

# MATRIK: JURNAL MANAJEMEN, STRATEGI BISNIS, DAN KEWIRAUSAHAAN

Terakreditasi SINTA Peringkat 2 SK: 148/M/KPT/2020

## **Does Board Gender Diversity Affect Financial Distress**

Yandi Suprpto, Irvin Ng

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### Does Board Gender Diversity Affect Financial Distress

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#### ABSTRACT

Females were regarded as incompetent as a leader before the current modern era. But, female in managerial positions has been increasing since 2015. As part of corporate governance, there is only a few research regarding gender diversity's relationship with financial distress with different results on different context. This research investigates the role of board gender diversity on firms' financial distress. Multiple linear regression is used as the method of study. In general, board gender diversity does not have any relationship with financial distress in the infrastructure firms. When dissected into 4 sub-sectors, 1 out of 3 sub-sectors with 1 other sub-sector excluded, shown a negative relationship between board gender diversity and financial distress while the other 3 sub-sectors do not show any significant relationship.

**Keywords:** Corporate Governance; Financial Distress; Gender Diversity.

#### INTRODUCTION

Before the modern era, females were never considered for their ability in holding a position of leadership as they were regarded as incompetent based on stereotypes where females don't have broad insights into the business world as well as being relatively inexperienced. Based on this reason, only males were holding managerial positions in the past (Fitriana & Cenni, 2021). The role of females in society was also affected due to this reason in which they were left out on most occasions compared to their male counterparts (Kartika & Kanada, 2017). Issues that are related to gender equality don't seem to have any solution and will always be a problem in every aspect of livelihood. This particular matter isn't just an issue for Indonesia (Ismail et al., 2020). On the bright side, gender equality has been seeing improvements in which it is being widely accepted by people from many countries (Sari et al., 2021).

Based on Badan Pusat Statistik (BPS) Indonesia's data, only 22,32% of managers in Indonesia were female in 2015. But more and more females in managerial positions are seen where there is an increase to 32,5% of managers in Indonesia are female in the statistics released by BPS Indonesia in 2021. Compared to Europe, Indonesia has more females in managerial positions whereas, in Europe, only 30% of managers are female (García & Herrero, 2021). Đăng et al. (2020) stated that literature related to gender diversity in executive positions has become increasingly important based on the fact that there is a positive trend in the number of female executives throughout countries.

Financial distress is a situation faced by companies when the mentioned firms are unable to clear their liabilities when it's due (Farooq & Noor, 2021). If a company is in financial distress, it will show certain characteristics such as paying out fewer dividends, recording net losses, facility closures, to being insolvent (Isayas, 2021). Whenever a company is facing financial distress, restructuring debts will often be a choice in hopes of improvements in its financials (Isayas, 2021). Otherwise, they will file for bankruptcy (Isayas, 2021). Many parties will suffer when a company faces financial distress, such as investors, creditors, and often time suppliers as financial distress comes with a high cost because legal costs will be incurred, interest on debts increases, and opportunity costs for projects with positive NPV (Net Present Value) because of difficulties in obtaining funds whereas companies will no longer be able to issue new shares or bonds (Yousaf et al., 2020).

Board gender diversity is a part of corporate governance. Literature investigating the effects of corporate governance towards firm performance, firm value, and many other company factors including financial distress is commonly found (Bhat et al., 2018; Endrikat et al., 2021; Gafoor et al., 2018; Mishra & Kapil, 2018; Orazalin, 2019; Sobhan, 2021). But literature concerning board gender diversity affecting financial distress in companies isn't as common as the forementioned literature. García & Herrero (2021) and Ali et al. (2022) who studied the effect of board gender diversity towards financial distress in Chinese and European firms found that having females on the board of directors decreases the probability of a firm facing financial distress situation as having female directors would moderate a firm's risk due to their risk-averse traits. On the other hand, Saima & Arefin (2022) didn't find any significant relationship between board gender diversity and financial distress in Bangladesh.

In the context of Indonesia, Samudra (2021) found a significantly negative relationship between female directors and financial distress out of 389 Indonesian manufacturing firms. Eliya & Suprpto (2022) previously stated that when the board of directors within a company has the characteristic of being heterogeneous, it would positively affect the general condition of mentioned firm. But a different result is found in Ariska et al.'s (2021) research where there is no significant relationship between females on the board of directors and financial distress in Indonesian manufacturing firms. Koerniawan & Malelak (2021) does not find any significant relationship between female directors and financial distress in manufacturing firms in Indonesia. As there are many differences in previous research conducted, it is important to investigate more regarding female directors' relationship with financial distress to reduce the gap in the literature conducted.

The majority of studies regarding female directors' relationship towards financial distress that are conducted in Indonesia is done by studying manufacturing sector companies. If the average debt-to-asset ratio (DAR) is compared across company sectors, infrastructure average firms have the highest risk of default due to lack of assets compared to their debts while manufacturing firms have ranked 2<sup>nd</sup> and 7<sup>th</sup> if taken apart into 2 separate categories, which is consumer cyclicals and consumer non-cyclicals. Although, this comparison has excluded the financial firms as banks and other financial institution has different operational procedure as well as financing sources resulting in a different type of financial report. Based on this comparison, sparked an interest to investigate female directors' effect towards financial distress within companies with the highest average leverage in Indonesia.

**Table 1. Debt-to-Assets Ratio of Indonesian Companies**

<b>RANK (WORST TO BEST)</b>	<b>SECTOR</b>	<b>DAR</b>
1	Infrastructures	123.779
2	Consumer Cyclicals	0.991
3	Transportation & Logistic	0.604
4	Energy	0.592
5	Basic Materials	0.535
6	Industrials	0.508
7	Consumer Non-Cyclicals	0.473
8	Properties & Real Estate	0.363
9	Technology	0.350

Source: IDX Quarterly Statistics, 2022

García & Herrero (2021) previously concluded that having female directors would improve monitoring toward managers in a company as well as reduce agency conflicts within it resulting in a lower probability of facing financial distress. Whenever there is more female within the board, a company's leverage would be lower as the outcome would be lower risk and lower financing costs of a company (Ali et al., 2022; García & Herrero, 2021; Yousaf et al., 2020). Samudra (2021) argues that females generally have a different mindset and point of view compared to their male counterparts that if they are combined, a better perspective and synergy would be achieved rather than having only males on board. (Maier & Yurtoglu, 2022) states that as there is board gender diversity, firms would have unique expertise within the board of directors which helps in mitigating financial distress risks.

**H1:** Gender diversity negatively affects financial distress

## METHOD

**Table 2. Samples**

<b>Information</b>	<b>Amount</b>
Infrastructure sector companies listed on Indonesia Stock Exchange	58
Companies that conduct initial public offerings after 2017	(13)
Insufficient annual reports	(3)
Insufficient data on annual reports	(4)
The number of sample companies that meet the criteria	38
The number of sample data for the 2017-2021 research period	190 sample

Source: Data Processed, 2023

This research will use infrastructure firms listed in The Indonesia Stock Exchange (IDX) as the population of this study. Above mentioned sector is composed of 4 (four) sub-sectors, which are utilities, telecommunication, transportation infrastructures as well as heavy construction and civil engineering based on IDX Yearly Statistics 2022 published by IDX. Out of the total of 58 companies, 39 companies were taken as samples in this study as these companies met the research sampling criteria based on the purposive sampling technique with requirements listed below.

Information that is made available to the public referred as secondary data is gathered for the purpose of this research (Digdowiseiso et al., 2022). Data were collected from the official website of IDX who published companies' annual reports and the period of this study ranged from 2017 to 2021. This research uses Stata 16 SE for statistics and regressions as panel data is being used and multiple linear regression compatible statistics program is needed in order to obtain the necessary evidence above conclusive results of this study. With Stata 16 SE, 5 models are used in this study with the equation as follows:

$$FDit = \alpha + \beta_1 FemDit \dots\dots\dots (1)$$

$$FDit = \alpha + \beta_1 FemDit + \beta_2 FSit \dots\dots\dots (2)$$

$$FDit = \alpha + \beta_1 FemDit + \beta_2 FSit + \beta_3 BSit \dots\dots\dots (3)$$

$$FDit = \alpha + \beta_1 FemDit + \beta_2 FSit + \beta_3 BSit + \beta_4 DERit \dots\dots\dots (4)$$

$$FDit = \alpha + \beta_1 FemDit + \beta_2 FSit + \beta_3 BSit + \beta_4 DERit + \beta_5 ROAit \dots\dots\dots (5)$$

Where:

FD = Financial Distress

FemD = Percentage of female director (Gender Diversity)

FS = Firm Size

BS = Board Size

DER = Leverage

ROA = Profitability

It is also important to note that, outliers are found in this study's sample. Outliers mentioned, are detected with the "extremes" command out of Stata 16 SE which detects sample values that deviate too far from observation. A total of 18 outliers that are removed from observation are listed below:

**Table 3. Outliers**

Name	Year	Zscore
PT Bakrie Telecom Tbk	2017	-60.815356
PT Bakrie Telecom Tbk	2018	-60.790916
PT Bakrie Telecom Tbk	2019	-2745.415
PT Bakrie Telecom Tbk	2020	7685.855
PT Bakrie Telecom Tbk	2021	-1318.257
PT Garuda Maintenance Facility Aero Asia Tbk	2020	-2.9025088
PT Himalaya Energi Perkasa Tbk	2017	15.07329
PT Himalaya Energi Perkasa Tbk	2018	30.538109
PT Himalaya Energi Perkasa Tbk	2020	16.86851
PT Leyand International Tbk	2018	-2.9576555
PT Leyand International Tbk	2019	-5.9066522
PT Leyand International Tbk	2020	-9.7269254
PT Leyand International Tbk	2021	-17138.886
PT Protech Mitra Perkasa Tbk	2017	15.508646
PT Protech Mitra Perkasa Tbk	2018	120.77017
PT Protech Mitra Perkasa Tbk	2019	98.607053
PT Protech Mitra Perkasa Tbk	2020	185.53681
PT Protech Mitra Perkasa Tbk	2021	454.61387

Source: Data Processed, 2023

**Table 4. Measurement of Variables**

Variable Name	Variable Type	Measurement	Formula		Source
Financial Distress	Dependent	Altman Z-Score	1.2	Net Working Capital/Total Asset + 1.4 Retained Earnings/Total Assets + 3.3 EBIT/Total Assets +	García dan Herrero, 2021; Maier dan Yurtoglu, 2022; Chen dan Liang, 2022; Salma dan Arefin, 2022;
			0.6	Share Price(Market Value of Equity)/Book Value of Debt + 1.0 Sales Revenue/Total Assets >2.99 Safe Zone 1.81 - 2.99 Grey Zone <1.81 Distress Zone	
		EPS Dummy	If EPS is negative for financial report year, "1" is given to represent financial distress. Otherwise, "0" for non-distressed firms		Oare dan Appiah, 2021; Ariska et al., 2021; Bravo-Urquiza dan Moreno-Ureba, 2021; Yousaf et al., 2020; Mariano dan Izadi, 2020.
Gender Diversity	Independent	Percentage of Females on Board	Female Director/Number of Directors x 100%		García dan Herrero, 2021; Salma dan Arefin, 2022; Ali et al., 2021; Samudra, 2021; Ariska et al., 2021; Koerniawan dan Malelak, 2020
		Female Dummy	"1" represents if a firm has a female director. Otherwise, "0"		Salma dan Arefin, 2022
Firm Size	Control	Total Asset	(log)TotalAsset		García dan Jose, 2021; Saima dan Arefin, 2022; Ali et al., 2021; Koerniawan dan Malelak, 2020
Board Size	Control	Total of Directors	Total of Directors		(García dan Jose, 2021; Saima dan Arefin, 2022; Ali et al., 2021; Koerniawan dan Malelak, 2020
Leverage	Control	Debt-to-Equity Ratio	Total Debt/Total Equity		Saima dan Arefin, 2022; Ali et al., 2021; Koerniawan dan Malelak, 2020
Profitability	Control	ROA	Net Income/Total Asset		García dan Jose, 2021; Saima dan Arefin, 2022; Ali et al., 2021

Source: Data Processed, 2023

Hypothesis testing, which is a test to examine a relationship's significance between two or more variables in research, will be the main intention in conducting this research (Sepriani & Candy, 2022). The outcome of this study will be an investigation of how gender diversity



directly affects financial distress in firms. Other than independent and dependent variables, control variables are being used as well in order to isolate other external factors that may affect the dependent variables as well (García & Herrero, 2021).

Research model that is used in this study has 1 (one) independent variable which is firm's board gender diversity measured by the percentage of female directors over the total of directors present on board, and 1 (one) dependent variable which is financial distress measured by Altman's Z-Score. Control variables that are used in order to isolate external factors' effects other than the independent variable will be firm size measured by natural logarithm of total asset, board size measured by the total of directors on the board, leverage measured by debt-to-equity ratio, as well as profitability measured by return-on-asset ratio. Dependent variable of this study has a substitute of measurement in order to complete a robustness check, in which a dummy variable of negative EPS as a substitute of Altman's Z-Score. Table 4 shows the formula for each measurement.

## RESULTS AND DISCUSSION

**Table 5. Descriptive Statistics**

Variable	Descriptive Statistics			
	Min	Max	Std. Dev	Mean
ZScore	-2.58505	14.36956	2.30943	2.10268
FemaleDire~r	0	0.66667	0.15655	0.10186
FirmSize	7.79e+07	2.77e+14	4.34e+13	2.34e+13
BoardSize	2	10	1.60877	4.85790
DER	-3.43356	370.57412	28.93746	4.49144
ROA	-1396.863	0.46437	101.35178	-7.58072

Source: Data Processed, 2023

Table 5 shows descriptive statistics of variables used in this study, composed of minimum, maximum, standard deviation, and mean values. The lowest value of Altman Z-Score is seen at PT Garuda Maintenance Facility Aero Asia Tbk in 2021 with a value of -2.59 while the highest value is seen at PT Himalaya Energi Perkasa Tbk in 2021 with a value of 14.37. The average Z-Score of infrastructure companies shows a value of 2.1, indicating that the majority of infrastructure companies are in the grey zone based on Altman Z-Score's interpretation. The female director has 0 minimum value as 61% of infrastructure companies don't have any female directors on the board. The highest percentage of female directors is 67% found in 2 companies, which are PT Solusi Tunas Pratama Tbk in 2020 as well as PT Cardig Aero Services Tbk in 2020 and 2021. The mean value of female director indicates that only 10% of the board in infrastructure companies are female.

With correlation matrix shown on Table 6, the independent variable of this study which is gender diversity measured by percentage of female director has a positive relationship with the dependent variable, which is Altman Z-Score. This relationship aligns with the hypothesis of the study, in which whenever there is an increase in female directors' percentage, there will also be an increase in Altman Z-Score as well. Therefore, financial health of the company

increases reducing financial distress probability of company. Other than that, control variables show a negative correlation with Altman Z-Score except for ROA.

**Table 6. Correlation Test**

	<b>ZScore</b>	<b>Female~r</b>	<b>FirmSize</b>	<b>BoardS~e</b>	<b>DER</b>	<b>ROA</b>
ZScore	1.0000					
FemaleDire~r	0.2161	1.0000				
FirmSize	-0.5058	-0.2500	1.0000			
BoardSize	-0.1458	0.1054	0.5487	1.0000		
DER	-0.3089	0.0792	0.2759	0.1393	1.0000	
ROA	0.4026	0.1741	-0.0381	0.0324	-0.3634	1.0000

Source: Data Processed, 2023

As seen in Table 7, the percentage of female directors on board doesn't affect financial distress in 5 of the models with each of the tests showing a probability above 0.05. Even so, it is found that gender diversity's significance towards financial distress gets increasingly significant as control variables are added to the model. With probability score starts from 0.673 without any control variables and gradually decreases to 0.294 as control variables are added.

