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Underpricing Anomalies: A Study of Companies that IPO on the Indonesian Stock Exchange

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ABSTRACT

During Initial Public Offerings (IPO), one of the most common anomalies associated with pricing is short-term underpricing. The main objective of this study is to contribute to previous academic research by examining the existing underpricing of companies that conducted Initial Public Offerings (IPO) on the Indonesia Stock Exchange during 2022. With this objective, 58 companies that conducted Initial Public Offerings (IPO) on the Indonesia Stock Exchange during 2022 were examined. This research is a causal associative research with a quantitative approach. In the analysis, the period of this study takes a relatively short-term period, namely the first day and the first seven days. Hypotheses were tested using non-parametric statistical testing methods, namely the Kruskal Wallis test. The empirical findings in this study are that when viewed from the abnormal/adjusted return shows that there is a short-term underpricing anomaly. This means that investors can get abnormal returns by buying the IPO shares. However, when viewed from the cumulative value, it shows that there is no short-term underpricing anomaly in companies conducting Initial Public Offerings (IPO) on the Indonesia Stock Exchange during 2022.

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INTRODUCTION

There are two basic financing methods or alternatives that can be used by companies in determining their funding decisions in the long term, namely by looking at the equity and debt aspects (Widiarti et al., n.d.). These two aspects certainly have their respective advantages and disadvantages. From the debt aspect, in the financing process, the company is subject to burdens in the form of interest debt and an obligation to make repayments. Meanwhile, in the equity financing process, the financing process is not like a loan; in other words, the company does not have financial obligations such as making repayments and charges in the form of interest (Özyeşil, 2022). Companies choosing between the two equity and debt financing methods certainly have the aim of meeting the company's needs more optimally and by looking at the existing situation in the company (Karya et al., n.d.). The most common method for carrying out equity financing in companies is by conducting a public offering, which is usually applied in the capital market (Özyeşil, 2022). This public offering is usually known as going public, which is done by several companies with the aim of maintaining their company. The process of going public is carried out in the primary market, which is usually known as initial public offerings (IPOs). Initial Public Offerings (IPO) is an activity where a company sells its shares for the first time and is addressed to the public through the capital market. This is usually called initial public interest because the process is carried out in the primary market. The primary market is a market aimed at companies wishing to make a public offering (issuers) with the aim of selling their shares for the first time to investors. The company does this because it has the aim of obtaining capital by selling its securities on the capital market (Budi Kuncoro & Suryaputri, 2019).

This public offering has always been an interesting and popular topic in the capital market. The public offerings that occur in the capital market are classified into 2, namely the primary market and the secondary market. The offering process in the primary market is when the share price of a company will be determined by an agreement between the two parties, namely the company and the underwriter (underwriter), while in the secondary market the offering process occurs when the share price of a company is determined by demand and supply, it is usually called the market mechanism (Adhi Partama & Gayatri, 2019). Public offerings are fairly popular because they are considered to play a fairly important role in a country's process to further develop and deepen the capital market. For example, in Indonesia, which is one of the developing countries, the number of publicly traded companies in 2021 on the Indonesia Stock Exchange was 54 companies. Quoting from (Qolbi, 2022), the number of companies that conducted initial public offerings in Indonesia in 2021 is said to occupy the first position in Asean. Meanwhile, when compared to the number of publicly traded companies in developed countries such as the United States on the stock exchange in 2021, there were 1,035 companies, which are considered to have an efficient capital market. There is a lot of research conducted on public offerings, or initial public offerings (IPOs), in various kinds of literature. One of them is research on the short-term performance of shares in companies offered to the public. In several studies of short-term stock performance, it was found that there were anomalies that occurred during initial public offerings. This anomaly is in the form of a short-term underpricing anomaly.

