PRODUCT QUALITY, PRICE, AND BRAND IMAGE ON VIVO SMARTPHONE PURCHASE INTENTION IN SURABAYA

Vicky Rohmansyah
Okto Aditya Suryawirawan
oktoaditya@stiesia.ac.id
Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya

ABSTRAK


Kata Kunci: kualitas produk, harga, citra merek dan purchase intention.

ABSTRACT

This research aims to analyze the influence of product quality, price, and brand image on interest in buying Vivo smartphones in Surabaya. The object used in this study is the people of Surabaya who have used or used Vivo smartphones. This type of research is categorized as descriptive analysis research using a quantitative method approach. The research sample used in the study was 100 respondents who had purchased a Vivo Smartphone. This sampling technique uses a technique, namely the accidental sampling method, which is a method of determining a sample by taking respondents who coincidentally exist or are available somewhere according to the research context. Data was collected through a Google questionnaire form. The analytical method used in this study is Partial Least Square using SmartPLS 3.0 software. The results showed that product quality had a positive and significant effect on purchase intention, price had a positive and significant effect on purchase intention, then brand image had a positive and significant effect on purchase intention.

Keywords: product quality, price, brand image, purchase intention.

INTRODUCTION

In today's fast-paced era of telecommunications digitalization, seamless communication has become a vital aspect of our daily lives. It is essential to cater to the community's needs by providing convenient ways to communicate and access various types of information without any hindrances. The prevalence of smartphones has made them an indispensable part of people's lifestyles, resulting in a significant focus on the telecommunications industry. This has led to a surge in the emergence of numerous smartphone brands, each vying to outdo one another and create products with distinctive advantages and superior quality. The competition in this
market is fierce, driving innovation and improvements to meet consumers' ever-growing demands. The rapid technological advancement in the telecommunications industry has led to a surge in smartphone demand. As people desire prestigious and cutting-edge devices, smartphone industry entrepreneurs face the challenge of devising effective marketing strategies to compete for a larger market share. To stay relevant and thrive in the modern era, these business leaders must continuously introduce innovations to their products and services. This innovation-driven approach is vital for sustaining their companies amidst the dynamic and ever-evolving landscape of the smartphone market. By constantly offering new features, improved designs, and enhanced user experiences, smartphone entrepreneurs can attract more customers and secure their companies' long-term survival in the fiercely competitive contemporary market.

Smartphones in Indonesia have been steadily increasing due to their ease of use and affordable prices. Smartphones have become an indispensable part of daily life for the people of Indonesia. Consequently, the number of smartphone users in the country has been consistently growing each year, making Indonesia an attractive and strategic market for smartphone business entrepreneurs to offer various brands of smartphones.

Among the many smartphone brands available in Indonesia, Vivo is one of the technology companies actively developing its business strategy in the country. Originating from China, Vivo was founded in 2009 and embarked on its international expansion journey in 2014 by entering the Thai market. Subsequently, Vivo's products entered several Southeast Asian countries, including Indonesia, India, Myanmar, Malaysia, Thailand, the Philippines, and Vietnam. Over time, Vivo expanded further, reaching markets in Russia, Sri Lanka, Hong Kong, Taiwan, Macau, Brunei Darussalam, Laos, Cambodia, Bangladesh, and Nepal. In June 2017, Vivo entered the Pakistani market, quickly gaining popularity. Later, in October 2020, Vivo announced its plans to expand sales to the European market.

With a growing presence, Vivo has become a significant player in the smartphone industry. According to their official company profile page, Vivo currently boasts more than 400 million users spread across 50 countries and regions, showcasing their global reach and success in catering to the diverse needs of smartphone consumers worldwide.