**Table 7. Infrastructure Sector Regression**

	(1)	(2)	(3)	(4)	(5)
	<b>Z-Score</b>	<b>Z-Score</b>	<b>Z-Score</b>	<b>Z-Score</b>	<b>Z-Score</b>
<b>Female Director %</b>	0.3851	-0.0008	0.7927	0.6597	0.8607
	-0.42	(-0.00)	-0.95	-0.8	-1.05
<b>Firm Size</b>		-1.2747***	-1.7555***	-1.7139***	-1.6201***
		(-3.16)	(-4.23)	(-4.15)	(-4.16)
<b>Board Size</b>			0.4462***	0.4266***	0.4488***
			-3.34	-3.25	-3.35
<b>DER</b>				-0.0338***	-0.0362***
				(-5.09)	(-4.62)
<b>ROA</b>					-1.1709
					(-0.83)
<b>Constant</b>	2.0598***	18.5422***	22.4115***	22.0856***	20.7495***
	-8.89	-3.48	-4.18	-4.13	-4.17
<b>Adj. R-squared</b>	-0.0052	0.1617	0.2171	0.2422	0.2529
<b>Obs.</b>	172	172	172	172	172
=** p<0.10	** p<0.05	*** p<0.01"			

Source: Data Processed, 2023

Within telecommunication companies, it also doesn't show any significant relationship between gender diversity with financial distress. As the probability score shows 0.965, significance increases as control variables are considered in the regression. As control variables

are added, the probability score of gender diversity decreases to 0.512, showing increased significance towards financial distress.

A different result is shown while examining the heavy construction and civil sub-sector. Referring to Table 8, gender diversity does have a significantly positive relationship on the measure of financial distress with a probability score showing 0.028, below 0.05. But, the significance of the relationship faded as control variables were added to the model. As the probability score shows 0.0977, the significant effect of gender diversity on financial distress diminished.

**Table 8. Transportation Infrastructure Sub-Sector Regression**

	(1)	(2)	(3)	(4)	(5)
	Z-Score	Z-Score	Z-Score	Z-Score	Z-Score
<b>Female Director %</b>	1.6256 (1.32)	0.9725 (0.66)	0.3624 (0.16)	-2.4997 (-1.24)	-0.9381 (-0.84)
<b>Firm Size</b>		-0.7046** (-2.12)	-0.6560** (-2.13)	-1.5312*** (-2.87)	-0.8436** (-2.75)
<b>Board Size</b>			-0.1178 (-0.67)	-0.3138 (-1.70)	-0.1008 (-0.99)
<b>DER</b>				0.7172 (1.64)	0.1317 (0.95)
<b>ROA</b>					11.1789*** (7.42)
<b>Constant</b>	1.2027** (2.82)	10.4986** (2.22)	10.5557** (2.14)	22.4361*** (3.25)	12.7462*** (3.22)
<b>Adj. R-squared</b>	0.0353	0.1071	0.0783	0.3399	0.8056
<b>Obs.</b>	24	24	24	24	24
= " * p<0.10      ** p<0.05      *** p<0.01 "					

Source: Data Processed, 2023

In general, gender diversity does not have any significant relationship towards financial distress in the infrastructure sector of Indonesian companies. Even when classified into different sub-sectors, the majority of the results still don't show any significant relationship between gender diversity and financial distress. Except for the utility sub-sector, most data of the utility sector are categorized as outliers and excluded, there is insufficient data to do a regression in which will not be considered in this discussion. Insignificant relationships in most sectors excluding utility sub-sector aligns with the research of Saima & Arefin (2022), Ariska et al. (2021), and Koerniawan & Malelak (2021). Ariska et al. (2021) argue that high gender diversity on the board of directors, doesn't necessarily mean that firms could prevent financial distress from happening as every favorable decision-making in the company would be depending on the ability of directors. It is also likely the that lack of gender diversity on the board of directors causes the insignificance of its relationship to financial distress.

Interestingly, it is found that gender diversity has a significantly positive relationship towards Altman Z-Score as a measurement of financial distress in the heavy construction and civil sub-sector. Whenever there is an increase of 1 point of gender diversity on board, the Z-

Score of the company would increase by 3.15 points. Therefore, the increase of Z-Score indicates a better financial health of the firm, which would mean that gender diversity has a significantly negative relationship towards financial distress. This result aligns with the research of García & Herrero (2021), Samudra (2021), Ali et al. (2022), and Yousaf et al. (2020). García & Herrero (2021) and Ali et al. (2022) argue that reduces agency conflicts and increases monitoring of managers as well as capital structure in the means of controlling financial risk in which, reduces the probability of financial distress. Samudra (2021) states that a better synergy within the board of directors would be achieved when there is the presence of females on the board of directors based on the difference in ideas and perspectives between male and female directors. Despite this finding, infrastructure sector in general as well as majority of the sub-sectors included in the infrastructure firms doesn't show any significant relationship between female directors and financial distress. Hence, hypothesis of this study (**H1**) is rejected.

**Table 9. Telecommunication Sub-Sector Regression**

	(1)	(2)	(3)	(4)	(5)
	Z-Score	Z-Score	Z-Score	Z-Score	Z-Score
<b>Female Director %</b>	0.0729 (0.04)	-0.3174 (-0.21)	1.2212 (0.98)	0.7845 (0.65)	0.7308 (0.66)
<b>Firm Size</b>		-0.5791 (-1.23)	-2.5677*** (-4.65)	-2.5941*** (-4.74)	-2.2683*** (-4.27)
<b>Board Size</b>			1.1535*** (5.14)	1.1320*** (5.20)	0.8287*** (3.78)
<b>DER</b>				-0.0311*** (-7.66)	-0.0152** (-2.38)
<b>ROA</b>					7.8596*** (2.68)
<b>Constant</b>	1.8498*** (4.72)	9.5141 (1.50)	29.9397*** (4.58)	30.5820*** (4.68)	27.5416*** (4.33)
<b>Adj. R-squared</b>	-0.0158	0.0014	0.3818	0.4405	0.5334
<b>Obs.</b>	65	65	65	65	65
=** p<0.10	** p<0.05	*** p<0.01"			

Source: Data Processed, 2023

Interestingly, it is found that gender diversity has a significantly positive relationship towards Altman Z-Score as a measurement of financial distress in the heavy construction and civil sub-sector. Whenever there is an increase of 1 point of gender diversity on board, the Z-Score of the company would increase by 3.15 points. Therefore, the increase of Z-Score indicates a better financial health of the firm, which would mean that gender diversity has a significantly negative relationship towards financial distress. This result aligns with the research of García & Herrero (2021), Samudra (2021), Ali et al. (2022), and Yousaf et al. (2020). García & Herrero (2021) and Ali et al. (2022) argue that reduces agency conflicts and increases monitoring of managers as well as capital structure in the means of controlling

financial risk in which, reduces the probability of financial distress. Samudra (2021) states that a better synergy within the board of directors would be achieved when there is the presence of females on the board of directors based on the difference in ideas and perspectives between male and female directors. Despite this finding, infrastructure sector in general as well as majority of the sub-sectors included in the infrastructure firms doesn't show any significant relationship between female directors and financial distress. Hence, hypothesis of this study (H1) is rejected.

### Robustness Check

By substituting the main measurement of dependent variable within research with another measurement, is one of few commonly used methods for robustness test to examine and verify a model is robust as well as unbiased study results (Sepriani & Candy, 2022; Liu et al., 2021). In this study, dummy variable of financial distress will be employed in which a company will be scored "1" if negative earnings per share (EPS) is reported in a financial year and "0" otherwise, as this measurement is commonly used in financial distress research (Ariska et al., 2021; Balasubramanian et al., 2019; Bravo-Urquiza & Moreno-Ureba, 2021; Indarti et al., 2020; Mariano et al., 2020; Oware & Appiah, 2021; Yazdanfar & Öhman, 2020; Yousaf et al., 2020; Žiković, 2018). No significant relationship is found between gender diversity expressed by Female Director % towards financial distress in the infrastructure companies. Hence, the research finding is robust as the same results were produced even with different measurement of the same variable.

**Table 10. Heavy Construction and Civil Sub-Sector Regression**

	(1)	(2)	(3)	(4)	(5)
	Z-Score	Z-Score	Z-Score	Z-Score	Z-Score
<b>Female Director %</b>	3.1478** (2.24)	1.3927 (1.15)	0.7498 (0.52)	1.2573 (0.90)	-0.0372 (-0.03)
<b>Firm Size</b>		-1.5678*** (-4.78)	-1.9082*** (-4.22)	-1.6772*** (-3.70)	-1.8520*** (-4.19)
<b>Board Size</b>			0.2755 (1.51)	0.2505 (1.39)	0.2601 (1.45)
<b>DER</b>				-0.0863** (-2.40)	-0.0190 (-1.44)
<b>ROA</b>					8.4785*** (4.66)
<b>Constant</b>	2.0773*** (8.58)	22.2643*** (5.08)	25.1556*** (4.72)	22.5012*** (4.21)	24.4716*** (4.77)
<b>Adj. R-squared</b>	0.0325	0.2421	0.2498	0.2744	0.3765
<b>Obs.</b>	69	69	69	69	69
=** p<0.10	** p<0.05	*** p<0.01"			

Source: Data Processed, 2023

## CONCLUSIONS

There is no strong evidence between gender diversity and financial distress in Indonesian infrastructure companies including 3 out of 4 sub-sectors of the infrastructure sector. Best financial decisions made by the board depends on the directors' competence, not based on gender. But there's a different outcome in 1 sub-sector, which is heavy construction and civil sub-sector that is also a part of the infrastructure sector shows a significantly negative relationship between gender diversity and financial distress. Unique competence is achieved as different mindset and perspective within diverse gender on the board creates a synergy between male and female directors. Female directors are also risk-averse, that companies with gender diversity on the board would have the firm's leverage risk moderated to a certain safer level. Even so, the significant relationship mentioned diminished as control variables are taken into account. This research proves that only a certain sector could prevent financial distress by having gender diversity on the board of directors.

This research isn't free of limitations as only the infrastructure sector is used. The periods of study used are in the range of 2017 to 2021 and the use of only 1 country certainly limits the outcome of this study. Many other factors including governance factors might affect financial distress and provide better explanations are not considered during this research. It is recommended to include other sectors in order to obtain a wider perspective and outcome that applies to a broader context. A longer observation period, using more than 1 country as well as including other factors that might affect financial distress are also recommended for future research. In the corporate context, firms in Indonesia should consider having more female directors on the board to reduce financial distress risk based on outcomes out of heavy construction and civil sub-sector that proves having gender diverse board of directors reduces the probability of facing financial distress in firms.

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### Biased Behavior and Stock Investment Decisions of Investors in Bali, Indonesia

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#### ABSTRACT

Investment decisions are often affected by irrational behavioral factors that cause improper logical analysis. Herding and overconfidence are two behaviors that lead to biased decision-making, specifically regarding investment. Therefore, this study aimed to test the effect of herding and overconfidence on investment decisions moderated by financial knowledge and attitude. Using a sample of 267 stock investors, the test was conducted with PLS-SEM. The results showed that overconfidence positively influences individuals' investment decisions, while herding has no effect. Financial knowledge and attitude were found not to moderate this effect but could act as predictor variables with a significant positive impact on investment decisions.

**Keywords:** Herding; Financial Knowledge; Financial Attitude; Financial Behavior Overconfidence.

#### INTRODUCTION

In the 1980s, a new concept emerged that financial behavior combines financial knowledge with psychology (Kumar & Goyal, 2015), which determines individuals' investment decisions. Prospect theory developed by Kahneman and Tversky (1979) explained that individuals' investment decisions are highly determined by biased behavior. This behavior determines whether investors make decisions as rational or irrational individuals. The investors' psychology and emotions often trigger speculations about their overconfidence in something. This overconfidence is caused by the effect of contagion and mutual imitation among investors, increasing the speculation bubble generated by herding (Setiawan et al., 2018). Investors demonstrate herding through overconfidence in information validated by many people rather than their judgment. This is fueled by the perception that investment decisions taken by the majority cannot be wrong. Aristiwati & Hidayatullah (2021) observed the behavior of gold investors and stated that herding does not affect their decisions. The study concluded that investors could easily obtain information through the technology available today, enhancing rational decision-making. Similarly, Bakar & Yi (2016) examined investors' behavior in the Malaysian capital market and found that herding does not affect investment decisions. This is because investors feel it is not appropriate to invest only by following the decisions of many people.

Investment decisions made based on overconfidence in predictions and information

could cause knowledge overestimation and risk underestimation (Setiawan, et al., 2018). Overconfidence is a form of biased behavior that leads investors to make irrational decisions. According to previous studies, this overconfidence positively affects investment decisions (Aristiwati & Hidayatullah, 2021; Budiarto & Susanti, 2017; Budiman et al., 2021; Dewi & Krisnawati, 2021). This contradicts other findings that overconfidence does not affect investment decisions (Afriani & Halmawati, 2019; Bakar & Yi, 2016; Bodnaruk & Simonov, 2015; Lathifatunnisa & Wahyuni, 2021). To explain this finding, Afriani & Halmawati (2019) stated that investors lack sufficient investment knowledge, making them less confident in making decisions. Investors' decision-making behavior is determined by their financial knowledge and attitude (Sandi et al., 2020). Financial knowledge refers to individuals' understanding and mastery of financial concepts (Aditya & Azmansyah, 2021). Better knowledge leads to improved financial management behavior, facilitating rational decision-making. Similarly, attitude shapes investors' approach to financial management, making the decisions made more productive (Aditya & Azmansyah, 2021).

This study was motivated by the inconsistencies in several findings regarding the relationship between herding and overconfidence in investment decisions. The existence of inconsistencies indicates the presence of other factors that affect this relationship. Therefore, this study aimed to examine the role of financial knowledge and attitude in the effect of biased behavior on investment decisions. Theories in financial behavior provided clues that individuals' behavior results from their knowledge and attitude (Ozmete & Hira, 2011). Therefore, biased behavior in making investment decisions varies depending on individuals' financial knowledge and attitude. This study used financial knowledge and attitude as moderation variables of herding and overconfidence. Previous studies rarely examined the effect of individuals' financial knowledge and attitude on herding and overconfidence in investment decisions. According to Kumar & Goyal (2015), individuals' investment decisions are significantly affected by their behavior. The concept of financial literacy presented by Kaiser et al. (2015) implies that financial behavior changes with variations in individuals' knowledge and attitude toward finance. Therefore, this study aimed to examine the moderation of financial knowledge and attitude on the effect of herding and overconfidence on investment decisions. The findings are expected to provide theoretical and practical contributions. Theoretically, this study confirms the prospect theory that investment decisions are determined by individuals' behavior toward external factors. Furthermore, it aimed to prove that negative behaviors such as herding and overconfidence could be reduced with financial behavior and attitude. Regarding practical contribution, the findings could be used by authorities to understand the characteristics of investors, specifically those in Bali. This understanding could help determine investors' education needs to anticipate and overcome investment problems.

