Perceived Quality Drives Indonesian Purchase Intention for Fermented Drinks

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***Abstract, Objective** – This study aims to determine people's perceptions of fermented drinks through its value, and quality which then lead to Indonesian purchase intention on fermented drinks. **Methodology** – An online survey was used to gather information from respondents of various ages and professions who enjoy drinking fermented beverages as well as those who are unsure of what it is and its advantages. Fermented beverages are still not categorized as alcoholic beverages, but with some restrictions. A linear regression model was used in SPSS 3 version to examine the data gathered for this study. **Findings** – The outcome demonstrates that the significant hypothesis only applies to hypothesis 1, which states that perceptions of fermented drink quality simultaneously influence Indonesian buying intentions in a favorable way. Additionally, a significant positive connection is shown in this study between the dependent variable of purchase intention and the independent variable of perceived quality. Hypothesis 2, on the other hand, which holds that perceived value and Indonesian buy intention are strongly correlated, is not supported by the data and has a modest positive association. **Novelty** – While there might be studies on fermented drinks and consumer behavior, focusing specifically on the Indonesian context is a unique angle.*

Keywords: perceived quality, perceived value, fermented drinks, purchase intention

1. INTRODUCTION

Drinks that go through a specific procedure to create fermented beverages have distinct flavors and advantages over conventional drinks. The respiratory response is the end product of the fermentation process, which generates energy in the cells under anaerobic environments or without oxygen. In order to alter the material's nature and maximize the organism's development process, certain microbial activities will be activated (Kusuma & Pratiwi, 2020). This will result in the production of beneficial fermentation products.

Before the invention of the refrigerator, food and beverages were preserved by fermentation. Because beneficial bacteria, yeast, or fungi transform organic components into alcohol or acid, fermented beverages can have a distinctly robust, somewhat acidic flavor. On the other hand, ingesting fermented beverages on a daily basis is highly beneficial to overall health. Fermented beverages are undoubtedly rich in nutrients that may be used to produce vitamin B and synthesize vitamin K. Regular use of probiotic-rich fermented beverages can help maintain immunity by strengthening the mucosa, or intestinal lining, which acts as a natural barrier. Furthermore, it can lower elevated blood pressure, particularly in cases of fermented dairy products. Subsequent investigations revealed that probiotic bacteria support gut health, which is connected to mental health and can thus affect our emotions and sentiments.

Many fermented beverages are available worldwide, with bases ranging from fruits, milk, tea, coffee, and plants including wheat and rice. Fruit-based fermented beverages may also be prepared with soursop, mango, salak, and pineapple in addition to grapes that are often used to make wine, which has an alcohol content of 12% to 15% (Dewi, 2015). Yakult, a fermented drink made from milk and commonly referred to as yogurt, is categorized as a non-alcoholic beverage.

While kefir is also a milk-based fermented drink originating from the Middle East and contains alcohol around 0.5-2.5% (Ega, 2017). For the tea-based fermented drink usually known as Kombucha that contains 0.5-3% alcohol (Halim, 2020). However, for cultured coffee or coffee kombucha is the one known from coffee-based fermentation that does not contain any alcohol (Pawar, 2020). Last, the fermentation of wheat and rice that we often know, such as beer and soju, contains around 2-8% for beer, while soju is around 15-53% (Reditya, 2021). Every fermented beverage has unique advantages, both before and after it ferments and yields alcohol. The length of the fermentation process affects the amount of alcohol that is generated as well. A drink's alcohol concentration increases with the length of its fermenting process (Kuncoro, 2019).

The purpose of this study is to examine fermented drinks that fall within the non-alcoholic beverage category. The Food and Drug Administration (FDA) states that fermented beverages, which contain a low proportion of alcohol and are healthful and higher in probiotics to strengthen the immune system, are not considered alcoholic drinks.

This study will examine fermented beverages, which can yield 0.3% to 3% alcohol after up to 10 days of fermentation. This study also emphasizes the more healthful natural elements found in fruit, milk, tea, and coffee—aside from wine, beer, and soju, which have an alcohol content of greater than 3%. Because the alcohol level is quite modest, alcoholic beverages with an alcohol consistency below 5% can still be found at the closest minimarket. It takes a lot to become wasted on this type of whiskey (Maharani, 2021).