In the first quarter of 2021, Vivo smartphones experienced a year-on-year sales decline of -3.4%. Despite this decline, the brand managed to secure the third position in the smartphone market, with a market share of 16.6%. However, in the second quarter of 2022, Vivo made an impressive comeback, increasing its market share by 17.8%, which indicates a significant growth in its presence in the market. Although the increase in market share seems promising, it is worth noting that Vivo's actual shipments of smartphones decreased from 1.8 million units in the second quarter of 2021 to 1.7 million units in the second quarter of 2022. This means that even though their market share grew, they faced challenges maintaining the same shipment level during the mentioned period.

Based on the data presented in table 1, Vivo smartphones have increased their market share percentage, allowing them to retain their third position in the Indonesian market. Moreover, Vivo's performance has been impressive enough to shift Xiaomi smartphones to the fourth position. However, despite these achievements, Vivo smartphones have not overtaken Oppo smartphones, which continue to lead the market share in Indonesia.

To gain a competitive edge and attract more consumers, companies, including Vivo, need to implement effective marketing strategies. When consumers show interest in purchasing a product, they pay attention to it and experience pleasure in considering it as a potential purchase. This interest and pleasure can lead to buyer behaviour, where consumers decide to purchase.
Table 1
Smartphone Sales Data in Indonesia

<table>
<thead>
<tr>
<th>Company</th>
<th>Shipment 2Q22</th>
<th>Shipment (%) 2Q22</th>
<th>Shipment 2Q21</th>
<th>Shipment (%) 2Q21</th>
<th>Growth YoY (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPPO</td>
<td>2.0</td>
<td>20.6</td>
<td>2.0</td>
<td>19.1</td>
<td>-3.0</td>
</tr>
<tr>
<td>SAMSUNG</td>
<td>1.9</td>
<td>20.2</td>
<td>1.7</td>
<td>16.2</td>
<td>11.8</td>
</tr>
<tr>
<td>VIVO</td>
<td>1.7</td>
<td>17.8</td>
<td>1.8</td>
<td>16.6</td>
<td>-3.4</td>
</tr>
<tr>
<td>XIAOMI</td>
<td>1.5</td>
<td>15.6</td>
<td>2.8</td>
<td>26.5</td>
<td>-47.1</td>
</tr>
<tr>
<td>REALME</td>
<td>1.2</td>
<td>12.1</td>
<td>1.2</td>
<td>11.1</td>
<td>-1.7</td>
</tr>
<tr>
<td>Others</td>
<td>1.3</td>
<td>13.7</td>
<td>1.1</td>
<td>10.4</td>
<td>17.9</td>
</tr>
<tr>
<td>Total</td>
<td>9.5</td>
<td>100.0</td>
<td>10.6</td>
<td>100.0</td>
<td>-10.0</td>
</tr>
</tbody>
</table>

Source: Processed Secondary Data, 2021

To be successful, Vivo should focus on understanding consumer preferences and needs, offering innovative features and attractive pricing, and creating effective marketing campaigns to highlight the unique selling points of their smartphones. By continuously improving its products and adapting its strategies to match the ever-changing market demands, Vivo can enhance its market share further and potentially challenge Oppo's leadership position in the future.

Consumers interested in buying a product tend to pay close attention to and find pleasure in it, eventually leading to their buying behaviour. However, the decision to make a purchase is heavily influenced by the product's perceived quality. Previous research on the relationship between product quality and purchase intention has yielded varying results. Hermanto and Saputra (2019) conducted a study that concluded that product quality was not a significant factor in influencing consumer purchase intention. In contrast, other researchers such as Powa et al., (2018), Budiyanto and Destilestari (2017), and Idris et al., (2020) found a significant positive correlation between product quality and purchase intention. Therefore, this study wants to determine product quality's effect on the purchase intention of Vivo smartphones in Surabaya.