Herd behavior is a behavior shown by an investor by imitating the decisions taken by other investors (Demirer & Kutan, 2006). Decision making becomes irrational because an investor's decision depends on the decisions of other investors (Kumar & Goyal, 2015). Investors feel more secure when following the actions decided by other investors (Ah Mand et al., 2021). Herding can occur because investors feel they do not have complete information about market conditions, so they will feel safe if they follow other investors. Herding behavior is divided into two types, namely intentional herding and unintentional herding (Setiawan et al., 2018). Intentional herding is the behavior of investors who deliberately follow the actions of other investors by ignoring the information they have obtained. Intentional herding is very likely to occur when reliable information is not widely available in the market. Unintentional

herding is the behavior of a group of investors who make the same decision due to obtaining the same information. In unintentional herding, investors acknowledge that the information is reliable. In general, herding can be described as irrational investor behavior in making a decision. The investor's decision is not based on reliable market information but simply follows the behavior of other investors. This is the behavior of investors seeking a sense of security because of doubts about their own ability to make decisions and a fear of losing momentum if they do not follow the behavior of most investors.

Herding is a biased financial behavior that shows a tendency for individuals to follow other investors' decisions. Investors rely on collective information obtained to make decisions (Zahera & Bansal, 2018). In this regard, Rehan et al. (2021) found that herding could positively affect decision-making in the Pakistani stock market. This finding supports Malik et al. (2021) that herding affects investment decisions. Furthermore, a previous study showed that investors in the real estate sector in Pakistan quickly respond to majority opinions in determining their decisions. Herding could also be caused by a lack of information available to investors when making decisions. As a result, following majority decisions is the safest way when investors lack information or have doubts about making decisions. This shows that herding is a way for investors to protect themselves from losses (Afriani & Halmawati, 2019). Investors with herding behavior can have more confidence that the information is valid if all investors make the same decision on the information. Based on these observations, the following hypothesis was proposed:

H1: Herding positively affects investment decisions

Overconfidence is a condition where an investor has excessive optimism for an investment. An investor feels that the information he currently has is sufficient to make a profitable decision (Zahera & Bansal, 2018). The impact of overconfidence is that investors will overestimate their ability to evaluate companies as potential investments, tend to overtrade, and underestimate risks (Afriani & Halmawati, 2019). Investor behavior that overestimates will tend to distort the investment portfolio because the investors are overconfident and ignore the impact of other factors on investment (Rehan et al., 2021). Overconfidence behavior arises when someone believes that their decision is the best decision, even though in reality it is an irrational one (Malik et al., 2021). Overconfidence can occur because investors feel they have a high understanding of managing investment portfolios and become overconfident in themselves. Someone who is overconfident will overestimate their knowledge, underestimate risks, and overly control everything (Shukla, 2021).

Overconfident investors tend to believe that their decisions would produce the expected results (Setiawan et al., 2021). Malik et al. (2021) stated that overconfidence causes individuals to engage in high-volume trading transactions more frequently. Investors with high confidence make courageous decisions due to a belief that their investment would yield significant profits. In this process, this overconfidence causes investors to ignore the risks that may arise from their choices. This belief arises because investors feel very confident in their abilities and knowledge (Aristiwati & Hidayatullah, 2021). According to Budiarto & Susanti (2017) study, overconfidence could positively affect decision-making. This is because investors with high overconfidence are more daring in making decisions. Therefore, the following hypothesis was formulated:

H2: Overconfidence positively affects investment decisions

Financial knowledge refers to individuals' understanding of financial concepts and facts needed for effective management and decision-making (Aditya & Azmansyah, 2021). Financial

knowledge is a part of financial literacy and can have an impact on decision making and one's financial behavior (Lusardi, 2019). Financial knowledge is not equivalent to financial literacy but is part of it. Financial knowledge is human capital that is specific to personal finance and can assist in making financial decisions (Huston, 2010). A person is said to have good financial knowledge if he has the ability and confidence to implement this knowledge in making financial decisions (Potrich et al., 2016). A person's financial knowledge will increase if he is active in educating himself about finance (Kaiser et al., 2015; Lusardi, 2019). Education can be obtained through education, including formal education such as schools, seminars, and training, and non-formal education such as from parents, friends, work experience, and personal experience (Sandi et al., 2020). The experiences gained are actively integrated into previous knowledge, which can also increase one's financial knowledge in the future (Ademola et al., 2019).

Herdjiono et al. (2016) stated that individuals with high financial knowledge exhibit good behavior, and vice versa. Individuals use their knowledge to make the right decisions by properly managing resources. In this context, financial knowledge determines individuals' behavior and affects decision-making (Rai et al., 2019). This knowledge helps investors understand and evaluate information to make the right decisions. Investors with high knowledge obtain and maintain more information compared to those with low knowledge (Crujisen et al., 2021). This statement implies a strong relationship between financial knowledge and behavior as well as investment decisions. Biased decision-making behavior cannot emerge when individuals have a good cognitive understanding (West, 2012). When making an investment decision, people with good knowledge will be able to manage information effectively to lessen herding behavior. People with high financial knowledge prefer to think logically and in accordance with financial principles, which reduces their tendency to overconfidence while making investment decisions. Based on these explanations, the following hypotheses were proposed:

H3a: Financial knowledge moderates the effect of herding on investment decisions

H3b: Financial knowledge moderates the effect of overconfidence on investment decisions

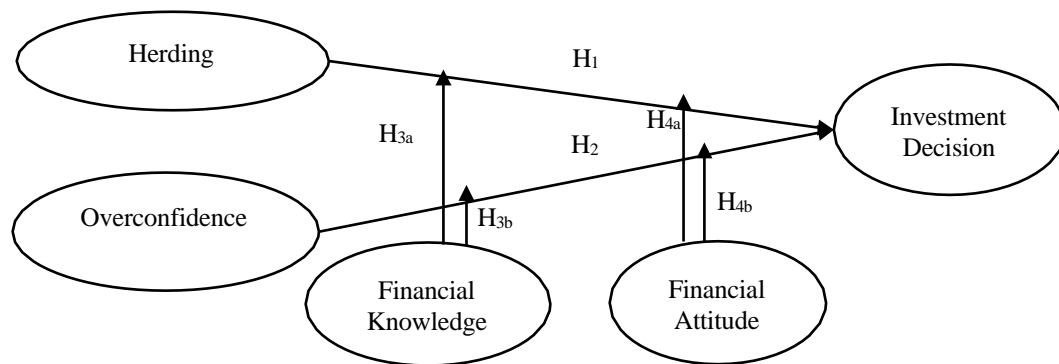
Sandi et al. (2020) define a financial attitude as a person's state of mind, opinion, and assessment of his personal finances, which are all applied to their attitude. Financial attitude is a form of human psychology that is manifested when an individual evaluates financial practices by producing different levels of acceptance of these practices, namely agreeing or disagreeing (Talwar et al., 2021). Paluri & Mehra (2016) identified four groups of Indian women's financial attitudes. The group consists of the financially prudent, conservative, greedy, and unsure. Based on the results of his research, of a total sample of 177 Indian women, only one third did not choose financial products. The most popular financial product is deposits. The selection of deposit products as a financial asset shows a conservative attitude because they tend to choose security. Financial attitude can be expressed as a personal tendency towards financial problems. The ability to plan for the future by managing savings accounts is an important activity of financial attitude (Rai et al., 2019).

Financial attitude is the application of financial principles to generate and maintain value by making the right decisions and managing resources. This attitude could also be defined as individuals' financial mindset, opinion, and evaluation (Aditya & Azmansyah, 2021) that shapes the tendency to spend, save, hoard, and dispose of the money. Therefore, poor financial management and attitude practices could trigger financial problems and behavior (Sandi et al., 2020). Many studies showed that financial attitude is an important determinant of literacy (Rai et al., 2019). Financial attitude is a fundamental determinant of individuals' evaluation of

financial activities (Talwar et al., 2021), which determine the decisions made. Individuals with a good financial attitude manage their expenses and income well for their current and future well-being (Herdjiono et al., 2016). Therefore, unfavorable behaviors could be avoided by nurturing a good attitude in considering every decision to ensure future financial security. Individuals who have a strong financial attitude will reduce the possibility of simply following market trends. A strong financial attitude can also suppress the emergence of overconfidence in a person, because they are aware of their strengths and weaknesses in making decisions and will avoid unfavorable behaviors. Based on these considerations, the following hypotheses were proposed:

H4a: Financial attitude moderates the effect of herding on investment decisions

H4b: Financial attitude moderates the effect of overconfidence on investment decisions



**Figure 1. Conceptual Framework**

Source: development of previous research studies

## METHOD

**Table 1. Variables and Indicators**

Concept	Indicator	Items	Source
<b>Investment Decisions</b>	Love investment in the stock, Able to analyze stock liquidity, and Perception of risk	3	(Putri & Rahyuda, 2017a)
<b>Herding</b> This is the behavior of investors who bandwagon in making investment decisions.	Make decisions based on a majority vote, and Lack of decisions made individually.	4	(Setiawan et al., 2018)
<b>Overconfidence</b> This is the behavior of investors with excessive confidence in making decisions.	Overestimate the decisions taken, and Underestimate the decisions of other investors	4	(Dewi & Krisnawati, 2021)
<b>Financial Knowledge</b> Is the knowledge to manage finance in making financial decisions.	General knowledge of finance, Savings, Insurance, and Investment	4	(Herdjiono et al., 2016)
<b>Financial Attitude</b> Is the application of financial principles to create and maintain value by making the right decisions and managing resources.	Obsession, Power, Effort, Inadequacy, Retention, and Security	6	(Aditya & Azmansyah, 2021)

Source: Aditya & Azmansyah, 2021; Dewi & Krisnawati, 2021; Herdjiono et al., 2016; Putri & Rahyuda, 2017; Y. C. Setiawan et al., 2018

This study was conducted on stock investors in Bali. Data from the Indonesia Stock Exchange indicated that Bali had 86,507 stock investors as of 2022. The Isaac and Michael formula with a 10% error rate was used to determine the study sample, resulting in 267 investors. The study used financial knowledge and attitude as moderation variables to test their effect on herding and overconfidence in investment decisions. The conceptual model was analyzed using PLS-SEM with the assistance of SmartPLS 3.0 software. The test involved examining the direct effect of herding and overconfidence on investment decisions. Furthermore, a moderation analysis technique was used to determine the moderation effect of financial knowledge and attitude variables.

## RESULTS AND DISCUSSION

The data were tested with PLS-SEM by first evaluating the model feasibility using convergent validity, discriminant validity, and composite reliability. The outer loading values of the indicators in each variable in the convergent validity test exceeded 0.5, meaning they were valid. Similarly, the resulting AVE values exceeded 0.5, fulfilling the requirements for convergent validity.

**Table 2. Convergent validity test**

Indicators	Herd(X1)	Over(X2)	FK (M1)	FA (M2)	ID (Y)
X1.1	0.951				
X1.2	0.972				
X1.3	0.959				
X1.4	0.976				
X2.1		0.944			
X2.2		0.947			
X2.3		0.759			
X2.4		0.795			
M1.1			0.905		
M1.2			0.857		
M1.3			0.901		
M1.4			0.840		
M2.1				0.890	
M2.2				0.923	
M2.3				0.927	
M2.4				0.871	
M2.5				0.888	
M2.6				0.920	
Y1.1					0.861
Y1.2					0.926
Y1.3					0.804
Y1.4					0.906

Source: processed data using Smart PLS 3

The discriminant validity test using the Fornell-Larcker Criterion in Table 3 showed that the correlation between each latent variable is smaller than the AVE square root of the compared variable. The results indicate that the model fulfilled the criteria for discriminant validity. Therefore, all endogenous variables are feasible for use in predicting exogenous variables.

**Table 3. AVE,  $\sqrt{AVE}$ , Correlation among latent variables**

Variab les	Comp osite Reliab ility	AVE	$\sqrt{AVE}$	Correlation among latent variables								
				FA	FK	Herd	ID	Over	Herd *FK	Herd *FA	Over *FK	Over *FA
FA	0.964	0.816	0.904	1.000								
FK	0.930	0.768	0.876	0.425	1.000							
Herd	0.982	0.930	0.964	0.049	0.043	1.000						
ID	0.929	0.766	0.875	0.320	0.297	0.008	1.000					
Over	0.922	0.749	0.865	0.289	0.242	0.003	0.218	1.000				
X1*M1	1.000	1.000	1.000	0.020	0.084	0.008	0.029	0.062	1.000			
X1*M2	1.000	1.000	1.000	0.078	0.018	0.007	0.080	0.169	0.402	1.000		
X2*M1	1.000	1.000	1.000	0.261	0.305	0.009	0.216	0.050	0.081	0.135	1.000	
X2*M2	1.000	1.000	1.000	0.298	0.268	0.015	0.244	0.137	0.155	0.024	0.533	1.000

Source: processed data using Smart PLS 3

Description: FA= Financial Attitude; FK= Financial Knowledge; Herd= Herding; Over= Overconfidence; ID= Investment Decisions; X1\*M1= Interaction of Herding with Financial Knowledge; X1\*M2= Interaction of Herding with Financial Attitude; X2\*M1= Interaction of Overconfidence with Financial Knowledge; X2\*M2= Interaction of Overconfidence with Financial Attitude

Table 3 shows that the composite reliability values of each latent variable exceed 0.7, meaning all the indicators are reliable. The overall test indicates that the indicators have good feasibility values and could measure the variables in the model. Furthermore, the R2 value is 0.177, meaning that all the variables used explain 17.7% of investment decisions. The remaining 82.3% is explained by other variables outside the model.

**Table 4. Test for Exogenous and Moderation Variables on Endogenous Variables**

Variables	Coefficients	p-values	Descriptions
Herding_(X1) → Investment Decision_(Y)	-0.095	0.141	Non Significant
Overconfidence_(X2) → Investment Decision_(Y)	0.113	0.041	Significant
Financial Knowledge_(M1) → Investment Decision_(Y)	0.157	0.029	Significant
Financial Attitude_(M2) → Investment Decision_(Y)	0.177	0.015	Significant
X1*M1 → Investment Decision_(Y)	0.055	0.539	Non Significant
X1*M2 → Investment Decision_(Y)	0.036	0.650	Non Significant
X2*M1 → Investment Decision_(Y)	-0.065	0.293	Non Significant
X2*M2 → Investment Decision_(Y)	-0.078	0.232	Non Significant

Source: processed data using Smart PLS 3



Table 4 shows that *H1* is rejected, which implies no significant effect of herding on investment decisions ( $p\text{-value} = 0.141$ ). Meanwhile, *H2* is accepted, meaning that overconfidence positively affects investment decisions ( $p\text{-value} = 0.041$ ). *H3a* and *H3b* were rejected, meaning that the moderation effect of financial knowledge on herding and overconfidence toward investment decisions is insignificant ( $p\text{-value} = 0.539$  and  $0.293$ ). Similarly, the moderation effect of financial attitude on herding and overconfidence toward investment decisions is insignificant ( $p\text{-value} = 0.650$  and  $0.232$ ), contradicting *H4a* and *H4b*. The results also showed that financial knowledge and attitude only act as predictor variables, as seen from their partial effect on investment decisions ( $p\text{-value} = 0.029$  and  $0.015$ ).

The findings indicated that herding does not significantly affect investment decisions, contradicting Malik et al. (2021) and Rehan et al. (2021). However, these findings support Aristiwati & Hidayatullah (2021) and Bakar & Yi (2016) that herding does not significantly affect investment decisions. The study showed that investors use their logic rationally to utilize information in making decisions. This is facilitated by information accessibility, which helps investors understand market conditions and select their preferred investment alternatives (Demirer & Kutan, 2006). Additionally, technological advancements and information openness support investor rationality in making decisions. Regulators are very concerned about individuals' interests and needs regarding viable investments in capital markets. These regulations aim to protect investors, making them comfortable and confident in their investment decisions. Bakar & Yi (2016) found that herding is more common among institutional than individual investors. Institutional investors seek to protect their credibility by avoiding losses in making investment decisions. Therefore, these investors follow market movements to secure their positions in the market.