The goal of this research is to ascertain how purchase intentions for less-alcoholic and non-alcoholic fermented drinks in Indonesia are influenced by perceived quality and perceived value, which include aspects of flavor, packaging, safety concerns, and advantages. This study also aims to determine the factors that impact people's interest in purchasing this fermented beverage.

2. LITERATURE REVIEW

Perceived Quality

According to past research, perceived quality is the customer's judgment about a couple of product's superiority (Zeithaml, 1988). Perceived quality of a product will make sure the estimation created by the consumer relies on the total set of basics further as surface factors of the product (Grunert et al, 2001). However, in line with (Aaker, 1996) that perceived quality predicts the extent for standard level for the quality of the whole product. Furthermore, (Blythe, 2013) examines that producer provides the product which it expects to receive by consumer perceived quality as a subjective perception of the excellence regarding the product.

Consumers typically use accidental attributes like price, packaging, and of a product to judge a product's quality if they are bound that they have a decent beliefs of however these attributes impact the product quality (Camillo, 2012; Kazmi, 2010; Monroe, 2012; Olsen et al., 2011; Schiffman & Kanuk, 2010). Consumers can judge the product quality once they rely and try the products. Sellers will experience the influence of both perceived quality and perceived value on customer satisfaction that lead to purchase intention, then in term of terribly robust perceived quality within the customer's perspective, seller need to
able to explore more such price inelasticity that it could even boost a customer's willingness to pay higher price (Vera, 2015).

Perceived Value

Perceived value is outlined as the value of a product according to its price in the mind of customers (Manisah et al., 2017). On the other hand, (Zeithaml, 1988) states that perceived value is also defined as consumers' assessment of the utility of a product or service. Those are usually based on the perceptions of what is received and what is given. As stated before, perceived value additionally contributes specifically to customer satisfaction, which therefore convinces future expectations (McDougall and Levesque, 2000; Fornell et al., 1996). It will drive trust and loyalty to the brand, once consumers have a positive perception. Thus, trust is one of the fundamentals that can drive loyalty due to it creates an exchange that is extremely valued for the business that also leads to repurchase intention (Tong & Hawley, 2009).

Purchase Intention

Product perceived quality directly impacts purchase intention. Customers usually have some perceptions before purchasing the product about the product quality, appearance, and price. After using the product, purchase intention can come with increased and decreased results as well, due to it having direct relations which affect each other. Once the quality is high, the purchase intention of the customer is also high. The customer's perspective on perceived quality as a more certain understanding based on product features that will have many contributing factors to influence it. Businesses usually have a division of control over

quality. As a result, when perceived quality is considered as an overall valuation, perceived quality is recognized to be the source of satisfaction (Llusar et al., 2001). Previous research found an indirect relationship between perceived product quality and purchase intentions via perceived value mediating variables (Cronin & Taylor, 1992; Madu et al, 1995; Sweeney et al., 1999; Llusar et al., 2001). According to a study by (Ghosh, 1990), buyers choose one good, but the end result is determined by their purpose.

Since purchase intentions involve the decision-making as stated before, the process which determines whether or not to purchase a product. Thus, the process involves purchasing intention describing a need that must be satisfied and looking for relevant information regarding product benefits and product quality in order to make an informed decision. Afterwards, the evaluation of all accessible products that could possibly satisfy one's need, the purchase and consumption of the chosen product, and the evaluation of whether the product met one's preferences and needs. (Du Plessis & Rousseau, 2007; Skinner, 1990; Silver, Stevens, Wrenn & Loudon, 2013).

Hypothesis Development

We learned about the existence of a perceived value throughout the literature review chapter, which is a trade-off between perceived quality and purchase intention. According to Manisah et al. (2017), price alone has little effect on a product's perceived value; rather, price is frequently used by customers as a predictor of perceived quality and purchase intention. The objective is to determine whether there is a positive or negative correlation between the variables of perceived quality and perceived value and the intention of consumers in Indonesia to purchase fermented drinks. The next step is to determine the reason behind this intention, which is directly influenced by these variables. Finally, the study aims to determine whether the variables of perceived quality and perceived value have the most bearing on the intentions of consumers to purchase fermented drinks.