Price plays a crucial role in influencing consumer purchase intention, as it is a significant consideration for consumers when making purchase decisions. Therefore, Vivo must carefully set its prices to ensure they align with the specifications and features, maintaining competitiveness against its rivals. The pricing strategy should also reflect the product's perceived benefits, as prices that are too high or too low can impact consumer interest. In line with this, companies often use pricing as a benchmark to gauge product demand (Armstrong and Kotler, 2009). However, previous research on the effect of price on consumer purchase intention has yielded conflicting results. Powa et al., (2019) found no significant impact of price on consumer purchase intention. Conversely, other researchers, such as Budiyanto and Destilestari (2017), Idris et al., (2020), and Rahayu et al., (2020), have demonstrated an apparent influence of price on purchase intention. Given the inconsistent findings from previous studies, further research is necessary to determine the relationship between price and purchase intention, particularly concerning Vivo smartphones in Surabaya. By conducting this additional research, it will be possible to gain deeper insights into how price affects consumer behaviour in the context of Vivo smartphones, enabling the company to devise a more effective pricing strategy that resonates with its target market.

A positive brand image can be a significant advantage for a company, setting it apart from competitors. When consumers have a favourable impression of a product's brand image, it becomes easier for the com-
pany to attract and persuade them to purchase. A strong brand image serves as a means of communication, conveying the value and trustworthiness of Vivo products to consumers. This positive image influences consumer perceptions and attitudes towards the entire organization and its individual products or product lines (Kenneth and Baack, 2018). Thus, a positive brand image can substantially impact consumer purchasing behaviour. However, despite the importance of brand image, conflicting results have emerged from previous research. Idris et al., (2020) found no significant effect of brand image on consumer purchase intention, which contrasts with other studies conducted by Hermanto and Saputra (2019), Budiyanto and Destilestari (2017), and Rahayu et al., (2020). These studies have shown an evident influence of brand image on purchase intention. Considering the inconsistent findings, further research is needed to determine the relationship between brand image and purchase intention, particularly concerning Vivo smartphones in Surabaya. By conducting this additional research, a more comprehensive understanding of how brand image influences consumer behaviour can be attained. Such insights will aid Vivo in developing effective strategies to enhance its brand image and build consumer trust, ultimately driving higher purchasing intentions among its target audience.

Based on the previous section's description, the study's research problems can be identified as follows: (1) does product quality affect purchase intention? (2) does price affect purchase intention? Furthermore, (3) does brand image affect purchase intention?, while the objectives of this study are: (1) to know and analyze the effect of product quality on purchase intention, (2) to know and analyze the effect of price on purchase intention, and (3) to know and analyze the influence of brand image on purchase intention.

LITERATURE REVIEW

Purchase Intention

Consumer purchase intention is a significant aspect of consumer behaviour, driven by the desire to buy or choose a specific product based on various experiences such as product evaluation, usage, and consumption. Purchase intention arises when consumers find pleasure in a product and have confidence in its perceived benefits, leading them to believe that owning the product will be advantageous. This purchase intention is a crucial component of the consumer's attitude towards consumption (Ferdinand, 2014). Once consumers have decided to purchase a product, they have reached the purchase intention stage. Evaluating a product's value plays a pivotal role in influencing purchasing decisions. If the product's perceived benefits outweigh the sacrifices required to obtain it, the consumer's desire to buy the item becomes stronger. However, if the perceived benefits are relatively lower than the sacrifices, the consumer might delay purchasing or consider evaluating alternative products. In summary, purchase intention reflects the consumer's willingness to buy a product fueled by positive experiences, perceived benefits, and the product's value proposition. Understanding purchase intention is crucial for businesses to tailor their marketing strategies and product offerings to meet the needs and preferences of consumers, ultimately leading to increased sales and brand loyalty.

Product Quality

Product quality is the ability of a product to meet consumer needs and desires. It serves as an essential identity for companies or producers, showcasing their commitment to providing satisfying services or products, thereby fostering consumer loyalty. According to Assauri (2015), product quality represents the level of a particular brand or product's ability to fulfil its intended function. Consequently, when consumers receive what they desire, it positively impacts sales, leading to consistent growth in product de-
mand. For companies and producers, ensuring product quality becomes a mandatory and critical aspect, as it directly influences consumer satisfaction and enables them to compete successfully in their target market. Conformity quality measures how well a product adheres to predetermined quality specifications, while design quality is based on the product's specifications and features. Typically, the concept of quality is considered a relative measure of the excellence of a service or product, encompassing both conformity quality and design quality. By focusing on product quality, businesses can attract more consumers, retain loyal customers, and gain a competitive edge in the market. Satisfied customers are likelier to recommend the product to others, leading to increased brand reputation and enhanced sales performance. Therefore, pursuing high product quality is crucial for companies and producers to thrive in today's competitive market.