The findings indicated that overconfidence positively affects investment decisions, supporting Aristiwati & Hidayatullah (2021), Budiarto & Susanti (2017), Budiman et al. (2021), and Dewi & Krisnawati (2021). This implies that overconfidence affects how investors make their decisions. Investors with high overconfidence tend to take higher risks in their decisions, while those with low overconfidence are generally cautious (Budiarto & Susanti, 2017). Overconfidence causes individuals to underestimate risks believing their predictions are very accurate (Setiawan, et al., 2018). According to Aristiwati & Hidayatullah (2021), high confidence in information management skills sometimes causes investors to overlook potential risks. Investors who overestimate their knowledge of certain information have high confidence in making investment decisions.

The findings of this study state that financial knowledge cannot moderate the effect of herding and overconfidence on investment decisions. Financial knowledge does not moderate herding behavior, which can be caused by investors' trust in available information. Although financial knowledge fosters rationality, investors could ignore private information and follow the market (Demirer & Kutan, 2006).

High overconfidence causes investors to overestimate their knowledge and underestimate the risks (Ellen & Yuyun, 2018). This makes investors certain about their investment decisions and expects high returns (Bakar & Yi, 2016). In this regard, Huston (2010), Lusardi (2019), and Nair (2022) stated that confidence disregarding risks contradicts the financial knowledge concept. Financial knowledge is individuals' understanding of financial concepts for effective management and decision-making (Aditya & Azmansyah, 2021).

Investors should consider psychological aspects in making decisions based on information, emotions, and other social factors (Shukla, 2021). According to West (2012),

financial education programs aimed at improving knowledge have an insignificant role in minimizing biased behavior. Investors with financial knowledge may still exercise herding and overconfidence because this behavior is also strongly affected by information, emotions, and other social factors. As a result, financial knowledge may not necessarily moderate such biased behavior.

This study found that financial attitude cannot moderate herding and overconfidence in investment decisions. Individuals have different levels of literacy, bias, and emotions, which affect their investment decision-making process to limit or avoid discomfort (Alsemgeest, 2015). Financial attitude developed from literacy has an insignificant role in making decisions. The complexity of financial instruments shows that attitude alone cannot intervene in investors' management behavior (West, 2012). Investment decisions should match market reality and expectations to give investors more confidence (Demirer & Kutan, 2006). This market information brings investors' expectations closer to the actual results of their decisions. Therefore, financial attitude cannot moderate herding and overconfidence in investment decisions due to asymmetric information, limitations in understanding, and inadequate skills (Willis, 2008). In this case, investors should process knowledge to avoid making biased decisions based on asymmetric information. Moreover, applying knowledge shown in attitude cannot result in similar decisions among investors due to differences in understanding and skills in performing calculations. Such conditions make financial attitude irrelevant in weakening herding and overconfidence.

The results showed that financial knowledge positively affects investment decisions, supporting Potrich et al. (2016). In line with this, Rai et al. (2019) and Sharma & Joshi (2015) stated that increasing financial knowledge produces better investment decisions. Individuals with high knowledge understand financial concepts better and use money wisely to obtain economic benefits. These individuals make better financial decisions that require knowledge in analyzing and selecting investment assets. Therefore, financial knowledge is obtained when individuals have adequate education (Kaiser et al., 2015; Lusardi, 2019) or regularly attend training sessions (Bodnaruk & Simonov, 2015).

The findings also showed that financial attitude is a predictor variable that positively affects investment decisions. These findings suggest that a better financial attitude increases the individuals' likelihood to invest. Previous studies also showed that financial attitude positively affects investment decisions (Herdjiono et al., 2016; Rai et al., 2019). Investors' decisions are largely determined by their attitude toward various investment alternatives. Furthermore, investors are guided by their attitude in evaluating the acceptable outcomes of financial practices (Talwar et al., 2021). Decisions are made based on considerations of future investment prospects. This means that investors make decisions only when the investment provides returns commensurate with the capital.

The findings of this research are in line with behavioral financial theory, which states that financial behavior will be determined by one's knowledge and attitude towards finance. This behavior in this study is shown in financial decisions. High knowledge and strong financial attitudes will tend to encourage individuals to make investments. In behavioral theory, it is also explained that a person's behavior is also driven by their nature and emotions. In this study, it is proven that individuals with a high level of overconfidence tend to invest more than individuals with a low level of overconfidence. These results also provide a practical view, especially for investors in Bali, that investors in Bali will decide to invest if they have high financial knowledge and attitudes and have high self-confidence. The results of the study show

that herding has no impact on investment decisions, indicating that investors in Bali do not want to just go along with the investment without having financial knowledge, financial attitudes, and high self-confidence.

## CONCLUSION

This study found that biased behavior as well as financial knowledge and attitude affect investment decisions. The results showed that overconfidence is a form of biased behavior that plays a role in determining investment decisions. Investors have high confidence in all information obtained and promote courage in making decisions. This ease in the accessibility of unlimited information is facilitated by technological developments. However, the ability to process information is highly needed to make accurate decisions. Overconfidence in one piece of information by ignoring risk factors could result in bias in investment decisions. Therefore, investors should take this condition seriously to avoid losses. Different emotions and personalities contribute to the rationalization of investors' decision-making. Psychological factors should also be considered in individuals' financial management due to their role in decision-making.

Financial knowledge and attitude cannot weaken biased behavior such as herding and overconfidence. Biased behavior as well as knowledge and attitude do not interact in shaping investment decisions, though each factor has an individual effect. Making investment decisions requires related information. According to the findings, knowledge, and attitude are insignificant in reducing biased behavior in making decisions, which are also affected by personal factors.

Financial knowledge and attitude cannot reduce herding behavior or overconfidence but still contribute to decision-making. Investors could increase their financial knowledge through education to process information properly and generate profits. Similarly, financial attitude is formed from education which helps individuals avoid losses. Individuals with good attitudes know how to act when facing financial problems.

This study focused on making investment decisions by considering biased behavior as well as financial knowledge and attitude. It did not explore the performance impact of investment decisions resulting from herding, overconfidence, knowledge, and attitude. Therefore, future studies should evaluate these results because decisions could produce profits and losses. When biased behavior such as herding and overconfidence results in profits, it should be considered favorable. Additionally, future studies could examine other psychological effects of biased behavior as well as financial knowledge and attitude to obtain a holistic overview of financial behavior.

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### **Tourism Transition and Green Economy: Inspire or Prevent income in the COVID-19 Shock**

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#### **ABSTRACT**

This research was conducted with the aim of analyzing the green economy transition in tourism, especially tourist villages, whether it is able to provide inspiration or actually prevent an increase in people's income in conditions of the COVID-19 shock. The research was carried out in tourist villages in West Java and Lampung Provinces. This study found that the transition of a tourist village with the concept of green economy has a strong influence in increasing the income of rural tourism communities in conditions of the COVID-19 shock, this is due to the fact that the green economy concept encourages the utilization of natural resources and environmental preservation, this will ensure a sustainable attraction for tourists which in turn can increase revenue.

**Keywords:** COVID-19; green economy; tourism village.

#### **INTRODUCTION**

The COVID-19 epidemic affects many facets of international society. The World Health Organization (WHO) officially classified it as a global emergency at the end of January 2020. The fallout has profound effects on the worldwide economy (Patel, 2020). This is shown by the fact that the tourist industry is forced to shut down. One industry that took a major damage is the tourist industry. Once buoyant, the tourist industry has seen recent decline as the continuing epidemic dampens early expansion (Škare, Soriano, & Porada-Rochoń, 2021). Foreign visitors have declined along with the fall in international flights, while domestic tourists have decreased and may reduce more due to many government measures (Abbas, Mubeen, Iorember, Raza, & Mamirkulova, 2021). Indonesia's tourist industry has ground to a halt due to government rules meant to curb the spread of the deadly COVID-19 virus. How long this will last is anyone's guess (Uğur & Akbıyık, 2020).

Several sectors connected to tourism have been affected by the temporary halt in activity. Huge losses have been incurred by Indonesia's tourism industry across the board as a consequence of the decreased number of visitors brought about by different government regulations surrounding social restrictions. It also affects the long-term viability of the tourism industry, particularly in resort communities (Aldao, Blasco, & Poch Espallargas, 2022). A tourist village is a rural location that offers something very special for visitors interested in

experiencing local culture, history, and everyday life. Community-based and environmentally-friendly tourist development, like that practiced in tourism villages, necessitates the creation of gender-responsive development policies (Susilorini et al., 2022). As a result of the pandemic's spread, several hotels and other tourism-related businesses have had to shut their doors. However, the loss of the village's major source of income has been one of the most devastating effects on the tourist town. Many popular tourist locations have closed during the ongoing epidemic, making it imperative that tourist communities be well-managed (Judge, 2020).

Rural Tourism Village has several potential draws because to its unique setting. The village is a resource with untapped potential for economic growth and social well-being that must be developed further (Susilo, Hidayat, & Marta, 2021). But on the other hand, the results of the study (Laili Dwi Agustina, Annastya Putri Kirana, 2022) concluded that the government's efforts to boost the tourist industry's economy continue to over-exploit natural resources. With this phenomenon, the management of tourist villages with the concept of green economy is very important, because it can preserve nature and the surrounding ecosystem. Efforts to put into practice a kind of development that prioritizes the health of the planet's ecosystems and the preservation of its natural resources might find fertile ground in the green economy idea. In this sense, tourist towns have a vested interest in making a profit, but they also have a responsibility to protect the local environment so as to foster harmony between people and their natural surroundings (Shang, Qi, Chen, Yang, & Chen, 2022). It is hoped that the Green Economy idea would provide a solution, serving as a link between rising living standards, fair treatment of all citizens, and conservation of natural resources. It is important to consider the possible trade-offs and synergies between the economic and environmental elements of the Green Economy concept, which is presented by many organisations as a vehicle for sustainable resource management (without neglecting social issues) (Vu, Nguyen, Nguyen, & Tran, 2022).

In study (Nur, Maulana, Nashihah, & Wardah, 2022) As a tourism model that should be the best at conserving natural resources, ecotourism which takes into account environmental concerns, displays respect for parts of nature, exhibits an attitude of concern for environmental sustainability. In research studies (Pol & Rutkowska, 2023) When it comes to defining green economy, striking a middle ground between minimizing ecological and environmental risks and maximizing social and economic well-being for all people is crucial.

Previous research, both domestically and abroad, has resulted in findings and identification there is a gap that in tourism development there is still exploitation of the environment so this research will further discuss the findings of the existing phenomenon where the green economy concept provides opportunities for community welfare with environmental balance in tourism areas, especially tourist villages. However, there is another contradiction that during the current COVID-19 era, tourism has decreased drastically so that people's income from the tourism business has gone bankrupt. This research was conducted with the aim of analyzing the green economy transition in tourism, especially tourist villages, whether it is able to provide inspiration or actually prevent an increase in people's income in conditions of the COVID-19 shock.

This research needs to be done because tourism villages and nature-based tourism have the potential to be part of the solution in building local economic resilience. By making the transition to a green economy, which focuses more on sustainability and environmental preservation. Transitioning to a green economy in the context of tourism can help reduce negative impacts on the environment and natural resources. This is an important step to ensure that the natural tourist attraction remains sustainable for future generations. Through a green



economy approach, local communities can be more involved in decision-making and resource management in their own areas. This can increase community involvement in the development and management of tourist villages, as well as help reduce social inequality. By involving these various aspects in research on the green economy transition to rural tourism, it can help develop recommendations and guidelines for building sustainable tourism villages, reducing negative impacts, and providing real benefits to local communities in the post-COVID-19 era.

According to Midgley's (1997) welfare theory, a society's standard of living improves when its numerous issues are solved, its people's wants are met, and their possibilities are expanded (Arbulú, Razumova, Rey-Maqueira, & Sastre, 2021). The concept of well-being makes individuals have the desire to fulfill their desires and needs. There is a tendency for individuals to always try to satisfy that desire. With the tendency of individuals to always try to satisfy their desires, welfare will be achieved when satisfaction reaches an optimum level (Joo, Xu, Lee, Lee, & Woosnam, 2021). The creation of a prosperous living condition when humans can meet their needs, social problems can be resolved properly and humans have social opportunities to work, get an education, get health services and participate in development (Acosta, Maharjan, Peyriere, & Mamiit, 2020). The importance of welfare theory in this research is based on the fact that, in an effort to better the human condition, social welfare seeks to harmonize with a wide range of disciplinary relationships, including those with the environment (through ideas like ecotourism and green economy), in order to create a model of growth that ensures prosperity without compromising the quality of life for future generations (Adnyana, Primasari, & Yulianah, 2020).

Temporary travel from one location to another, done alone or in groups, with the goals of social peace, cultural immersion, and natural and scientific discovery is what we call tourism (Adnyana et al., 2020). As a human endeavor, tourism is described as the intentional pursuit of leisurely travel for the purpose of receiving services from a variety of providers in locations both inside and outside of one's own nation. acquire a regular job (Pham, Dwyer, Su, & Ngo, 2021). Traveling for the sake of recreation, leisure, enjoyment, discovery, education, health promotion, recreation, relaxation, business, or any other personal or professional goal is known as tourism. Tourism, in its broadest sense, is transient movement from one location to another by a person or a group with the purpose of exploring, learning about, and perhaps improving upon one's social, cultural, natural, and scientific surroundings (Sharma, Thomas, & Paul, 2021). To qualify as a vacation, a journey must be brief, undertaken without any feeling of obligation or compulsion, and not include any kind of gainful employment (Butchers, 2021). The term tourism refers to a broad category of trips taken by individuals, families, and large groups from their home location to other locations across the world for the express purpose of sightseeing rather than working or residing there. This is just a stopover on a longer journey back to its permanent home (Duro, Perez-Laborda, Turrion-Prats, & Fernández-Fernández, 2021).

The COVID-19 pandemic has had a broad impact on the world tourism industry due to reduced demand from domestic and foreign tourists. The pressure on the tourism industry was evident in the massive drop in international tourist arrivals with massive cancellations and reduced bookings (Zenker & Kock, 2020). The government's social restriction policy, which led to the temporary closure of tourist attractions in an effort to stem the spread of the COVID-19 outbreak, also led to a significant drop in tourist traffic and, consequently, local revenue (Z. Li, Zhang, Liu, Kozak, & Wen, 2020). Domestic tourism also slowed, perhaps as a result of individuals being reluctant to fly owing to concerns about the possible effects of COVID-19.

The declining number of tourists has cut into the profits of local businesses and tourism officials (Collins-Kreiner & Ram, 2021).