Price promotions tend to reduce consumers' perceived financial sacrifice and hence enhance perceived quality when perceived quality surpasses perceived monetary cost. To put it another way, if perceived quality increases, buyers' perceived value increases and their intentions to make a purchase increase (Weisstein et al., 2014). The research hypothesis for this study will be summarized and utilized to reinforce the theoretical knowledge on the subject. Consequently, this study will assess the following hypothesis. As to Aaker (1996), the degree of overall product quality is determined by the perceived quality. A product's quality is determined by the customer's perception of the product's superiority or degree of perfection (Alfred, 2013). To preserve its place in the market and raise the caliber of its output, a business

has to be able to employ a variety of strategies (Brata et al., 2017). Gama (2018) asserts that purchasing intention is positively and significantly impacted by perceived quality. Additionally, it is argued by Saleem et al. (2015) and Lamboan (2017) that purchase intention is positively and significantly impacted by perceived quality. Thus, hypothesis one of this study is:

**H1: Perceived quality positively influences fermented drinks purchase intention**

The perceived worth of a product successfully serves as a signal to consumers who are likely to steer their purchase intentions in a positive way, as consumer decisions are typically based on incomplete or asymmetric information (Kardes et al., 2004). Perceived value, which is simply a collection of attributes linked to customers' opinions of a product's worth, can increase customer purchase intentions by stimulating positive word-of-mouth (Liu et al., 2016; Ashton et al., 2010). According to Gounaris et al. (2007), there is a positive correlation between customer purchase intention and perceived value; as a result, low levels of perceived value may lead to a decline in purchase intention (Sweeney et al., 2001; Sitinjak et al., 2019). However, if customers believe a product has a high value, they are more inclined to purchase it (Chang et al., 2008). To review and restate, a great deal of prior research has shown that a customer's perceived value positively influences their purchase intention (Eggert et al., 2002; Tam, 2004). Therefore, hypothesis two of this study is:

H2: Perceived value positively influences fermented drinks purchase intention

3. METHODOLOGY

This research was conducted from March until April 2022, including the preparation, data collection, data processing, and data analysis. For the data collection, a questionnaire was spread to 100 respondents using online form. The questionnaire uses a Likert Scale Measurement. In addition, the respondents of this research were Indonesian people of all ages.

Researchers need to seek for a link between the independent and dependent variables in order to have a thorough understanding of how Indonesians' perceptions of the quality and value of fermented drinks affect their intention to purchase. As in the first independent variable, namely Perceived Quality (X1) the factors are Health Consciousness, Packaging, Taste, and safety concerns. Then the second independent variable is perceived value (X2) while the factor is only Price. Later, the independent variable will be related to the dependent variable, namely Purchase Intention (Y). Then there is the dependent variable. Then the proposed framework model of this research can be described in Figure 1.
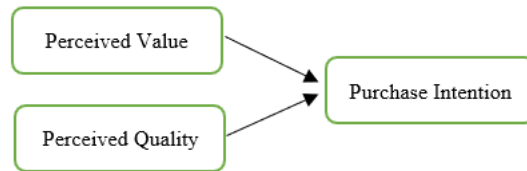
Figure 1 Proposed Framework Model

Data collection method used in this study is using primary resources. For the primary resource, this study gathered the responses through questionnaires among Indonesian people that have been distributed to a random sample. However, in order to match the criteria of the respondents, the one who is being considered as an invalid respondent would automatically be eliminated since there are some sort of filter questions in the first part to ease the process. The questionnaire designed to use a 5-point Likert scale contains ranked-ordered levels strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5) where the third point in the middle represents neutrality. The odd-number Likert scale was purposefully used in this study to allow respondents to express a neutral opinion between disagreement on one side and agreement on the other (Chyung, 2017). This was distributed through social media platforms such as Instagram, WhatsApp, and Twitter using Microsoft Forms for the online survey platform.

According to Hair et al. (2010) A sample size of 5-10 subjects per variable is required to calculate the sample size. The sampling technique used is random sampling, which is taking a random sample from a predetermined population and suggesting an appropriate sample size between 100-200 respondents for use with Structural Equation Model (SEM) interpretation estimates. Minimum Sample = Indicator item x 10 = 100 minimum samples. Since the total indicators or question stated on the main questionnaire is 10, and the maximum subject per variable is 10 (Hair et al, 2010), so 10 is being used in this study, then it needs to be multiplied by the number of measurement items, of which the author used 10 items from 12 indicators and 3 variables.