Price

Price is a crucial factor in winning a competition and effectively marketing products. According to Armstrong and Kotler (2015), price refers to the amount of money charged for a product or service, representing the value customers exchange to own or use the product. Price plays a significant role in a consumer's decision-making process when purchasing. Consumers carefully evaluate the prices of various products, judging whether they align with the perceived value and the amount of money they are willing to spend. A higher price in the market often indicates good product quality and a convincing, reputable brand in the minds of consumers.

In contrast, a lower price might signal lower product quality and erode consumer confidence in the product's brand. Therefore, setting an appropriate price for a product is essential to balance perceived value and affordability. An optimal pricing strategy attracts consumers and positions the product favourably in the market, allowing businesses to gain a competitive advantage. By understanding consumer perceptions and expectations regarding price and value, companies can effectively leverage pricing as a powerful tool to boost sales and enhance their brand image.

Brand Image

According to Sutiyono and Hadibrata (2020), the brand image serves as a distinctive identity for a product in the eyes of customers, setting it apart from competitors' offerings. A positive brand image influences consumer purchasing decisions, making them more inclined to choose products with a good image. Conversely, a negative brand image can deter consumers from considering a particular product. Every company possesses a unique brand that shapes consumers' perceptions and preferences. Consumers often rely on brand image as a crucial factor in product selection. A strong brand image that effectively communicates the value proposition and product character can have a profound emotional impact on consumers, surpassing the rational appeal of the product. Establishing a favourable brand image requires strategic communication through various media channels to embed the brand's identity in consumers' minds. The brand image represents consumers' overall perception of the brand, formed through information and past experiences with that brand. Marketers can create positive associations in consumers' minds by crafting a compelling brand image and consistently delivering on promises. This approach differentiates the brand from competitors and fosters brand loyalty and long-term customer relationships. Thus, cultivating a positive brand image is essential for businesses to succeed in the competitive market.

Previous Research

The existing research on the relationship between product quality and purchase intention has yielded conflicting results. Hermanto and Saputra (2019) found that product quality was not significantly related
to consumer purchase intention, whereas Powa et al. (2018), Budiyanto and Destilestari (2017), and Idris et al., (2020) reported a significant influence of product quality on purchase intention. Similarly, the impact of price on consumer purchase intention has been a topic of varied findings in previous studies. Powa et al., (2019) revealed that price did not have a significant effect on purchase intention, while Budiyanto and Destilestari (2017), Idris et al., (2020), and Rahayu et al., (2020) demonstrated a significant relationship between price and purchase intention. Furthermore, research on the association between brand image and purchase intention has also produced inconsistent results. Idris et al., (2020) found no significant effect of brand image on consumer purchase intention, in contrast to the findings of Hermanto and Saputra (2019), Budiyanto and Destilestari (2017), and Rahayu et al., (2020), which indicated a significant impact of brand image on purchase intention.

Conceptual Framework

The contextual framework described in this study is related to theoretical objectives and can be explained on figure 1.

Hypothesis Development

The Effect of Product Quality on Purchase Intention

As defined by Assauri (2015), product quality refers to the level of a brand or product's ability to fulfil expected functions. Consumers tend to prioritize high-quality products, as they find the costs justified when obtaining them. Product quality that aligns with consumer expectations positively impacts purchase intention. This finding is consistent with the research conducted by Powa et al., (2018), Budiyanto and Destilestari (2017), and Idris et al., (2020), which also demonstrated a significant effect of product quality on purchase intention.