A tourist village is a community that incorporates attractions, lodging, and ancillary services into a cohesive whole, all within the context of regular daily life and the customs and practices of the locals. The term tourist village refers to a community that combines modern amenities with a strong emphasis on preserving local culture and heritage (Havadi Nagy & Espinosa Segui, 2020). A tourism village is a rural area that provides an authentic experience, beginning with the social culture, customs, everyday life, architecture of buildings and spatial structures of the village, and socio-economic life or economic activities that make the village special. In addition to being a promising area for the growth of other aspects of the tourist industry, such as attractions, lodging, food and drink, souvenirs, and so on (H. Van Nguyen, Diane, & Newsome, 2020). A tourism village is one that has the potential to be both unique and distinctive as a tourist attraction, whether that be due to the physical characteristics of the rural natural environment or the socio-cultural life of the community, and which is managed and packaged in an attractive and natural way by developing tourism support facilities, in a harmonious environmental and management system. Tourism economic activities that may enhance the welfare and empowerment of local communities; excellent and planned so that they are ready to accept and drive tourist visits to the community (Ramaano, 2022). Tourist communities have seen the effects of the ongoing COVID-19 epidemic, leading to fewer visitors or possibly an absence of tourists altogether (Gao & Cheng, 2020). Since the COVID-19 virus caused airlines to stop servicing Indonesia, few tourists have visited the country, and many individuals who work in the tourism business have returned home. This has left many residents of tourist towns unemployed (Lu, Li, & Xu, 2020). The community realizes that in the midst of the devastating COVID-19 shock that has caused this economic decline there is still hope, so they spontaneously and actively remain united in reviving tourism village activities (Kastenholz, Marques, & Carneiro, 2020). Tourism that offers rural nature is a very promising market opportunity in developing tourism villages (Ramaano, 2021). The locals will benefit financially from the creation of a tourist town (Yang et al., 2021).

A Green Economy is a form of economic governance that prioritizes people's health, social justice, and the environment before profit. A Green Economy is one that uses little or no fossil fuels, conserves natural resources, and treats its people fairly. A green economy is one that does not have any negative effects on the natural world (Dai, Rao, Liu, Mohsin, & Taghizadeh-Hesary, 2022). The term green economy is often used to refer to an economic model that may boost social welfare and equity. Although social goals such as sustainable development, social equality, and poverty reduction do not always materialize automatically, the green economy is still a tool or means that is expected to be able to provide these results: new sources of income and employment; low carbon emissions; reduced use of natural resources; and reduced increase in pollution and waste (Howson, 2021). However, in order to achieve these social aims, we need to tether green economic endeavors to certain institutional policies. In supporting the success of a green economy concept that aims to improve economic aspects through development activities that do not override environmental sustainability (TL Nguyen, 2022).

After much delay, the World Health Organization (WHO) has announced that the COVID-19 pandemic is a serious threat to global health (Dzigbede & Pathak, 2020). Even in Indonesia, the COVID-19 virus has moved rapidly and deftly to many regions of the nation. The impact of COVID-19 extends well beyond the realm of mental health to permeate other

areas of society and the global economy (Dzigbede & Pathak, 2020). The policy of limiting social activities given by the government caused the situation to become even more paralyzed so that the food chain sector, including meat supply, experienced shocks (Osinubi & Olomola, 2021). The whole tourist industry will feel the effects of the COVID-19 pandemic. With so many people canceling their trips and fewer people making reservations, it's clear that the tourism sector is feeling the pinch (Payne, Gil-Alana, & Mervar, 2022). Since the outbreak of the pandemic, tourist arrivals have decreased drastically so that it has had an impact on the actors and activists of the Tourism Village (Wu, 2021). Villages that focus on tourism have a great chance to fulfill communal welfare by developing all of their resources in a way that is tailored to their specific requirements (Wang, Wang, He, & Zhu, 2022).

The tourism industry, particularly tourist towns, was hit hard by the COVID-19 epidemic, which destroyed all previous regulatory mechanisms. The ban on the locals engaging in their normal activities has reduced business in several tourist communities. The effects are also seen in the field of tourist administration (Z. Li, Zhang, Yang, Singer, & Cui, 2021). However, despite the economic blow brought on by the COVID-19 epidemic, a well-managed tourist resort will continue to attract visitors (Orîndaru et al., 2021). The Green Economy Transition is referred to as the right concept of economic development because it is able to create jobs and improve the welfare of a just society and maintain the carrying capacity and quality of the tourist village environment (Panzer-Krause, 2022). Various organizations define the Green Economy idea as a tool for long-term resource preservation (Bergius, Benjaminsen, Maganga, & Buhaug, 2020). To understand the possible trade-offs and synergies between the economic and environmental components (without ignoring social concerns) is central to the concept of Green Economy, which is multifaceted in nature. The rise of the Green Economy has reaffirmed the felt need of environmental preservation and opened up opportunities for tourist investment (Markose, Tazhathethil, & George, 2022). The term green economy refers to an economic theory that has the potential to greatly lessen environmental dangers while simultaneously promoting human flourishing and social justice (Ma, Hong, & Chen, 2022).

A tourism village is a kind of development project that may be used to improve locals' standard of living. However, the use of natural resources to facilitate tourist growth will have an effect on the natural environment's ability to be maintained (Bachelor, 2021). The use of green space for the purpose of creating tourist attractions is one example of natural exploitation. The Green Economy idea is urgently needed to remedy this situation (Wayan, Dewi, & Sutarna, 2021). To be established in places that use eco-friendly tourist practices, the notion of Green Economy must be able to increase living standards and social justice while reducing the possibility of actual environmental harm (Sugiyanto, Tiurmidia, & Triono, 2022). The tourist industry is an important part of the Green Economy. Sustainable and able to raise living standards in rural areas, Green Economy implementation in the tourist industry takes the shape of tourist Village Development (Basuki, Wonoseputro, & Tarigan, 2023). In the results of the investigation (Apriantoro, Rahayuningsih, & Sarwanto, 2022) that The idea of green economy may boost community economic well-being and lessen the likelihood of severe environmental harm. Furthermore, as shown by (L. Li et al., 2022) a stronger organic growth of the village and higher incomes for its residents as a result of the green economy transition.

H<sub>1</sub>: The green economy transition in the development of tourist villages has a strong influence in increasing people's income in the conditions of the COVID-19 shock.

## METHOD

The research adopts a quantitative design and an associative approach in looking at causal relationships (Sugiyono, 2017). So, there is an independent variable or influence variable, namely the green economy and the dependent variable as the affected variable, namely people's income during the COVID-19 era. The type of data is primary data which is obtained directly from research respondents. The research was conducted in tourist villages in West Java Province, namely: Alamendah Tourism Village, Bandung and Saung Ciburial Garut Tourism Village, and Lampung Province tourist villages, namely: Harapan Jaya Tourism Village, Kiluan Negeri Tanggamus Tourism Village, Riris Jaya Tourism Village, West Lampung and Way Kalam Tourism Village, Lampung. South. The research period was carried out under the conditions of COVID-19 for the 2022 period. Data collection was carried out from respondents targeting tourism village communities in West Java and Lampung Provinces. Sampling using random sampling to ensure that each member of the population has the same opportunity to be selected as a sample so that the number of samples used is 500 respondents (Purwanto, 2019). Collecting data using a questionnaire and measuring indicators used is a Likert Scale.

**Table 1. Sample Characteristics**

Table 1: Sample Characteristics			Number of	
No.	Social and Demographic Characteristics		Participants	Percentage (%)
1.	Education	Senior High School	389	77.8
		Diploma	64	12.8
		Bachelor Degree (S1)	47	9.4
2.	Age	17-25 Years	69	13.8
		26-30 Years	124	24.8
		31-35 Years	189	37.8
		35 > Years	121	24.2
3.	Gender	Male	224	44.8
		Woman	276	55.2
4.	Jobs	Student / Colage Student	26	26
		Self Employed	23,2	23.2
		Housewife	37,8	37.8
		Etc	13	13
5.	Income	IDR. 1.500.000 - IDR. 2.000.000	128	25.6
		IDR. 2.100.000 - IDR.2.500.000	196	39.2
		IDR > 2.600.000	176	35.2

Details of the characteristics of the respondents can be seen in table 1. When viewed from the last level of education, there were 77.8% of respondents with a senior high school, 12.8% of respondents with a diploma education, and 9.4% of respondents with a bachelor's degree (S1). Judging from the age of the respondents, this study was dominated by the age range of 31 to 35 years, namely 37.8%. In terms of gender, the majority of respondents in this study were female, namely 55.3%. And when viewed from the income side, the majority of respondents have IDR income. 2.100.000 - IDR 2.500.000 by 39.2%.

Previous research used mixed methods and descriptive qualitative while the current research developed a quantitative instrument design with an associative approach in analyzing

the transition of a green economy to tourism in tourist villages towards increasing people's income in conditions of the COVID-19 shock. This of course can identify significant patterns or relationships. between green economy practices and local economic development. The use of quantitative instruments, such as questionnaires can help collect measurable data and provide more in-depth statistical analysis.

**Table. 2 Operational Variables**

Table 2 Operational Variables			
No.	Variable	Indicator	Scale
1.	Income Society (Y)	Productive age	Ordinal
		Outpouring of Working Time	
		Level of education	
		Total Income	
2.	GreenEconomy (X)	Use Value, Intrinsic Value and Quality Value	Ordinal
		Follow the Flow of Nature	
		Garbage is Food	
		Tidy and Diversity of Functions	
		Appropriate Scale	
		Self Abilities, Self Organization and Self Design	
		Creativity, Participation and Community Development	
		Strategic Role in Landscape Built Environment and	
Source: Research Data, 2022		Spatial Design	

Source: Research Data, 2022

SmartPLS 3.0 was utilized to analyze the data in the research. Outer test and inner model test statistics obtained via data processing. The latent variable loading factor was compared to the findings of the validity test instruments, and if the results were more than 0.70, it was determined that the data was valid (Hamid, 2019). Cronbach's alpha or the number of Composite reliability with a data validity limit of more than 0.70 are used to assess reliability. The R-Square statistic is used in the internal model test to determine the model's viability, whereas the p-value and t-statistic are analyzed throughout the hypothesis testing process (Hendriyadi, 2019).

## RESULTS AND DISCUSSION

The results of the validity test in Table 4 show that the value of each indicator for each variable green economy (X1) and society income (Y) has a significant relationship. Higher scores greater than 0.70 legally and highly. This means that all indicators used in the study have a significant correlation with the construct being measured. In other words, these indicators effectively measure the concepts referred to in the research. The data obtained is stated to be valid and very suitable for use in research. The reliability test results in table 4 show that the value of the green economy variable (X1) obtained a Cronbach's Alpha value with a result of 0.905, Composite Reliability with a result of 0.923, and Average Variance Extracted (AVE) with a result of 0.819, the variable society income (Y) obtained a value Cronbach's Alpha with a result of 0.807, Composite Reliability with a result of 0.874, and Average Variance Extracted (AVE) with a result of 0.837 and the numbers obtained from the test results have a value above 0.70 so that the absolute consistency or stability of the measuring instrument in measuring variables is very high. appropriate. This gives the results of the data obtained which are stated

to be truly reliable and provides empirical evidence that the consistency of the questionnaire is said to be very good and reliable and the questions asked in the questionnaire provide very consistent answers.

**Table. 4 Validity and Reliability Test Results**

Variable	Indicator	Loading Value	Information	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Green Economy (X)	GE. 1	0.730	Valid	0.905	0.923	0.819
	GE. 2	0.770	Valid			
	GE. 3	0.838	Valid			
	GE. 4	0.806	Valid			
	GE. 5	0.713	Valid			
	GE. 6	0.850	Valid			
	GE. 7	0.752	Valid			
	GE. 8	0.733	Valid			
Income Society (Y)	PM. 1	0.799	Valid	0.807	0.874	0.837
	PM. 2	0.826	Valid			
	PM. 3	0.825	Valid			
	PM. 4	0.731	Valid			

Source: Data Processing Results, 2023

**Table. 5 Structural Model Test Results**

Hypothesis	Original Sample	T – Statistics	P-Value
H1 Green Economy -> Society Income in Shock COVID-19	0.764	28.917	0.000

Source: Data Processing Results, 2023

Results structural model test in table 5 that construct green economy (X) has the original sample coefficient with society income in the era of COVID-19 with numerical results 0.764 and the t-statistic value with a result of 28.917 and the value is above 1.96 and the p-value with a result of 0.000 and the resulting value is below 0.05 so that it is absolutely stated that the green economy transition in tourist villages has a big role in society income in the era of the COVID-19 shock.

**Table. 6 Test Results R-Square Value of Endogenous Variables**

Variable	R Square	Adjusted R Square
Society Income in Shock COVID-19 (Y)	0.584	0.583

Source: Data Processing Results, 2023

Results test variable r-square value Table 6 yields a number with an acquisition of 0.584 or 58.4% so that it is absolutely and legally stated that the green economy transition in tourist villages has a sizeable contribution to society's income in the era of COVID-19 at 58.4% while the resulting remaining figure of 41.6% is explained in other variables outside of the implementation of the research conducted.

### **Green Economy Transition in Tourism Villages and Society Income in the COVID-19 era**

The concept of Green Economy is a new paradigm in economic development to replace old policies and does not favor long-term solutions and ecosystems, therefore a green economy

is the best solution for policy makers to balance environmental preservation and economic growth (Toubes & Araújo-Vila, 2022). The COVID-19 Pandemic severely impacted the tourism industry, including the administration of tourist villages, which is why it is now standard practice for all tourist villages to govern themselves in accordance with the Green Economy Concept (Saliman, Wibowo, Widiastuti, & Rosardi, 2021).

The results of the study provide facts about the transition of a tourist village to the green economy concept as a strong influence in increasing the income of tourism village communities in West Java Province and Lampung Province in the conditions of the COVID-19 shock. This is because the green economy concept encourages sustainable practices in the utilization of natural resources and environmental preservation. By maintaining a healthy ecosystem, tourism villages can attract tourists who are attracted by nature and its pristine natural beauty. This will ensure a sustainable attraction for tourists, which in turn can increase revenue. The green economy promotes income diversification through the sustainable use of natural resources. The shift to a green economy encourages the adoption of new technologies and knowledge focused on sustainability. This kind of innovation can improve efficiency and productivity, which in turn contributes to higher revenues. Tourism villages that focus on a green economy can market themselves as eco-friendly and sustainable tourism destinations. This could appeal to tourists who are increasingly aware of the environmental impact of their travels. With the right branding, tourism villages can build a positive image that contributes to increased visits and income.

Tourist communities that embrace the idea of green economy are in a better position to develop a distinct appeal for visitors. The design of a tourist village is created in accordance with the natural conditions that surround the community that is used as a tourist object. Additionally, various natural potentials are combined with the living conditions of the community to become an appropriate collaboration and innovation is carried out in the tourist village with the green economy concept to make the tourist village more appealing so that the village tourism is eyed by many people. When visitors arrive in the town, there will undoubtedly be a resurgence of the local economy. It is possible that the construction of a tourist town based on the idea of a green economy would bring advantages in the form of an increase in people's incomes, which will allow the community to experience a substantial influence from an economic point of view. There are a lot of new career possibilities that the community in this area may take advantage of, such as providing a range of culinary delicacies that are characteristic of tourist settlements. Aside from that, the community of the village is able to engage in a variety of productive activities as a result of the presence of a tourist village. Some examples of these activities include the processing of handicrafts. Not only that, but the presence of a tourist village also has an effect on the communities that surround the village. One of these impacts is the growth of the town's ability to house a large number of micro, small, and medium-sized businesses (MSMEs). The combination of the idea of green economy with the tourist village has had a stunning effect, the most notable of which is the significant increase in the number of people who have visited the tourist village by purchasing one of the various tour packages. The level of economic activity that takes place in the vicinity of the tourist village is directly proportional to the degree to which the community and the decision-makers in the tourist village manage their tourism-related endeavors. This includes the manner in which they promote tourism in the tourist village so that it is known in the surrounding community.