4. RESULTS AND DISCUSSION

Profile of the Respondents

In this research, the total of respondents are 108, gathered through an online questionnaire. The demographic data includes the respondents of the survey. Specifically, this part will cover five sections of multiple-choice questions that will elaborate on respondents' gender, age,

occupation, monthly expenses for fermented drinks, and the willingness of buying fermented drinks.

From 108 respondents, 58 are women or 53.7% rounded into 54% while 50 are men or 46.3% rounded into 46%. The demographic of respondents' gender can conclude that the majority of the respondents in this survey are women. The target respondents in this survey are both yet women seem to have more interest toward a healthy-fermented drink.

Seventy-seven are between 20-30 years old or 71.3% rounded into 71% while 12 are between 30-40 years old or 11.1% rounded into 11%. Next is between 10-20 years old which covers around 5.6% or with 6 respondents. Next is the one from 50-60 years old which comes up with 5 results which is around 4.6% from the total population. For the > 60 and <10 comes up with the same amount which is 3 or around 2.8 % and 2.8% from the total population. The last are 2 respondents between 40-50 years old (1.9%). The demographic of respondents' age can conclude that the majority of the respondents in this survey are between 20-30 years old. The target respondents in this survey are all ages which are well represented since they are mostly aged between 20-30 years old.

Fifty-four are currently students or 50%, 43 are employees or 39.8%, 7 are businessman/ woman or 6.5%, and the rest for the housewife and unemployment respondent who give the same result which are 2 and 2 or about 1.9% and 1.9%. The demographic of respondents' education level can conclude that the majority of the respondents in this survey are education level can conclude that the majority of the respondents in this survey are college or university students who commonly age between 20-30 years old similar to respondents' age conclusion.

Thirty respondents are spending Rp.40.000-50.000 for monthly expenses or 27.8% rounded into 28% for fermented drinks, 29 respondents are spending less than Rp.30.000-40.000 for monthly expenses or 26.9% rounded into 27%, 25 respondents are spending Rp. 20.000-30.000 for monthly expenses or 23.1%, 14 respondents are spending more than Rp.50.000 for their monthly expenses or 13%. The rest are 8 respondents or around 7.4% which spend around Rp.10.000-20.000 for their monthly expenses. The last 2 only spend less than Rp.10.000 for their monthly expenses for fermented drinks. The demographic of respondents' monthly fermented drink spending can conclude that the majority of the respondents in this survey are spending Rp.40.000-50.000 for monthly consumption indicating that they have large enough resources to buy sufficient amounts of fermented drinks.

Forty-two respondents are willing to buy fermented drinks around Rp.20.000-30.000 or 38.9% rounded into 39%, 36 respondents are willing to buy fermented drinks around Rp.30.000-40.000 or 33.3% rounded into 33%, 19 respondents are willing to buy fermented

drinks around Rp.10.000-20.000 or 17.6%, 9 respondents are willing to buy fermented drinks for around Rp.40.000-50.000 or 8.3%. The rest are 2 respondents or around 1.9% who are willing to buy fermented drinks around less than Rp. 10.000. The demographic of respondents' willingness to buy fermented drinks can conclude that the majority of the respondents in this survey are spending Rp.20.000-30.000 indicating that price is the right amount of fermented drinks.

Cronbach's Alpha

Cronbach's Alpha test is to calculate the indicator items from each variable, two independent and one dependent. For the independent variables perceived quality and perceived value, the calculations display the Cronbach's Alpha values, indicating that the data are dependable since the dependability values are 0.575 and 0.235, respectively. For the dependent variable purchase intention, the value 0.863 implies that the data obtained is reliable.

Multicollinearity

The multicollinearity is used to find out if there is a strong or perfect inter-correlation or the inter-association among the independent variables. Multicollinearity must be managed to avoid due to multicollinearity can contribute to a number of issues, including a subsequent increase for standard errors in the following regression, direct consequence as well as a disruption in assessing the relevance of independent variables in explaining their influence on the dependent variable. If the degree of correlation between variables is relatively high, it can cause problems when fitting the model and interpreting the results. The result of the multicollinearity test should give a tolerance value of more than 0.1 and Variance Inflation Factor of must be <6 for the model to be considered free of multicollinearity. Otherwise, if the VIF is >5, it is suggested to eliminate the variable (Hair et al, 2011). For this research, there is only one model tested. The model of independent variables Perceived Quality and Perceived Value towards the dependent variable of Purchase Intention (see Table 1).