H1: Product quality positively and significantly affects the purchase intention of Vivo smartphones in Surabaya.

The Effect of Price on Purchase Intention

Price is a crucial element of the marketing mix as it directly generates revenue for the company. According to Armstrong and Kotler (2015), price represents the money charged for a product or service and the value exchanged by customers for owning or using it. Consumers consider price as a significant factor when making purchasing decisions. Companies must carefully set prices, considering competitors' strategies to avoid setting prices too high or too low. This research aligns with studies conducted by Budiyanto and Destilestari (2017), Idris et al., (2020), Rahayu et al., (2020), and Nugroho and Suhermin (2017), which all demonstrate a significant influence between price and purchase intention.

H2: Price positively and significantly affects the purchase intention of Vivo smartphones in Surabaya.

The Influence of Brand Image on Purchase Intention

As defined by Sutiyono and Hadibrata (2020), brand image is a crucial aspect of a product's brand identity that sets it apart from competitors' offerings. Consumers assess a product's brand image based on its benefits, which should outweigh the costs incurred during the purchase. A positive brand image in the minds of consumers leads to purchase decisions in favour of that brand. This research is consistent with studies by Hermanto and Saputra (2019), Budiyanto...
and Destilestari (2017), Rahayu et al., (2020), and Nugroho and Suhermin (2017), all indicating a significant influence between brand image and purchase intention.

H3: Brand image positively and significantly influences the purchase intention of Vivo smartphones in Surabaya.

RESEARCH METHODS

This research utilizes a quantitative and comparative causal approach, which examines causal relationships between variables after facts and events occur. The study focuses on Vivo smartphone users residing in Surabaya as the target population. This study employs accidental sampling, a random sampling technique where any individual who coincidentally meets the researcher can become a respondent. The Lemeshow formula determined the sample size, comprising Vivo smartphone users in Surabaya. The research utilizes primary data, which is collected directly through observations, questionnaires, and interviews with selected samples or respondents representing the entire population in the study.

Variable Operational Definition

Dependent and Independent Variables

The independent variables used in this study are product quality, price, and brand image. The dependent variable in this study is Purchase intention.

Product Quality

Product quality for Vivo smartphones in Surabaya refers to the ability to meet or exceed consumers' expectations, influencing their purchase intention. If Vivo smartphones demonstrate good product quality, it will attract more consumers and boost purchase intention. Conversely, poor product quality can lead to reduced purchase intention among consumers.

Price

The price for Vivo smartphones in Surabaya represents the value offered to consumers in exchange for a certain amount, aiming to provide corresponding benefits. As an essential element of the marketing mix, price charges money for products or services, generating income for the Vivo company.

Brand Image

The brand image for Vivo smartphones in Surabaya is shaped by consumers' perceptions, experiences, and associations formed through various channels such as events, exhibitions, electronic media, and print media. Customers who have purchased Vivo smartphone products contribute to the overall understanding and belief in the brand's positive image.

Purchase intention

Purchase intention konsumen mengacu pada perilaku konsumen yang menggambarkan keinginan seseorang untuk memilih atau membeli smartphone Vivo di Surabaya, berdasarkan pengetahuan dan keinginan dalam mengonsumsi, menggunakan, atau memiliki produk tersebut.

Data Analysis Techniques

Hypothesis testing in this study involves using the structural equation model (SEM) approach based on Partial Least Square (PLS), a component-based variant of SEM. SEM-PLS is a multiple method that combines principles of science and history, making it suitable for relatively difficult-to-measure constructs. SEM comprises two parts: the measurement method, which links variables and indicators to a latent variable, and the latent variable method, which involves simultaneous equations with econometrics. These two components are fundamental in concluding behavioural and social sciences. Ghozali (2014) describe SEM-PLS as a variant-based method calculated using smartPLS.

Measurement Model (Outer Model)

Validity Test (Convergent Validity, Discriminant and AVE Validity Test)

Validity tests are essential to assess the overall and individual indicator's ability to
produce valid data. In PLS analysis, three validity tests are employed: convergent validity, discriminant validity, and average variance extracted (AVE). These tests help determine whether the instrument and its indicators yield valid data.