LITERATURE REVIEW

According to Ordelman (n.d.), this anomaly occurs when the share price of a company conducting an initial public offering is superior to the market price in a short period of time. According to Beatty (1986), the underpricing phenomenon could occur due to asymmetric information. According to Baron and Holmstrom (1980) the undepriced initial offering price is based on the assumption that there are differences in information between various parties regarding the value of the new shares. (Baron & Holmstrom, 1980) also argue that this information asymmetry occurs due to the unequal distribution of information, or it could be said that the underwriter has significantly better information than the information available to the issuer. Meanwhile, if we look at opinions (Rock, 1986), information asymmetry occurs due to the unequal distribution of information among investors. Research (Fardila et al., 2019) on companies listed on the IDX in the 2008–2017 period shows that information asymmetry has a significant effect on underpricing. Short-term underpricing anomalies can occur due to many factors. Various kinds of research show how companies experience underpricing and what factors are behind it. This anomaly is certainly not an event that the company wants. Every company certainly wants to get big profits or increase more than before. Of course, each company has its own tactics for formulating prices that will be mutually agreed upon during an initial public offering. Judging from the model (Rock, 1986), when conducting an initial public offering (IPO), companies do not want or can be said to be reluctant to provide a price that is too low for their IPO. Contrary to the model (Allen & Faulhaber, 1989), which states that companies deliberately provide low prices at the time of the IPO with the aim of giving a signal to potential investors that the company can bear the costs of underpricing to reduce the impact of information asymmetry that arises between the issuing company and investors, By doing this, the publishing company does not need to hand over any valuable information that it might prefer to keep secret from the public.

Many factors trigger this underpricing anomaly (Füllbrunn et al., 2020). A short-term underpricing anomaly can be interpreted as meaning that the price at the time of offering tends to be lower than the fair value. Issuers provide discounts to investors who buy shares through issuance during the IPO. In this way, the initial return of investors who have purchased shares at the time of first issuance can be higher than the average market return (Antonio et al., 2022). Which can be interpreted as an abnormal return that investors get a greater profit than the market. Abnormal returns apply to short-term share issuance. On the stock exchange, what can be said to be short term is the first day after the issuance until the end of the week after the issuance (Kaya, 2019) in (Özyeşil, 2022). The average return obtained by investors who have purchased shares through an initial issuance and then held them for a relatively short or short-term period will tend to be higher compared to other investors who have not purchased shares publicly. Demand that is said to be strong can influence the short-term price performance of share prices after issuance. There are several factors that support the demand for IPOs, one of which is that investors know that issuing institutions usually provide discounts at the time of an initial public offering and they want to get existing shares from the offering (İlbasmış, 2023). Underpricing anomalies, especially for short-term underpricing, have had several studies conducted. Many of them have conducted research such as (Maheshwari & Kumar, 2022) in their findings regarding short-term IPO performance in India during Covid-19, showing that there was a significant increase in average underpricing. Research (İlbasmış, 2023)examines underpricing and aftermarket performance after IPO in Borsa Istanbul. Cumulative abnormal return measurement is carried out. (İlbasmış, 2023) found that there was quite significant underpricing during the observation period, namely during Covid-19, with the coverage period being 2021 and 2022 (Özyeşil, 2022) in observing underpricing anomalies in 32 companies that had initial public offerings at Borsa Istanbul in 2021. The anomalies seen were short-term anomalies in each company. Based on empirical findings, it was found that there was no visible short-term underpricing for all public offerings carried out at Borsa Istanbul in 2021. Referring to this research, researchers observed short-term underpricing anomalies in companies conducting their initial public offering. With this aim, 58 companies conducting initial public offerings (IPOs) on the Indonesia Stock Exchange during 2022 were examined. Based on this description, according to Asquith & Mullins (1986) in Özyeşil (2022), the research hypothesis can be formulated as follows:

Hypothesis used for first-day abnormal returns:

H_0: $\overline{AR_t} \leq 0$ Invalid *Underpricing* Anomaly.

H_1: $\overline{AR_t} > 0$ Valid *Undepricing* Anomaly.

Hypothesis used for the 7th-day abnormal return:

H_0^1: $\overline{AR_t} \leq 0$ Invalid *Underpricing* Anomaly.

H_1^1: $\overline{AR_t} > 0$ Valid *Undepricing* Anomaly..

H_0^2: $\overline{CAR_t} \leq$

0 Based on the Cumulative Adjusted Return, the Underpricing Anomaly is invalid.

H_1^2: $\overline{CAR_t} >$ 0 Based Cumulative Adjusted Return Anomali *Underpricing* valid.