Table 1 Multicollinearity

Construct	Collinearity Tolerance	Statistics VIF
Perceived Quality	0.886	1.128
Perceived Value	0.886	1.128

Linear Regression

The value for multiple R or also known as the correlation coefficient describes the strength of overall linear relationship between the independent variables (X1 Perceived Quality, X2 Perceived Value) and dependent variable Y (Purchase Intention). In Table 2, the R square value

describes the proportion of variance in the dependent variable that can be explained by the predictor variables. The value of adjusted R square is 0.259, which means that 25.9% or round up to 26% of the dependent variable Y (Purchase Intention) can be explained by the predictor variables of X1 (perceived quality), X2 (perceived value). While the remaining 74% is impacted by variables other than the observed variables used in this study.

Table 2 Model Summary

Construct	R Square	Adjusted R Square
Purchase Intention	0.259	0.244

Hypothesis Testing

The major component that contributes to the model with respect to purchase intention is perceived quality, together with perceived value and perceived quality as independent variables, according to the statistical test findings. In Table 3, it can be seen that purchasing intention is not greatly influenced by perceived value. However, prior research using the same variables shown that purchase intention is highly influenced by perceived value. This indicates that Indonesian consumers are becoming more and more concerned with product quality as opposed to price (perceived value). Additionally, if the quality of the fermented beverage is good, a positive signal is produced.

Table 3 Hypothesis Testing

Relationship	B	Std. Error	t	Sig.
Perceived Quality → Purchase Intention	0.739	0.141	5.240	0.001
Perceived Value → Purchase Intention	0.163	0.264	0.616	0.539

5. CONCLUSION

To conclude, this research has two independent variables which is Perceived Quality and Perceived Value and the one dependent variable is Purchase Intention. From two independent variables, the one who significantly and positively influences the dependent variable (purchase intention) is Perceived Quality. While the data analysis shows that perceived value does not positively influence purchase intention or is not significant. The strongest positive correlation occurred between perceived quality and purchase intention compared with the perceived value. Other factors that can support perceived quality could be brand awareness, brand image, consistent performing, product benefit, other than related factors on this research like health consciousness, packaging, safety concern, and taste. While factors that can support perceived value are more like emotional factors that provide consumers with the enjoyable and relaxing

feeling after consuming, and also feel pleasurable, religious factors, and social influence such as word of mouth, perceived improvement, feeling of acceptance, feeling of good impression, and approval from society. Thus, the survey resulted in Indonesian people paying more attention to the quality of the product such as health consciousness, packaging, safety concern, and taste rather than being affected by the price. This means that product quality of fermented drink is more important towards the willingness of buying the product.

Throughout this study's analysis, all results that can be implemented by managerial implication such as increasing product quality, whereas, if product quality increases then Indonesian people would tend to buy. Since the value (price) is not significant, then Indonesian people have great willingness to buy such good quality products.

In order to make the correlation of perceived value become stronger, managerial suggestions include adding more variables such as social influence to growth the marketing expansion, brand awareness, and brand image in perceived quality. Thus, if perceived quality is increased, from other factors such as increasing brand awareness, brand image, and in the marketing sector then the willingness of buying fermented drinks also increases. Then the managerial tendency to increase product price whereas perceived value does not positively influence Indonesian purchase intention on fermented drinks. In other words, that is a good sign if perceived value does not significantly impact purchase intention that can result in more profit in the business sector.

Scope and time limitations of this study technically only concern the two independent variables that do not fully represent the elements or contributors to purchase intention. Hence, the result of the study is also limited by only those variables.

For the demographic respondent results are the same as our expectation which targeted all ages. However, there is a time limit and the study can be further improved with a longer time frame to get more specific respondents and reach all Indonesian people in all regions.

The researcher would like to recommend further researchers to consider data to more specifically do the research on other cities in Indonesia, and other countries outside Indonesia, especially considering the characteristics of people from different cities and countries can give different results.

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