**Convergent Validity Test**

Convergent validity test examines the measurement principle of a construct or variable with higher correlations. In PLS validity testing, an outer loading value of $\geq 0.50$ is considered significant, while values of $< 0.50$ are deemed not significant.

**Discriminant Validity Test**

The discriminant validity test confirms validity when the cross-loading value of each indicator is higher than its correlations with other variables, except for the variable itself. This test ensures that indicators demonstrate a low correlation with other variables, verifying the validity of the measurement.

**AVE**

AVE serves as a test to support the pre-tested results on discriminant validity. An AVE value of $\geq 0.5$ is considered accepted and valid, while a value of $< 0.5$ is considered invalid.

**Reliability Test**

The reliability test assesses the consistency or stability of a questionnaire's indicators representing a variable or construct. A questionnaire is considered reliable when respondents' answers remain consistent over time. Cronbach's alpha and composite reliability are used to measure a construct's top-down and true reliability. A composite reliability value $\geq 0.70$ indicates questionnaire reliability.

**Structural Model (Inner Model)**

**R-Square Test**

The inner model test in PLS assesses the correlation between constructs using t-tests. It measures the structural relationships and R-Square values to determine the extent of influence between variables in the model.

**Hypothesis Testing**

Hypothesis testing in the PLS system determines the variables' direct or indirect influence. A significant influence is indicated by a t-statistic value $\geq 1.96$, while an insignificant influence is indicated by a t-statistic value $< 1.96$. Direct and indirect influences can be identified by the p-value, where a value of $p < 0.05$ (5%) is considered significant, and $p \geq 0.05$ (5%) is considered indirect or insignificant.

**ANALYSIS AND DISCUSSION**

Characteristics of respondents by gender

One hundred questionnaires were distributed to assess the impact of product quality, price, and brand image on Vivo smartphones in Surabaya, considering respondents' characteristics such as gender and age.

Based on table 2, the PLS processed data on Vivo mobile phone users, four people aged 19-25 years, six people aged 26-40 years, and 28 people aged over 41 years.

<table>
<thead>
<tr>
<th>Age</th>
<th>Number (People)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-25 years</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>26-40 years</td>
<td>68</td>
<td>68%</td>
</tr>
<tr>
<td>&gt; 41 years old</td>
<td>28</td>
<td>28%</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Primary data tabulation, 2023

**Table 3**

Gender Characteristics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number (People)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>84</td>
<td>84%</td>
</tr>
<tr>
<td>Woman</td>
<td>16</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Primary data tabulation, 2023

Based on table 3, there are 84 male and 16 female Vivo mobile phone users.
Table 4