H_0^3: $\overline{BHAR_t} \leq$

0 Based on Compound Adjusted Return Underpricing Anomaly is invalid.

H_1^3: $\overline{BHAR_t} >$

0 Based Compound Return campuran Anomali *Underpricing* valid.

METHODOLOGY

The type of research is causal associative research that uses a quantitative approach. Where, according to (Sugiyono, 2022) associative research is carried out with the aim of finding out how the influence and relationship between two or more variables and also this type of research has a causal form that has a causal relationship, namely the influence of one of the variables (independent) on the variable (dependent). The population in this research is all companies that have conducted an initial public offering (IPO) and have been listed on the Indonesia Stock Exchange in 2022. The sample used in this research is 58 companies that have conducted an initial public offering (IPO) on the Indonesian Stock

Exchange. This research period takes a relatively short term period, namely seven days of observation for each company. In other words, this research focuses more on days 1 and 7 and a comparison will be made of the offering price and closing price of the company concerned. This research will look at the performance of short-term prices through shares offered to the public, which means an examination of the share prices for each company will be carried out, and short-term underpricing anomalies will be seen. The observation variables used in this research are stock Abnormal Return, Cumulative Abnormal Return, and Buy and Hold Abnormal Return which influence each other.

Underpricing is Calculated using the Following Formula

AR (Abnormal Return) or abnormal return is an event that occurs because there is a difference between the actual or actual return that occurs and the return that investors have expected (expected return) (Jogiyanto, 2017).

$$RTN_{i,t} = RTN_{i,t} - E\,[R_{i,t}] \qquad (1)$$

Information:

$RTN_{i,t}$: abnormal return of company shares (i) in the event or observation period (t).

$R_{i,t}$: the actual return that occurred for company shares (i) on the day of the observation period (t).

$E\,[R_{i,t}]$: expected return (expected return) of company shares on the day of the observation period (t).

a. Return realization

This actual return is the result obtained through the difference in the current price relative to the previous price (the return at time t.

$$Rnt = \frac{(Xnt - Xnt - 1)}{Xnt - 1} \qquad (2)$$

Information

Rnt: return for stock n at time t.

Xnt : closing price for stock n at time t.

Xnt-1 : closing price for share n at time t-1 (when issued).

b. Expected return

Expected return is a return that must be estimated in order to see the expected return in the future. In other words, expected return is the expectation that there will be a return in the future (which has not yet happened).

$$Rmt = \frac{(Xmt - Xmt - 1)}{Xmt - 1} \quad \ldots (3)$$

Information:

Rmt: Expected return.

Xmt : Composite Stock Price Index in period t.

Xmt -1 : Composite Stock Price Index in period t-1

CAR (Cumulative Abnormal Return) or accumulated abnormal return (ARTN) is the accumulation of abnormal returns that existed on the previous day during the current event period (Jogiyanto, 2017).

$$ARTN_{i.t} = \sum_{a=t3}^{t} RTN_{i,a} \quad \ldots (4)$$

Information

$ARTN_{i.t}$: a cumulation of the cumulative abnormal return of company i's shares on day t, which is accumulated from the abnormal return (RTN) of company i's shares starting from the initial day of the event period up to day t.

$RTN_{i,a}$: *abnormal return* For the shares of the Ith company on the day a, which starts from the first day of the window period to the day t.

BHAR (Buy and Hold Abnormal Return) is a holding period method for measuring a company's short-term ownership (Khotari & Warner, n.d.)

$$BHAR_i\ (t_1, t_2) = \prod_{t=t_1}^{t_2}(1 + r_{i,t}) - \prod_{t=t_1}^{t_2}(1 + r_{m,t}) \quad \ldots (5)$$

Information

$BHAR_i$: abnormal return on share i in month t calculated based on compound basis.

$r_{i,t}$: return for stock n at time t.

$r_{m,t}$: Expected return (expected return).