The management of all tourist villages in West Java and Lampung provinces has implemented the green economy concept in various aspects of its activities. Tourism village

managers must prioritize the use value and quality of tourist villages to maintain the comfort of visitors. Managers maintain the environment by buying or making equipment that can be used as a means of protecting the environment. This is done to ensure that even if there is a limited amount of cash available, the natural tourism village can still stay viable and that the management will still profit from the construction of a tourist village. To accomplish this goal, waste disposal sites made of wood, toilets, or other suitable permanent disposal sites, as well as sources of clean water, should be constructed. In addition, a tourist town that does a good job of going with the flow of nature will help the local environment and ecology to remain mostly unchanged. When it comes to successfully constructing a tourist village that is supported by a green economy, compatibility with the natural environment is the most important factor. The idea behind the tourist town is to include natural elements into the design of the attractions that are made available, such as a steep camping site that guests may take advantage of throughout their time there.

The presence of garbage in tourist villages is a major problem in keeping the environment beautiful. Garbage is also a real disease that can disrupt environmental sustainability. In managing the waste generated by visitors, various efforts must be made that still pay attention to environmental aspects. The efforts made by the manager are that the manager prepares a trash bin that separates organic, non-organic and plastic waste. The local community has a vital role in waste management. The local community regulates and maintains the health and cleanliness of the environment, in order to create a beautiful environment that impacts the health and safety of the community itself. Furthermore, tidiness and diversity of functions is an important thing to do in a tourist village with the green economy concept. This is because it will make it easier for managers to keep the environment beautiful. The tourist landscape that is owned can be put to good use by managers such as structuring locations in tourist villages that adjust to their potential.

Diversity is important in tourism. With a variety of attractions, attracting interest for tourists who have just visited the tourist village. Then in designing a concept can be done by yourself or with the help of various parties. Intervention from other parties can provide convenience in accelerating the development of tourist villages. The tourism village manager also together with the surrounding community organizations manages it further. The role given is also an active role and with various efforts made it still upholds aspects of environmental sustainability such as routinely cleaning the tourist village area. In building a tourist village, it must be with the approval of the entire surrounding community. If development is not carried out with the approval of parties in the village, Of course there will be potential for misunderstanding. Because of this, one of the characteristics of a tourist village is that it is managed by the local community in addition to community organizations, all of which play an extremely important part in the process of keeping a tourist village in operating shape.

This study's results are consistent with the underlying hypothesis. According to Midgley (1997), wellbeing is a state of human existence achieved by the effective resolution of societal issues, the satisfaction of fundamental human wants, and the expansion of available social possibilities (Arbulú et al., 2021). A form of development is required that brings together economic growth directly without causing a decline in the environment in order to guarantee a good quality of human life, and social welfare makes an effort to synergize with various disciplinary relationships, such as its relation to the environment, specifically the concept of tourism and green economy. in the future as well as the present (Adnyana et al., 2020). This finding has a direction that is in line with the hypothesis developed by the researcher



(Apriantoro et al., 2022) that The idea of green economy may boost community economic well-being and lessen the likelihood of severe environmental harm. Furthermore, as shown by (L. Li et al., 2022) that the green economy transition in the village become an economic advantage and be able to make village endogenous development better and the community is able to earn more income.

The locals may be able to better use the resources available to them if a tourist village exists in their area. The growth of tourism will have several effects on the local community because of its direct interaction with and participation in it (Putri, Mahmud, & Aminy, 2022). This is what the management has to focus on in order to keep the tourism village running well, since the presence of visitors who come to visit tourist villages means more money for the local economy (Susiyanto, 2022).

## CONCLUSION

This study analyzes the green economy transition in tourism, especially tourist villages, whether it is able to provide inspiration or actually prevent an increase in people's income in conditions of the COVID-19 shock. Because of the COVID-19 shock, the findings of the research reveal data on how the transition of a tourist village to the green economy concept has a big effect in raising the revenue of tourism village communities in the provinces of West Java and Lampung. These provinces are located in Indonesia. This is due to the fact that the green economy concept encourages sustainable practices in the utilization of natural resources and environmental preservation. By maintaining a healthy ecosystem, tourism villages can attract tourists who are attracted by nature and its pristine natural beauty. This will ensure a sustainable attraction for tourists, which in turn can increase revenue. The green economy promotes income diversification through the sustainable use of natural resources. The shift to a green economy encourages the adoption of new technologies and knowledge focused on sustainability. This kind of innovation can improve efficiency and productivity, which in turn contributes to higher revenues. Tourism villages that focus on a green economy can market themselves as eco-friendly and sustainable tourism destinations. This could appeal to tourists who are increasingly aware of the environmental impact of their travels. With the right branding, tourism villages can build a positive image that contributes to increased visits and income.

In both a theoretical and practical sense, the results of this research are anticipated to give a reference for bolstering the tourist village program. This will allow the program to contribute to the growth of the economic sector of the community while also making the protection of the environment more convenient. The reason for this is because the problem of maintaining a healthy environment plays a very important role in the process of maintaining a healthy economy. Management of tourist villages with the green economy concept in an effort to develop tourism that is directed at eco-friendly and sustainable tourism which is certainly able to increase people's economic income so that people's living standards have increased

Future researchers are encouraged to expand upon the one framework explored here the green economy by studying the role of community-based tourism (CBT) in boosting local incomes and examining the long-term viability of the built tourism infrastructure (sustainable tourism). Further research is encouraged to investigate, study, and compare tourist villages in other Asian countries, such as those in Thailand and China, so that they may serve as references in the development of Indonesia's own tourist villages, which this study only examines in West

Java and Lampung. This study tested just during the COVID-19 pandemic, hence future studies should be carried out at this time period.

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### Impact of Tourist Satisfaction Attributes on Behaviour of Sharing Tourism Experience on Social Media

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#### ABSTRACT

Tourist satisfaction is an emotion that is felt by visitors when they there are in a place, in this case a tourism place. The satisfaction felt by visitors makes certain behaviours, which in this case share information using social media. This objective study is examines and analyzes the predictors of tourist satisfaction and tourist engagement on the behaviour of sharing tourism experience on social media. Methode: quantitative research with analysis technique. Results all variables influence can be acceptable and positive impact. Novelty in this study is the existence of tourist engagement that is able to make something unique because both the visitor and the place visited have an emotional engagement. Implication of results that with social media so we can easy to share experience and for destination as a promotion place, communication with prospective customer and discussion.

**Keywords:** Attraction; Engagement; Satisfaction; Social Media.

#### INTRODUCTION

East Java Province is a densely populated province which ranks 2nd based on the results of the 2020 population census (Ningsih, 2021). The fact is that in this province, the dense population is also offset by rapid economic growth. This is evidenced by economic growth which is above the average national economic growth, of 4.73% (RoEkonomi, 2019). One of the sectors that contributed to economic growth came from the tourism sector, which was 5% (Kominfo, 2019). In 2022, the Gross Regional Domestic Product (GRDP) for the tourism sector will also continue to experience a significant increase (Febrianto, 2022). Based on data obtained from the East Java Provincial Culture and Tourism Office, GRDP at current prices for the tourism sector in the first quarter of 2022 was IDR 36,986.76 billion, then there was an increase in the second quarter to IDR 38,243.41 billion, and continued to increase again to IDR 39,408.48 Bn in the 3rd quarter (Rachma, 2022). One indicator of the increase in GRDP in the tourism sector can be seen from the number of visitors at tourist sites. Even though there had been a drastic decrease in the number of tourists in all destination places in Indonesia, due to the Covid-19 pandemic in 2020. In 2021 there was an increase again, even in January-September 2022 there was an increase of 134.90%, compared to the previous year in the same period, namely 20,441,579 for domestic tourists or domestic tourists (Hasanah, 2022).



Since the existence of social media, information dissemination has become faster and easier, therefore social media has become one of the marketing media that is considered quite effective. In the tourism business, social media is an important and effective marketing channel (Zeng & Gerritsen, 2014). In the current era of globalization, a person's decision to buy or shop is mostly decided through social media (Ayutiani & Putri, 2018). Likewise in the tourism business, one of the decisions of potential consumers to visit tourist attractions is determined through one's previous experiences shared on social media or commonly known as the behaviour of sharing tourism experiences on social media. According to research conducted by (Retnasary et al., 2019) that content from social media has an important role in the promotion of tourism objects. In this study, the factors that are thought to influence the behaviour of sharing tourism experience on social media are tourist satisfaction and tourist engagement. Visitor satisfaction in a tourist spot that has been visited and the involvement of visitors in a tour is thought to influence a person's behaviour to share experiences on social media. This condition is in line with research conducted by Al-Htibat & Garanti (2019) that the more tourists are involved in the Cap Go Meh Singkawang festival, the higher the tendency to share information or experiences with other people. Likewise research that was conducted by Widiana & Novani (2022) also shows that customers who feel satisfaction at tourist attractions tend to share their experiences on social media. General attraction and culture attraction are also thought to have an indirect influence on the behaviour of sharing tourism experience. The existence of facilities or elements that support the tourist location (general attraction) as well as elements that indicate historical value at the tourist location are things that also influence customer satisfaction and tourist engagement.

Several previous studies related to the behaviour of sharing tourism have been carried out, one of which is regarding the analysis of factors that influence tourists' travel experience sharing on social media. The results show that overall satisfaction, perceived enjoyment, personal fulfillment, and self-actualization reasons have been significant predictors (Widiana & Novani, 2022). Research that was conducted by Sultan et al (2019) also shows that sharing on social media about positive experiences influences the positive effect of destination choice, while sharing about negative experiences will affect to decrease the choice of destination options.

Most of the previous research only focused on the factors that influence sharing behaviour on social media and the effect of this behaviour on tourist visits to a destination place, even though there are still many things related directly or indirectly to sharing behaviour on social media. This makes researchers interested in conducting research on the factors that influence sharing behaviour on social media in terms of tourist satisfaction and tourist engagement and their relation to general attraction and cultural attraction. Because after all, the satisfaction and engagement that impact on sharing behaviour comes from an attraction that causes visitor interest in these tourist attractions. In constructing all these variables in a model, the PLS SEM method is used. The end result of this research is that it is hoped that there will be an increase in tourists which will also have an impact on several aspects such as food, transportation, hotels, SMEs to the creative industry, even further on growth in East Java which comes from tourism contributions.

Behaviour is a behaviour that leads to a certain goal because there is a strong push either from internal factors or external factors, so it can be said that the behaviour of sharing tourism experience on social media as a behaviour or action to share on social media this can be in the form of an experience gained when visiting a certain place with the aim of expressing

or conveying a sense of emotion within (Jeong & Shin, 2020; Liu et al., 2018; Prayag et al., 2012).

According to Haneef et al., (2019); Wang et al., (2020) general attraction is something that is provided by tourism places with the aim of being able to be enjoyed and felt by visitors, so that visitors can feel safer, more comfortable and without any sense of worry in the sense that visitors get what they want when they are in tourism place. Visitors feel that there is self-involvement in tourism places because visitors feel valued and made as comfortable as possible, so it can be said that general attraction has an influence on tourist satisfaction and engagement.

H1: General attraction influence on tourist satisfaction

H2: General attraction influence on tourist engagement

Culture attractions in this case can be in the form of museums, galleries, culture (traditional), buildings that have historical value and monuments, or can be in the form of heritage attractions, crafts, architecture, past sights and art, but this cannot be separated from the existence of a maintenance factor. Specifically designed to maintain sustainability so that there is feedback for both visitors and places visited (tourism sites) (El Sheikh, 2020; Sergio Moreno-Gil, 2017). The research states that culture attraction has an effect on tourist satisfaction and tourist engagement.

H3: Culture attraction influence on tourist satisfaction

H4: Culture attraction influence on tourist engagement

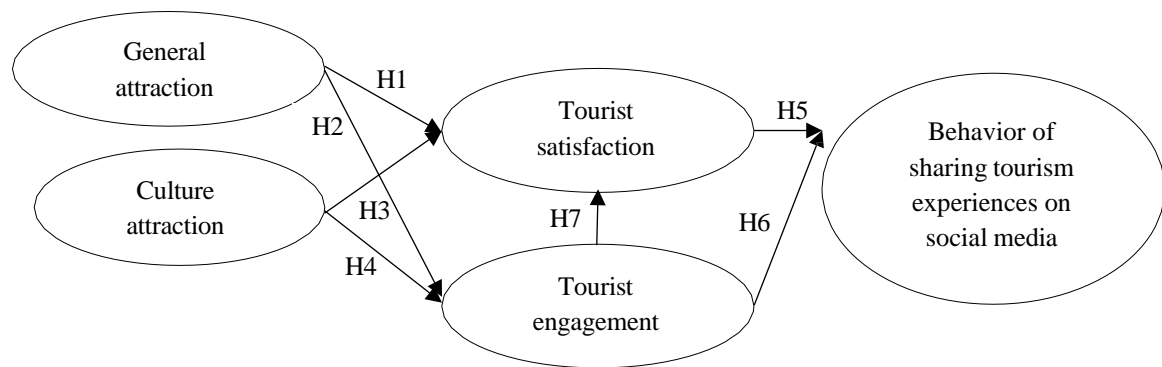
Tourist satisfaction is a standard that measures how successful a service or goods provider is in meeting the expectations of visitors or customers or connoisseurs of the services or products provided or offered (Garanti et al., 2019; Leon & Choi, 2020). Previous research (Prayag et al., 2012) states that satisfaction can be interpreted as a person's feelings that describe a feeling of pleasure or disappointment, for the results of comparing the benefits of products or services, so that the results have an impact, if the impact on positive benefits then visitors will feel satisfied, and if what is felt exceeds expectations, then the visitor will be very satisfied. It can be concluded that tourist satisfaction has an influence on the behaviour of sharing tourism experience on social media

H5: Tourist satisfaction influence on behaviour of sharing tourism experiences on social media

According to García-Milon et al., (2020); Tiamiyuet al., (2020) the existence of an existence in the form of emotional and rational that is owned by visitors to tourist destinations, this makes the two components interrelated so that there is direct involvement of visitors to what they have experienced when they are in a place that has more value. Previous research conducted by García-Milon et al., 2020; Tiamiyuet al., 2020) that there is an effect of tourist engagement on tourist satisfaction and behaviour of sharing tourism experience on social media.

H6: Tourist engagement influence on the behaviour of sharing tourism experiences on social media.

H7: Tourist engagement influence on tourist satisfaction.



**Figure 1. Conceptual Framework of Research**

Source: Hypothetical model was developed by researches

## METHOD

The approach used in this study is a quantitative approach which is a test of theories by means of measurement that emphasizes numerical data (numbers) on the variables studied and continues using one of the statistical test tools (Leavy 2017:9). The variables in this study consist of behaviour of sharing tourism on social media, tourist satisfaction, tourist engagement, general attraction and culture attraction. Behaviour of sharing tourism acts as an endogenous variable, while tourist satisfaction, tourist engagement are exogenous variables for behaviour of sharing tourism, and are endogenous variables for general attraction and culture attraction. Meanwhile, general attraction and culture attraction only act as exogenous variables. All types of variables in this study are latent variables, so that the measurement of each variable is carried out through several indicators. All indicators are adapted from several previous studies. Kim et al's research was adapted for general attraction variable indicators. Previous research belonging to Atsiz O & Akova, 2021 adopted for culture attraction. Own research (Jalilvand et al., 2012) adapted for tourist satisfaction variable. Tourist engagement is measured by indicators adapted from (Folgado-Fernández et al., 2021). Meanwhile, research (Wang et al., 2020) is referred to as the Behaviour of sharing tourism experience on social media indicator. All of these indicators are used as statement items in the questionnaire. Measurements were carried out using a five-point Likert scale with a range of values or numbers from 1 for strongly disagree to 5 for strongly agree.