Cross Loading Value

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Brand Image (BI)</th>
<th>Price (P)</th>
<th>Product Quality (PQ)</th>
<th>Purchase Intention (PI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI1</td>
<td>0.892</td>
<td>0.481</td>
<td>0.560</td>
<td>0.648</td>
</tr>
<tr>
<td>BI2</td>
<td>0.906</td>
<td>0.476</td>
<td>0.598</td>
<td>0.656</td>
</tr>
<tr>
<td>BI3</td>
<td>0.906</td>
<td>0.489</td>
<td>0.541</td>
<td>0.627</td>
</tr>
<tr>
<td>BI4</td>
<td>0.921</td>
<td>0.636</td>
<td>0.602</td>
<td>0.743</td>
</tr>
<tr>
<td>P1</td>
<td>0.553</td>
<td>0.938</td>
<td>0.778</td>
<td>0.711</td>
</tr>
<tr>
<td>P2</td>
<td>0.555</td>
<td>0.960</td>
<td>0.772</td>
<td>0.707</td>
</tr>
<tr>
<td>P3</td>
<td>0.569</td>
<td>0.946</td>
<td>0.750</td>
<td>0.685</td>
</tr>
<tr>
<td>P4</td>
<td>0.510</td>
<td>0.938</td>
<td>0.759</td>
<td>0.675</td>
</tr>
<tr>
<td>PQ1</td>
<td>0.554</td>
<td>0.645</td>
<td>0.925</td>
<td>0.724</td>
</tr>
<tr>
<td>PQ2</td>
<td>0.538</td>
<td>0.566</td>
<td>0.907</td>
<td>0.626</td>
</tr>
<tr>
<td>PQ3</td>
<td>0.548</td>
<td>0.581</td>
<td>0.903</td>
<td>0.631</td>
</tr>
<tr>
<td>PQ4</td>
<td>0.593</td>
<td>0.635</td>
<td>0.922</td>
<td>0.674</td>
</tr>
<tr>
<td>PQ5</td>
<td>0.590</td>
<td>0.913</td>
<td>0.856</td>
<td>0.717</td>
</tr>
<tr>
<td>PQ6</td>
<td>0.560</td>
<td>0.935</td>
<td>0.819</td>
<td>0.700</td>
</tr>
<tr>
<td>PI1</td>
<td>0.741</td>
<td>0.656</td>
<td>0.694</td>
<td>0.921</td>
</tr>
<tr>
<td>PI2</td>
<td>0.665</td>
<td>0.667</td>
<td>0.734</td>
<td>0.915</td>
</tr>
<tr>
<td>PI3</td>
<td>0.683</td>
<td>0.709</td>
<td>0.735</td>
<td>0.953</td>
</tr>
<tr>
<td>PI4</td>
<td>0.683</td>
<td>0.717</td>
<td>0.708</td>
<td>0.954</td>
</tr>
</tbody>
</table>

Source: Processed Primary Data, 2023

### PLS (Partial Least Square)

This study utilizes SmartPLS 3.0 software to calculate the relationships of direct and indirect influences between multi-path variables. PLS (Partial Least Square) comprises the outer model and the inner model, enabling efficient analysis of the study's variables.

### Measurement Model (Outer Model)

#### Convergent Validity Test and Deskriminan Validity Test

The convergent and discriminant validity tests share the same objective in assessing outer loading and cross-loading values. The distinction lies in interpreting the accepted valid value for each test. Convergent validity is valid if the outer loading value is \( \geq 0.5 \), while discriminant validity is valid if the cross-loading value is significantly higher than other indicator values.

The table 4 above indicates that each variable indicator, including Product Quality, Price, Brand Image, and Purchase Intention, exhibits higher values compared to the variables formed by other indicators. This demonstrates the good discriminant validity of the indicators used in this study.

#### AVE

AVE serves as a supportive test for previously assessed discriminant validity. An AVE value \( \geq 0.5 \) is considered acceptable and valid, while a value < 0.5 is considered invalid.

Table 5

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>0.822</td>
</tr>
<tr>
<td>H</td>
<td>0.894</td>
</tr>
<tr>
<td>PQ</td>
<td>0.791</td>
</tr>
<tr>
<td>PI</td>
<td>0.876</td>
</tr>
</tbody>
</table>

Source: Processed Primary Data, 2023
The table 5 above shows that the variables of brand image, price, product satisfaction, and purchase intention have AVE values $\geq 0.5$, indicating their validity and meeting the criteria for discriminant validity as supported by AVE (Average Variance Extracted) testing.

**Reliability Test**

Reliability tests use Cronbach’s alpha for top-down measurement and composite reliability for the true reliability value of a construct. If the composite reliability value is $\geq 0.70$, the questionnaire respondents’ answers are considered reliable. On the other hand, if the composite reliability value is $< 0.70$, they are considered unreliable.

The table 6 above indicates that all variables in this study, including Product Quality, Price, Brand Image, and Purchase Intention, have Cronbach’s Alpha values and composite reliability $\geq 0.70$. This demonstrates good reliability, allowing for further analysis in the study.

