buyers' experience on the quality of seller

services in an online marketplace that may be considered more important by buyers or consumers, so often overriding or revealing little consideration regarding prices when making decisions. to buy on the market place online.

Based on the hypothesis test in this study, shows the results that the quality of service has a positive relationship and has a significant effect on purchasing decisions. The results of this study strengthen the research of Yee and Yazdanifard [9] and the research of Setiyaningrum and Hidayat [10] which prove that service quality influences purchasing decisions. Service quality is an important factor that influences purchasing decisions in online market place. Buyers or consumers who make purchases at Farqi Cellular's online stores feel impressed and satisfied. In other words, the tangible, reliability, responsiveness, assurance, and empathy values that are given when shopping at the online market place are in line with their expectations.

Based on the hypothesis test in this study, shows the results that marketing communication has a positive and significant influence on purchasing decisions. The results of this study strengthen the research of Tyagi and Agarwal [12] and the research of Ristania and Justianto [7] which prove that marketing communication influences purchasing decisions. Marketing communication is the most important factor that influences purchasing decisions. Prospective buyers who visit or see image ads and detailed description of the product will feel interested and impressed to easily decide the transaction. In other words, the value of attention, interest, desire, and action given when advertising images and descriptions in accordance with the expectations or what they need.

VII. LIMITATIONS AND FUTURE RESEARCH

In designing this study, several methodological limitations were considered to conduct effective study. Whereas the study design was tailored to address research objectives and focused on the critical elements of this study, this study is still not doing without its limitations. With the R-square value (R^2) = 0.729 indicates that the ability variable (perception of price, service quality, communication) in explaining the dependent variable variance (online purchasing decision) is 72.9%. While 27.1% is supported by other factors outside the model. Suggestions for further research are recommended to add variables. Not only price perception, service quality and marketing communication to measure online purchasing decisions in market place, but several other variables such as customer service in market place, psychological factors, product knowledge factors, security trust factors in the market place.

A useful direction for future study in this consider is to test the validating in online purchase decision in other online marketplace with the aim of validating it, adding research methods such as checkpoints, interviews and observations in different online market places in Indonesia is not only in Bukalapak but other market place online which also has high

traffic / good like Tokopedia and Shopee, so it has a comparison between an online marketplace.

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