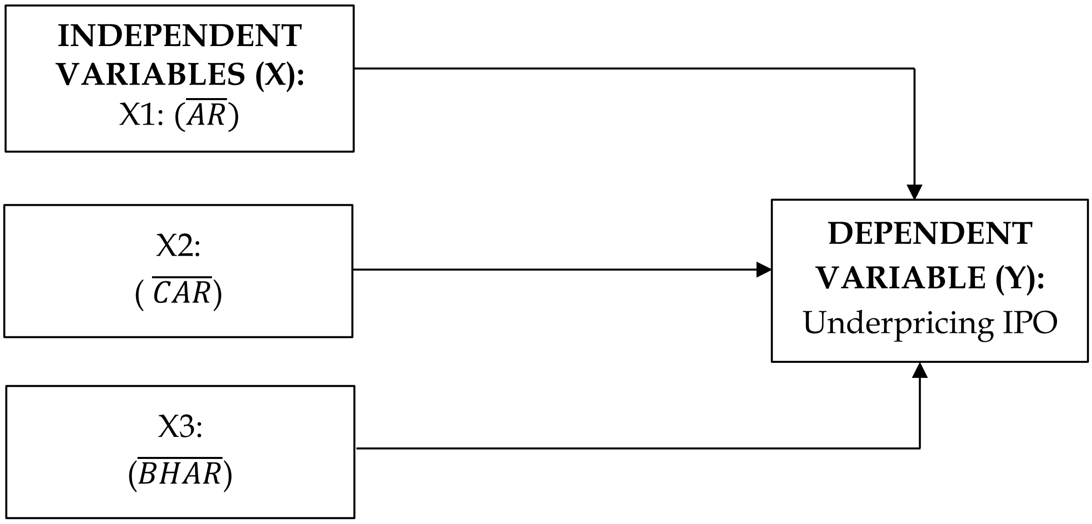
t : First period or first day.

T : compound return for stock i during time period t.

In this research, the bivariate analysis method used is two alternative tests, namely one way anova with the aim of comparing the mean differences in more than two groups, which is a parametric statistical method which, when examined, meets the assumption of normality (P>0.05) and The Kruskal Wallis test will be carried out, which is a non-parametric statistical method and is an alternative if the research does not meet the assumption of normality (P<0.05). What will be the benchmark for testing the one way anova hypothesis is if the probability is smaller than the significance level (P ≤ 0.05), which means H_0 is rejected, whereas if the probability is greater than the significance level (P > 0.05), it means H_0 is accepted.

The theoretical review built in this study resulted in a research model supported by several hypotheses presented in Figure 1.

Figure 1.



RESEARCH RESULT AND DISCUSSION

According to (Sugiyono, 2022) descriptive statistical analysis is used as a tool to analyze data by describing the data that has been collected without any generalizing conclusions.

Table 1. Descriptive Statistics

Hari	Parameter	R	AR	CARit	BHARit
	Median	0.25	0.25	-	-
1	Minimum	-0.10	-0.12	-	-
	Maximum	2.74	2.69	-	-
	Median	0.00	-0.01	0.24	-0.01
2	Minimum	-0.10	-0.10	-0.22	-0.10
	Maximum	0.35	0.35	2.93	0.35
	Median	-0.02	-0.01	0.20	-0.01
3	Minimum	-0.10	-0.10	-0.26	-0.10
	Maximum	0.34	0.35	3.18	0.35
	Median	0.01	0.00	0.19	0.00
4	Minimum	-0.10	-0.10	-0.33	-0.10
	Maximum	0.34	0.35	3.10	0.35
	Median	0.00	0.00	0.19	0.00
5	Minimum	-0.10	-0.09	-0.40	-0.09
	Maximum	0.25	0.25	3.04	0.25
	Median	-0.01	-0.01	0.18	-0.01
6	Minimum	-0.09	-0.09	-0.44	-0.09
	Maximum	0.43	0.43	2.96	0.43
7	Median	-0.01	-0.01	0.20	-0.01

Minimum	-0.38	-0.38	-0.52	-0.38
Maximum	0.34	0.35	2.90	0.35

Source: Data penelitian 2024, SPSS 16

After carrying out a normality test for the data from day 1 to day 7, the results show that the data that has been processed is not normally distributed as shown in the significance value ($P < 0.05$), which means the data does not meet the requirements for testing using the method. parametric statistics. Therefore, the research will use hypothesis testing with non-parametric statistical methods, namely the Kruskal-Wallis test because this method allows testing data that does not meet the assumption of normality (Purwohedi et al., 2017). The following data are the results of the Kruskal-Wallis test on returns, abnormal returns, cumulative abnormal returns, and buy and hold abnormal returns.