**Structural Model (Inner Model)**

In the inner model testing, the R-Square ($R^2$) value indicates the contribution of the independent variable’s influence on the dependent variable. A higher $R^2$ value signifies a more substantial impact of the independent variable on the dependent variable.

The table 7 above shows that the value of 0.718 indicates that brand image, price, and product quality collectively explain 71.8% of the influence on purchase intention.

**Hypothesis Test Value (Direct Effect)**

The table 8 below shows each variable’s statistical values and P-values.

The hypothesis testing determines significant relationships between constructs based on t-statistics and p-values. The hypothesis is accepted if the p-value $\leq 0.05$ and the t-statistic value $\geq 1.96$. Conversely, the hypothesis is not accepted if the p-value $> 0.05$ and the t-statistic value $< 1.96$. In this study, the first hypothesis, brand image on purchase intention, is accepted with a t-statistic value of 4.685 and a p-value of 0.000. The second hypothesis, price on purchase intention, is accepted with a t-statistic value of 3.053 and a p-value of 0.002. Finally, the third hypothesis, product quality on purchase intention, is accepted with a t-statistic value of 3.770 and a p-value of 0.000.
Brand Image Affects Purchase Intention
Based on the results of hypothesis testing, it is found that brand image significantly influences purchase intention for Vivo smartphones in Surabaya, confirming the acceptance of hypothesis one. This indicates that a strong brand image can positively influence consumer purchase intention and create a solid emotional bond with a brand. According to Sutiyono and Hadibrata (2020), a brand image is a brand identity that distinguishes a product from competitors. This aligns with previous research by Hermanto and Saputra (2019), Budiyanto and Destilestari (2017), Rahayu et al., (2020), and Nugroho and Suhermin (2017), which also show a significant impact of brand image on purchase intention.

Price Affects Purchase Intention
The hypothesis test results indicate that price significantly affects the purchase intention of Vivo smartphones in Surabaya, leading to the acceptance of hypothesis two. The study shows that the affordable price of Vivo smartphones attracts consumers in Surabaya. According to Armstrong and Kotler (2015), price represents the amount of money charged for a product or service in exchange for the benefits it offers. This finding aligns with previous research by Budiyanto and Destilestari (2017), Idris et al., (2020), Rahayu et al., (2020), and Nugroho and Suhermin (2017), which also demonstrate a significant impact of price on purchase intention.

Product Quality Affects Purchase Intention
Based on the results of the hypothesis test, it is evident that product quality significantly influences the purchase intention of Vivo smartphones in Surabaya, leading to the acceptance of hypothesis three. Assauri (2015) states that product quality refers to the level of a brand or product's ability to fulfil expected functions. This finding aligns with previous research by Powa et al., (2018), Budiyanto and Destilestari (2017), and Idris et al., (2020), which also demonstrate a significant impact of product quality on purchase intention.

CONCLUSIONS AND RECOMMENDATION
Conclusion
Based on the PLS (Partial Least Square) test results, the study concludes the following: (1) Product Quality (PQ) has a positive and significant impact on the Purchase Intention (PI) of Vivo smartphones in Surabaya. (2) Price (P) positively and significantly impacts the Purchase intention (PI) of Vivo smartphones in Surabaya. (3) Brand Image (BI) positively and significantly impacts the Purchase intention (PI) of Vivo smartphones in Surabaya.

Limitations
The study has limitations, including (1) The study uses 100 respondents. (2) The study is limited to three independent variables: product quality, price, and brand image. (3) Potential biases due to differences in thoughts and understandings among respondents and honesty factors in filling out the questionnaires.

Recommendation
Vivo should prioritize maintaining good product quality to boost purchase intention among consumers. Simultaneously, they should explore more competitive pricing strategies to enhance their market position. Future researchers can expand the study by further investigating additional independent variables like promotional strategies to influence purchase intention. Increasing sample sizes in future studies will provide more reliable and robust results. Enhancing the brand image will contribute to easy recognition and a positive impression of Vivo products among consumers.

REFERENCES