The population in this study were all domestic tourists who had visited tourism sites in East Java. The research sample was determined using the non-probability sampling method, which is a sampling method based on a non-random selection concept, each element of the population has unequal opportunities to become a sample (Cooper & Schindler, 2014: 349). This sample method was chosen because there is no definite population frame for data on domestic tourists visiting tourist sites in East Java. The sample was only selected based on several criteria, namely domestic tourists who have visited tourist sites in East Java for the last 2 years (2021-2022). Tourist locations only cover the areas of Surabaya, Malang, Jember and Mojokerto. Based on some of these criteria, 115 respondents were selected for this study. The statistical technique used is the Structural Equation Modeling (SEM-PLS) method, which is a structural equation model based on data variance. This method is used to find the effect of a variable on its indicators or between variables in modeling. This method is more flexible

than the covariance-based SEM method which has a number of assumptions that cannot be violated in modeling. This method has several stages of analysis such as constructing path diagrams, converting path diagrams to a system of equations, estimating the outer model and inner model, and evaluating goodness of fit Goodness of fit, indicators and acceptance criteria. In this study the significant levels used were 90% and 95%.

## RESULTS AND DISCUSSION

In this section, a discussion of the results of data analysis is carried out. For the initial stage is a discussion of the characteristics of the respondents as well as a summary of the descriptive statistics of the respondents' answers. In the next section is an explanation of the results of the analysis of the influence of exogenous variables on endogenous using the SEM-PLS method. A more detailed explanation is discussed in each of the following sub-chapters. Characteristics of Respondents and Descriptive Statistics of Respondents' Answers. The characteristics of the respondents in this study are presented in a Table 1. In the Table 1 above show that most of the respondents were female, with ages in the range of 21-25 years. Nearly half of the respondents had an undergraduate degree, and most of the sources of information obtained were from friends. Instagram is a social media that is often used by respondents in their daily lives. The Table 2 is a summary of the descriptive statistics for each answer given by the respondents from the five variables.

**Table 1. Characteristics of Respondents**

<b>Gender</b>	<b>Female</b>	79	<b>Background of Education</b>	D3	10
	<b>Male</b>	36		S1	100
<b>Age</b>				S2	5
		15-20 Years		Colleagues	15
		21-25 Years		Family	15
		26-30 Years	<b>Information Source</b>	Friends	85
		31-35 Years			
		36-40 Years	<b>Social Media to Used</b>	Whatsapp	15
		41-45 Years		Instagram	100

Source: processed data using SPSS version 27, 2023

In the Table 2 show that Respondents gave answers ranging from strongly disagree to strongly agree. If you look at the distribution of the answers, it shows that the number of categories that strongly agree has a fairly high value. So it can be said that the respondent understands and understands the context of the statement that must be answered.

Influence analysis using the SEM-PLS method through 2 stages, namely the analysis of the outer model and analysis of the inner model. The first stage is an analysis of the outer model. At this stage, several tests were carried out to measure the accuracy of using the indicators for each variable. All variables in this study are latent variables that are measured using several indicators, so it is hoped that the indicators used are appropriate and representative indicators in reflecting each variable. The tests carried out consisted of several stages, namely as follows.

**Table 2. Descriptive Statistics of Respondents' Answers**

Variable	Min	Max.	Average	St.dev
General Attraction	2	5	20.104	2.535
Cultural Attraction	1	5	19.791	2.296
Tourist Satisfaction	2	5	16.035	1.919
Tourist Engagement	2	5	16.757	2.539
Behavior of sharing tourism experiences on social media	1	5	18.922	3.333

Source: processed data using SPSS version 27, 2023

The testing phase of the outer model begins with convergent validity testing. This test is indicated by the value of the loading factor on each indicator. The indicator criteria are said to have met convergent validity if the resulting loading factor value is more than 0.5 (Chin, 1998). If there are variables that do not meet these criteria, then the indicator must be eliminated. The culture attraction variable is measured using 5 indicators, but the two indicators namely "obtaining the necessary information" and "positive things for the facilities offered" have a loading factor value that does not meet the criteria, so elimination is carried out for the two indicators. The results of the loading factor after elimination on all indicators in each variable are presented in the Table 3.

**Table 3. Convergent Validity Test**

Behaviour of Sharing Tourism Experience on Social Media	Culture Attraction	General Attraction	Tourist Engagement	Tourist Satisfaction
0.782	0.788	0.744	0.832	0.803
0.835	0.591	0.724	0.825	0.676
0.874	0.828	0.776	0.914	0.713
0.772		0.708	0.901	0.845
0.828		0.674		

Source: processed data using smart PLS version 3, 2023

In the Table 3 shown that all indicators in each variable have a loading factor value of more than 0.5 so that it can be indicated that all indicators have met the convergent validity criteria. This means that all indicators can be used appropriately and representatively to measure each variable in the study. The next test is the discriminant validity test. This test is conducted to test whether or not there is a difference in each latent variable. The difference in each latent variable indicates that the variable is unique and able to explain the phenomenon being measured. This test was carried out using 2 criteria, namely Fornell Lacker. Testing the discriminant validity using Fornell Lacker was carried out by comparing the square root of the AVE with the correlation between latent variables. A variable is said to have met discriminant validity if the AVE root in the latent variable is of greater value than the correlation with other latent variables. The results of the AVE value and the correlation of each variable are presented in the Table 4 below.

Based on the Table 4, it can be seen that the discriminant validity has a greater value when compared to the correlation between each latent variable (Cha, 1994). The AVE square

root value of each latent variable is the value that is located at the top position in each latent variable. This indicates that all latent variables in this study have met discriminant validity.

**Table 4. Discriminant Validity (Fornell Lacker)**

	<b>Behavior of sharing tourism experiences on social media</b>	<b>Culture Attraction</b>	<b>General Attraction</b>	<b>Tourist Engagement</b>	<b>Tourist Satisfaction</b>
Behaviour of Sharing tourism experience on social media	<b>0.819</b>				
Culture Attraction	0.429	<b>0.743</b>			
General Attraction	0.439	0.484	<b>0.726</b>		
Tourist Engagement	0.447	0.592	0.460	<b>0.869</b>	
Tourist Satisfaction	0.483	0.657	0.530	0.682	<b>0.762</b>

Source: processed data using smart pls version 3, 2023

**Table 5. Results of Validity and Reliability Test**

	<b>Composite Reliability</b>	<b>AVE</b>
Behavior of sharing tourism experiences on social media	0.910	0.671
Culture Attraction	0.784	0.552
General Attraction	0.848	0.527
Tourist Engagement	0.925	0.755
Tourist Satisfaction	0.846	0.581

Source: processed data using smart PLS version 3, 2023

The next stage is testing convergent validity and reliability. Convergent validity testing was carried out to test the correlation of indicators on each variable. According to Ghazali (2014) ,the correlation between indicators of each variable should have a high value. Reliability testing reflects the ability of indicators to measure their latent variables. So the more it has high reliability, the better. Convergent validity testing was carried out using AVE criteria, while reliability testing was carried out using composite reliability criteria. The two values are summarized in the Table 5. Based on the Table 5 it can be seen that the composite reliability value of all variables is greater than 0.7, meaning that all variables are reliable (Hair et al., 2011). The AVE value for entire variables are more than 0.5. It means whole variables have met the requirements of construct validity.

After going through several stages for testing the outer model, it can be concluded that all indicators can accurately and representatively measure the research variables. So that it can proceed to the next stage, namely testing the inner model. At this stage the test focuses on whether or not there is influence between variables in accordance with the previous research hypothesis. However, in the early stages, an assessment was made of the goodness of the model. This study uses 3 criteria to assess the goodness of the model, namely R-Square, R-Square Adjusted, and Q-Square. The R-Square value is the coefficient of determination, while the R-Square Adjusted value is the R-Square value that has been corrected for the standard error. Therefore the R-Square Adjusted tends to be more accurate in assessing the goodness of the model. The Q-Square criterion is also used to measure the goodness of the model but is more focused on the goodness of the observed values produced by the model and also the

parameter estimates (Ghozali, 2014). The  $Q^2$  statistic formula is calculated as  $1 - \frac{SSE}{SS\#}$ . SSE is sum of squared prediction errors based on comparison of the original data and predicted data while SSO is taken from prediction with mean. These three values have been summarized in the Table 6.

**Table 6. Results of R-Square, R-Square Adjusted, Q-Square**

	<b>R-Square</b>	<b>R-Square Adjusted</b>	<b>Q-Square</b>
Behavior of sharing tourism experiences on social media	0.259	0.246	0.16
Tourist Engagement	0.390	0.379	0.286
Tourist Satisfaction	0.589	0.577	0.33

Source: processed data using smart PLS version 3, 2023

In the Table 6, it can be shown that the adjusted R-square value is 24.6% for the effect of exogenous variables on behaviour, 37.9% for the effect on tourist engagement while the good value of the model for tourist satisfaction is 57.7%. Based on these two values, it can only be categorized as a model that measures the effect of exogenous variables on behaviour which is included in the low category, while the other two models are included in the moderate category. The Q-Square value generated for all models is greater than 0, so it can be indicated that the model has a predictive relevance value, and the goodness of the resulting observation value is included in the large category for the tourist satisfaction model and included in the medium category for the other 2 models.

**Table 7. Direct Test of Hypothesis**

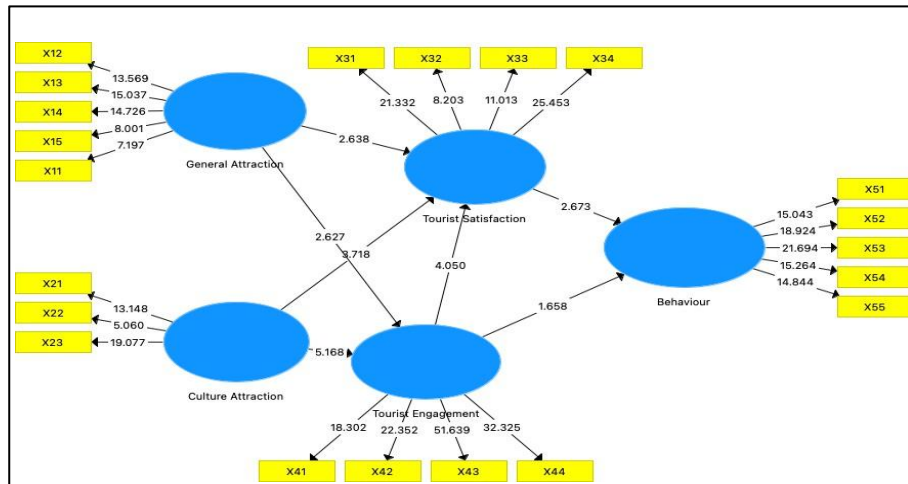
<b>Variable</b>	<b>Standard Deviation</b>	<b>T Statistics</b>	<b>P Values</b>
Culture Attraction > Tourist Engagement	0.093	5.168	0.000*
Culture Attraction > Tourist Satisfaction	0.089	3.718	0.000*
General Attraction > Tourist Engagement	0.086	2.627	0.009*
General Attraction > Tourist Satisfaction	0.070	2.638	0.009*
Tourist Engagement > Behavior of sharing tourism experiences on social media	0.133	1.658	0.098**
Tourist Engagement > Tourist Satisfaction	0.099	4.050	0.000*
Tourist Satisfaction > Behavior of sharing tourism experiences on social media	0.125	2.673	0.008*

Note : \* = significant at a significance level 95%

\*\* = significant at a significance level 90%

Source: processed data using smart PLS version 3, 2023

The next stage is testing the influence according to the initial research hypothesis. The results of the test are shown in the Table 7. In the Table 7 it can be seen that all hypotheses are accepted, because all variable influences have p-values that are smaller than the predetermined alpha values. The path diagram of the modeling is shown in the Figure 2.



**Figure 2. Final Model of PLS Result**

Source : processed data using smart PLS version 3, 2023

In the first hypothesis (1) the effect of general attraction on tourist satisfaction has a standard deviation value of 0.070 with a P-Value of 0.009 which has a significant effect, the results of this influence test have the smallest value compared to other influence tests. Previous research (Liu et al., 2017; Lund et al., 2016) showed that there is a significant relationship between general attraction and tourist satisfaction. This has the meaning that tourism provides what visitors want so that visitors can feel satisfaction. In the second hypothesis (2) states general attraction has an effect on tourist engagement with a standard deviation value of 0.086 with a P-Value of 0.009, which means that the greater the general attraction possessed by visitors, the higher the value of tourist satisfaction. In the third hypothesis (3) states that culture attraction has an effect on tourist satisfaction with a standard deviation value of 0.089 with a P-Value of 0.009 which means that the higher the culture attraction possessed by visitors, the higher the tourist satisfaction felt or owned by visitors.

In the fourth hypothesis (4) which states that culture attraction has an effect on tourist engagement, this can be seen from the standard deviation value of 0.093 with a P-Value of 0.000, this shows that the value of culture attraction felt by visitors will have a major influence on tourist engagement. In the fifth hypothesis (5), there is an influence of tourist satisfaction on the behaviour of sharing tourism experience on social which has a standard deviation value of 0.125 with a P-Value of 0.008, meaning that the satisfaction felt by visitors has meaning, because visitors feel fulfilled desires that are not just values but on the experience gained, so that this makes visitors want to convey deep impressions and messages through a social media they have, this research is in accordance with previous research (Dixit et al., 2019; Ghorbanzadeh et al., 2021; Liu et al., 2018; Zhou et al., 2020). In the sixth hypothesis (6) which states that tourist engagement has an effect on tourist satisfaction, this can be seen from the standard deviation value of 0.099 with a P-Value of 0.000, it can be indicated that there is strong involvement possessed by visitors resulting in a strong satisfaction. Also, this is in accordance with research (Alrawadieh et al., 2019; Han et al., 2021; Teng, 2021; Xu et al., 2018). The seventh hypothesis (7), namely tourist satisfaction has an effect on the behaviour of sharing tourism experience on social with a standard deviation value of 0.133 with a P-Value of 0.098, indicates that there is an involvement of visitors who are felt while in tourism places, visitors feel that there is an appropriate condition with the desired



expectations, visitors feel given the opportunity to be able to provide mutual benefits so that this has an influence on behaviour to share experiences on social media (behaviour of sharing tourism experience on social). The results of this study are in accordance with previous studies (Bilro et al., 2018; García-Milon et al., 2020; Tihamiyu et al., 2020) which states that there is sharing behaviour due to a strong encouragement from visitors because visitors feel given the opportunity by provider of tourism places. It can be concluded that the test of the greatest influence on H1 and H5 has the smallest influence value.

## CONCLUSION

The focus of this study is to analyze predictors of behavior related to sharing experiences on social media which consist of general attraction, culture attraction, tourist satisfaction and tourist engagement where each has an important role in the formation of behavior. Further research identifies similarities and differences in general and culture attraction, both of which are activities that have their own charm for visitors. This is distinguished from the existence of an activity that exists or is presented in a certain concept, making it possible for visitors to enjoy everything that is presented in a different way. These two variables are able to give their own impression and satisfaction for the visitors who enjoy it, the experience that is poured in the form of a satisfaction gives a strong desire to be shared with everyone through several media. The reason why using social media is because social media is one of the media that has speed and ease in sharing information and communicating. On the other hand, the satisfaction possessed by a person is driven by the existence of a strong feeling or strong bond that a person feels involved with an existing condition so that it can also create a certain behavior. The implications of this research for tourism managers are as support for management policies and as a strategy for marketing.