Share Price Performance on the First Day

In this part of the analysis, a calculation process is used by centralizing the data or taking the middle value. The raw return ($\bar{R}$) of these shares is calculated using the share price offered to the public on the date of the public offering and the closing price on the first day after the public offering. Then, using the raw return on the first day and the market return, the adjusted return ($\overline{AR}$) is calculated, namely the calculation of the average of the adjusted returns of these shares.

Table 2. Share Price Performance on the First Day

Hari	$\bar{R}$	sig.	$\overline{AR}$	sig.
1	0.25	0.00	0.25	0.00

Source: Data penelitian 2024, SPSS 16

On the first day when the initial public offering (IPO) was carried out, it showed that the raw returns from the shares that had been issued resulted in a significance value obtained of ($P < 0.05$).

Based on the following hypothesis:

H_0: $\overline{AR_t} \leq 0$ Anomali *Underpricing* invalid.

H_1: $\overline{AR_t} > 0$ Anomali *Undepricing* valid.

It can be concluded that if the significance value is as the value obtained in the table, then H_0 is rejected and conversely H_1 is accepted. So by looking at the first day of stock returns for each company after conducting its initial public offering, it can be seen that there is an underpricing anomaly on the first day for shares in companies conducting Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2022.

Stock Price Performance in the First Seven Days

Similar to the treatment carried out on the first day and first three days when Initial Public Offerings (IPO) were carried out, in the first seven days a calculation process was also carried out by carrying out a data centralization process, in other words, an analysis process by taking the middle value. At this stage it will be adjusted to the value of the raw return ($\bar{R}$) which will then be adjusted to the calculation of the market return ($\overline{AR}$), the cumulative calculation of the stock return ($\overline{CAR}$) and the calculation of the compound stock return ($\overline{BHAR}$) in companies undergoing Initial Public Offerings (IPO).

Table 4. Share Price Performance in the First Seven Days

Var.	**Median (Minimum-Maximum)**							**Sig.**
	Hari ke-1	**Hari ke-2**	**Hari ke-3**	**Hari ke-4**	**Hari ke-5**	**Hari ke-6**	**Hari ke-7**	
$\bar{R}$	0.25 (-0.10-2.74)	0.00 (-0.10-0.35)	-0.02 (-0.10-0.34)	0.01 (-0.10-0.34)	0.00 (-0.10-0.25)	-0.01 (-0.09-0.43)	-0.01 (-0.38-0.34)	0.00
$\overline{AR}$	0.25 (-0.12-2.69)	-0.01 (-0.10-0.35)	-0.01 (-0.10-0.35)	0.00 (-0.10-0.35)	0.00 (-0.09-0.25)	-0.01 (-0.09-0.43)	-0.01 (-0.38-0.35)	0.00
$\overline{CAR}$	0.25 (-0.118-2.69)	0.24 (-0.22-2.93)	0.20 (-0.26-3.18)	0.19 (-0.33-3.10)	0.19 (-0.40-3.04)	0.18 (-0.44-2.96)	0.20 (-0.52-2.90)	1.00
$\overline{BHAR}$	0.25 (-0.12-2.69)	-0.01 (-0.10-0.35)	-0.01 (-0.10-0.35)	0.00 (-0.10-0.35)	0.00 (-0.09-0.25)	-0.01 (-0.09-0.43)	-0.01 (-0.38-0.35)	0.00

Source: Data penelitian 2024, SPSS 16

In the first seven days when the initial public offering (IPO) was carried out, the raw return ($\bar{R}$), the market return ($\overline{AR}$), and the calculation of the compound stock return ($\overline{BHAR}$) of the shares that had been issued showed the value The significance obtained was (P<0.05). Meanwhile, the results of calculations using the cumulative calculation of stock returns ($\overline{CAR}$) from shares that have been issued produce a significance value of (P> 0.05).

Based on the following hypothesis:

$H_0^1: \overline{AR_t} \leq 0$ Invalid *Underpricing* Anomaly

$H_1^1: \overline{AR_t} > 0$ *Valid Underpricing* Anomaly

$H_0^2: \overline{CAR_t}$

≤ 0 Based on Cumulative Adjusted Return, Anomaly Underpricing is invalid

$H_1^2: \overline{CAR_t}$

$>$ 0 Based on Cumulative Adjusted Return, Anomaly Underpricing is valid

$H_0^3: \overline{BHAR_t}$

≤ 0 Based on Compound Adjusted Return, Anomaly *Underpricing* is invalid

$H_1^3: \overline{BHAR_t}$
$>$ 0 Based on Compound Adjusted Return, Anomaly *Underpricing* is valid

It can be concluded that if the significance value is as the value obtained in the table, in the first three days it can be seen either from centralizing the data or taking the middle value carried out and of course based on the significance value produced in the research, then the raw return ($\bar{R}$), the market return ($\overline{AR}$), and the calculation of the compound stock return ((BHAR)) from the shares that have been issued show that H_0^1, H_0^3 are rejected and H_1^1, H_1^3 are accepted. Besides that, because the significance value in the cumulative calculation of stock returns ($\overline{CAR}$) shows significant results, then H_0^2 is hypothesized that this can be accepted, otherwise H_1^2 will be rejected.

So by looking at the first seven days for stock returns for each company after conducting its initial public offering, it can be seen that there is an underpricing anomaly in the first seven days for shares in companies conducting Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2022 when viewed from raw return ($\bar{R}$), market return ($\overline{AR}$), and calculation of compound stock returns ($\overline{BHAR}$). Meanwhile, if you look at the cumulative calculation indicator of stock returns ($\overline{CAR}$), it can be seen that there is no underpricing anomaly in shares in each company conducting Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2022.

If you look at the research results from the cumulative side of abnormal returns ($\overline{CAR}$), it shows that there are no anomalies from underpricing itself in companies that had Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2018. This could have happened because of taking into account Cumulative abnormal returns have gone through a comparison process through the period at the time of the IPO with the period during the event or up to the seventh day of the event period. By comparing through cumulative abnormal returns, it is considered quite effective in making comparisons to conclude which types of shares are good or not and whether there will be deviations or not with the shares of each company. The results of this study are not in line with the results of research conducted by (Özyeşil, 2022) it was found that there was no short-term undepricing for all public offerings conducted at Borsa Istanbul in 2021. From these findings, it can be concluded that investors cannot obtain abnormal returns by buying shares from public offerings made in a short period of time.

CONCLUSIONS AND RECOMMENDATIONS

Financial markets may not always be organized as markets that can be said to be or are classified as efficient markets where all investors can obtain average returns and can access information fairly. Several studies have shown that some investors obtained returns or adjusted returns that were much higher than the average market price. This is where you can see whether there are price anomalies or not. Price anomalies are also usually observed when companies conduct initial public offerings (IPO). Price anomalies observed in the short term after issuance are defined as underpricing anomalies. In this case, the issuer experienced a loss of income due to setting the public offering price below the actual value when conducting Initial Public Offerings (IPO).

Based on the findings obtained when viewed through the data that has been processed and the discussion that has been presented from this research, it can be concluded that there is an underpricing anomaly in companies conducting Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2022. This is shown through the results Kruskal-Wallis significance test which shows a significance value <0.05. In other words, if we look at it statistically, companies that register themselves to conduct Initial Public Offerings (IPO) on the Indonesia Stock Exchange in 2022 can get a higher return (abnormal/adjusted return) than the market average by investing in this way IPO for a short period of time. However, if we look at the cumulative abnormal return value, the test results show a significance value of > 0.05.

This means that if you look at this value, there will be no underpricing anomaly in companies conducting Initial Public Offerings (IPO) on the Indonesian Stock Exchange in 2022. In other words, when viewed statistically, if investors apply a buy and hold investment strategy for stocks by buying shares in stocks that conduct IPOs and keeping them in portfolios for the first seven days, they can find significant benefits for investors. However, if future researchers want to get comprehensive, more detailed, and meaningful results, it is recommended to conduct research based on criteria such as sector or industry, through the public offering method, and through the sale of shares and other criteria that are more detailed.

ADVANCED RESEARCH

In writing this article the researcher realizes that there are still many shortcomings in terms of language, writing, and form of presentation considering the limited knowledge and abilities of the researchers themselves. Therefore, for the perfection of the article, the researcher expects constructive criticism and suggestions from various parties.

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