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### Impact of Tourist Satisfaction Attributes on Behaviour of Sharing Tourism Experience on Social Media

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#### ABSTRACT

Tourist satisfaction is an emotion that is felt by visitors when they there are in a place, in this case a tourism place. The satisfaction felt by visitors makes certain behaviours, which in this case share information using social media. This objective study is examines and analyzes the predictors of tourist satisfaction and tourist engagement on the behaviour of sharing tourism experience on social media. Methode: quantitative research with analysis technique. Results all variables influence can be acceptable and positive impact. Novelty in this study is the existence of tourist engagement that is able to make something unique because both the visitor and the place visited have an emotional engagement. Implication of results that with social media so we can easy to share experience and for destination as a promotion place, communication with prospective customer and discussion.

**Keywords:** Attraction; Engagement; Satisfaction; Social Media.

#### INTRODUCTION

East Java Province is a densely populated province which ranks 2nd based on the results of the 2020 population census (Ningsih, 2021). The fact is that in this province, the dense population is also offset by rapid economic growth. This is evidenced by economic growth which is above the average national economic growth, of 4.73% (RoEkonomi, 2019). One of the sectors that contributed to economic growth came from the tourism sector, which was 5% (Kominfo, 2019). In 2022, the Gross Regional Domestic Product (GRDP) for the tourism sector will also continue to experience a significant increase (Febrianto, 2022). Based on data obtained from the East Java Provincial Culture and Tourism Office, GRDP at current prices for the tourism sector in the first quarter of 2022 was IDR 36,986.76 billion, then there was an increase in the second quarter to IDR 38,243.41 billion, and continued to increase again to IDR 39,408.48 Bn in the 3rd quarter (Rachma, 2022). One indicator of the increase in GRDP in the tourism sector can be seen from the number of visitors at tourist sites. Even though there had been a drastic decrease in the number of tourists in all destination places in Indonesia, due to the Covid-19 pandemic in 2020. In 2021 there was an increase again, even in January-September 2022 there was an increase of 134.90%, compared to the previous year in the same period, namely 20,441,579 for domestic tourists or domestic tourists (Hasanah, 2022).

Since the existence of social media, information dissemination has become faster and easier, therefore social media has become one of the marketing media that is considered quite effective. In the tourism business, social media is an important and effective marketing channel (Zeng & Gerritsen, 2014). In the current era of globalization, a person's decision to buy or shop is mostly decided through social media (Ayutiani & Putri, 2018). Likewise in the tourism business, one of the decisions of potential consumers to visit tourist attractions is determined through one's previous experiences shared on social media or commonly known as the behaviour of sharing tourism experiences on social media. According to research conducted by (Retnasary et al., 2019) that content from social media has an important role in the promotion of tourism objects. In this study, the factors that are thought to influence the behaviour of sharing tourism experience on social media are tourist satisfaction and tourist engagement. Visitor satisfaction in a tourist spot that has been visited and the involvement of visitors in a tour is thought to influence a person's behaviour to share experiences on social media. This condition is in line with research conducted by Al-Htibat & Garanti (2019) that the more tourists are involved in the Cap Go Meh Singkawang festival, the higher the tendency to share information or experiences with other people. Likewise research that was conducted by Widiana & Novani (2022) also shows that customers who feel satisfaction at tourist attractions tend to share their experiences on social media. General attraction and culture attraction are also thought to have an indirect influence on the behaviour of sharing tourism experience. The existence of facilities or elements that support the tourist location (general attraction) as well as elements that indicate historical value at the tourist location are things that also influence customer satisfaction and tourist engagement.

Several previous studies related to the behaviour of sharing tourism have been carried out, one of which is regarding the analysis of factors that influence tourists' travel experience sharing on social media. The results show that overall satisfaction, perceived enjoyment, personal fulfillment, and self-actualization reasons have been significant predictors (Widiana & Novani, 2022). Research that was conducted by Sultan et al (2019) also shows that sharing on social media about positive experiences influences the positive effect of destination choice, while sharing about negative experiences will affect to decrease the choice of destination options.

Most of the previous research only focused on the factors that influence sharing behaviour on social media and the effect of this behaviour on tourist visits to a destination place, even though there are still many things related directly or indirectly to sharing behaviour on social media. This makes researchers interested in conducting research on the factors that influence sharing behaviour on social media in terms of tourist satisfaction and tourist engagement and their relation to general attraction and cultural attraction. Because after all, the satisfaction and engagement that impact on sharing behaviour comes from an attraction that causes visitor interest in these tourist attractions. In constructing all these variables in a model, the PLS SEM method is used. The end result of this research is that it is hoped that there will be an increase in tourists which will also have an impact on several aspects such as food, transportation, hotels, SMEs to the creative industry, even further on growth in East Java which comes from tourism contributions.

Behaviour is a behaviour that leads to a certain goal because there is a strong push either from internal factors or external factors, so it can be said that the behaviour of sharing tourism experience on social media as a behaviour or action to share on social media this can be in the form of an experience gained when visiting a certain place with the aim of expressing

or conveying a sense of emotion within (Jeong & Shin, 2020; Liu et al., 2018; Prayag et al., 2012).

According to Haneef et al., (2019); Wang et al., (2020) general attraction is something that is provided by tourism places with the aim of being able to be enjoyed and felt by visitors, so that visitors can feel safer, more comfortable and without any sense of worry in the sense that visitors get what they want when they are in tourism place. Visitors feel that there is self-involvement in tourism places because visitors feel valued and made as comfortable as possible, so it can be said that general attraction has an influence on tourist satisfaction and engagement.

H1: General attraction influence on tourist satisfaction

H2: General attraction influence on tourist engagement

Culture attractions in this case can be in the form of museums, galleries, culture (traditional), buildings that have historical value and monuments, or can be in the form of heritage attractions, crafts, architecture, past sights and art, but this cannot be separated from the existence of a maintenance factor. Specifically designed to maintain sustainability so that there is feedback for both visitors and places visited (tourism sites) (El Sheikh, 2020; Sergio Moreno-Gil, 2017). The research states that culture attraction has an effect on tourist satisfaction and tourist engagement.

H3: Culture attraction influence on tourist satisfaction

H4: Culture attraction influence on tourist engagement

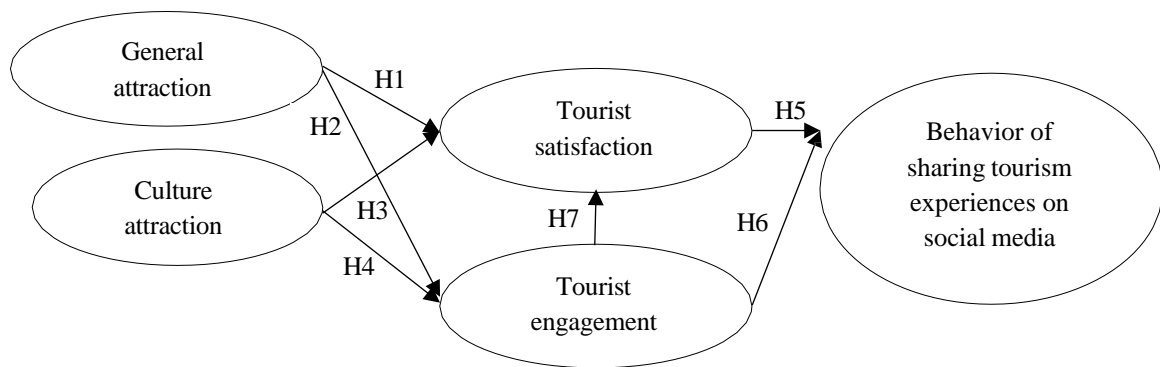
Tourist satisfaction is a standard that measures how successful a service or goods provider is in meeting the expectations of visitors or customers or connoisseurs of the services or products provided or offered (Garanti et al., 2019; Leon & Choi, 2020). Previous research (Prayag et al., 2012) states that satisfaction can be interpreted as a person's feelings that describe a feeling of pleasure or disappointment, for the results of comparing the benefits of products or services, so that the results have an impact, if the impact on positive benefits then visitors will feel satisfied, and if what is felt exceeds expectations, then the visitor will be very satisfied. It can be concluded that tourist satisfaction has an influence on the behaviour of sharing tourism experience on social media

H5: Tourist satisfaction influence on behaviour of sharing tourism experiences on social media

According to García-Milon et al., (2020); Tiamyuet al., (2020) the existence of an existence in the form of emotional and rational that is owned by visitors to tourist destinations, this makes the two components interrelated so that there is direct involvement of visitors to what they have experienced when they are in a place that has more value. Previous research conducted by García-Milon et al., 2020; Tiamyuet al., 2020) that there is an effect of tourist engagement on tourist satisfaction and behaviour of sharing tourism experience on social media.

H6: Tourist engagement influence on the behaviour of sharing tourism experiences on social media.

H7: Tourist engagement influence on tourist satisfaction.



**Figure 1. Conceptual Framework of Research**

Source: Hypothetical model was developed by researches

## METHOD

The approach used in this study is a quantitative approach which is a test of theories by means of measurement that emphasizes numerical data (numbers) on the variables studied and continues using one of the statistical test tools (Leavy 2017:9). The variables in this study consist of behaviour of sharing tourism on social media, tourist satisfaction, tourist engagement, general attraction and culture attraction. Behaviour of sharing tourism acts as an endogenous variable, while tourist satisfaction, tourist engagement are exogenous variables for behaviour of sharing tourism, and are endogenous variables for general attraction and culture attraction. Meanwhile, general attraction and culture attraction only act as exogenous variables. All types of variables in this study are latent variables, so that the measurement of each variable is carried out through several indicators. All indicators are adapted from several previous studies. Kim et al's research was adapted for general attraction variable indicators. Previous research belonging to Atsiz O & Akova, 2021 adopted for culture attraction. Own research (Jalilvand et al., 2012) adapted for tourist satisfaction variable. Tourist engagement is measured by indicators adapted from (Folgado-Fernández et al., 2021). Meanwhile, research (Wang et al., 2020) is referred to as the Behaviour of sharing tourism experience on social media indicator. All of these indicators are used as statement items in the questionnaire. Measurements were carried out using a five-point Likert scale with a range of values or numbers from 1 for strongly disagree to 5 for strongly agree.

The population in this study were all domestic tourists who had visited tourism sites in East Java. The research sample was determined using the non-probability sampling method, which is a sampling method based on a non-random selection concept, each element of the population has unequal opportunities to become a sample (Cooper & Schindler, 2014: 349). This sample method was chosen because there is no definite population frame for data on domestic tourists visiting tourist sites in East Java. The sample was only selected based on several criteria, namely domestic tourists who have visited tourist sites in East Java for the last 2 years (2021-2022). Tourist locations only cover the areas of Surabaya, Malang, Jember and Mojokerto. Based on some of these criteria, 115 respondents were selected for this study. The statistical technique used is the Structural Equation Modeling (SEM-PLS) method, which is a structural equation model based on data variance. This method is used to find the effect of a variable on its indicators or between variables in modeling. This method is more flexible



than the covariance-based SEM method which has a number of assumptions that cannot be violated in modeling. This method has several stages of analysis such as constructing path diagrams, converting path diagrams to a system of equations, estimating the outer model and inner model, and evaluating goodness of fit Goodness of fit, indicators and acceptance criteria. In this study the significant levels used were 90% and 95%.

## RESULTS AND DISCUSSION

In this section, a discussion of the results of data analysis is carried out. For the initial stage is a discussion of the characteristics of the respondents as well as a summary of the descriptive statistics of the respondents' answers. In the next section is an explanation of the results of the analysis of the influence of exogenous variables on endogenous using the SEM-PLS method. A more detailed explanation is discussed in each of the following sub-chapters. Characteristics of Respondents and Descriptive Statistics of Respondents' Answers. The characteristics of the respondents in this study are presented in a Table 1. In the Table 1 above show that most of the respondents were female, with ages in the range of 21-25 years. Nearly half of the respondents had an undergraduate degree, and most of the sources of information obtained were from friends. Instagram is a social media that is often used by respondents in their daily lives. The Table 2 is a summary of the descriptive statistics for each answer given by the respondents from the five variables.

**Table 1. Characteristics of Respondents**

<b>Gender</b>	<b>Female</b>	79	<b>Background of Education</b>	D3	10
	<b>Male</b>	36		S1	100
<b>Age</b>	15-20 Years	41	<b>Information Source</b>	S2	5
				Colleagues	15
				Family	15
	21-25 Years	50		Friends	85
	26-30 Years	10	<b>Social Media to Used</b>		
	31-35 Years	9		Whatsapp	15
	36-40 Years	2		Instagram	100
	41-45 Years	3			

Source: processed data using SPSS version 27, 2023

In the Table 2 show that Respondents gave answers ranging from strongly disagree to strongly agree. If you look at the distribution of the answers, it shows that the number of categories that strongly agree has a fairly high value. So it can be said that the respondent understands and understands the context of the statement that must be answered.

Influence analysis using the SEM-PLS method through 2 stages, namely the analysis of the outer model and analysis of the inner model. The first stage is an analysis of the outer model. At this stage, several tests were carried out to measure the accuracy of using the indicators for each variable. All variables in this study are latent variables that are measured using several indicators, so it is hoped that the indicators used are appropriate and representative indicators in reflecting each variable. The tests carried out consisted of several stages, namely as follows.

**Table 2. Descriptive Statistics of Respondents' Answers**

Variable	Min	Max.	Average	St.dev
General Attraction	2	5	20.104	2.535
Cultural Attraction	1	5	19.791	2.296
Tourist Satisfaction	2	5	16.035	1.919
Tourist Engagement	2	5	16.757	2.539
Behavior of sharing tourism experiences on social media	1	5	18.922	3.333

Source: processed data using SPSS version 27, 2023

The testing phase of the outer model begins with convergent validity testing. This test is indicated by the value of the loading factor on each indicator. The indicator criteria are said to have met convergent validity if the resulting loading factor value is more than 0.5 (Chin, 1998). If there are variables that do not meet these criteria, then the indicator must be eliminated. The culture attraction variable is measured using 5 indicators, but the two indicators namely "obtaining the necessary information" and "positive things for the facilities offered" have a loading factor value that does not meet the criteria, so elimination is carried out for the two indicators. The results of the loading factor after elimination on all indicators in each variable are presented in the Table 3.

**Table 3. Convergent Validity Test**

Behaviour of Sharing Tourism Experience on Social Media	Culture Attraction	General Attraction	Tourist Engagement	Tourist Satisfaction
0.782	0.788	0.744	0.832	0.803
0.835	0.591	0.724	0.825	0.676
0.874	0.828	0.776	0.914	0.713
0.772		0.708	0.901	0.845
0.828		0.674		

Source: processed data using smart PLS version 3, 2023

In the Table 3 shown that all indicators in each variable have a loading factor value of more than 0.5 so that it can be indicated that all indicators have met the convergent validity criteria. This means that all indicators can be used appropriately and representatively to measure each variable in the study. The next test is the discriminant validity test. This test is conducted to test whether or not there is a difference in each latent variable. The difference in each latent variable indicates that the variable is unique and able to explain the phenomenon being measured. This test was carried out using 2 criteria, namely Fornell Lacker. Testing the discriminant validity using Fornell Lacker was carried out by comparing the square root of the AVE with the correlation between latent variables. A variable is said to have met discriminant validity if the AVE root in the latent variable is of greater value than the correlation with other latent variables. The results of the AVE value and the correlation of each variable are presented in the Table 4 below.

Based on the Table 4, it can be seen that the discriminant validity has a greater value when compared to the correlation between each latent variable (Cha, 1994). The AVE square

root value of each latent variable is the value that is located at the top position in each latent variable. This indicates that all latent variables in this study have met discriminant validity.

**Table 4. Discriminant Validity (Fornell Lacker)**

	<b>Behavior of sharing tourism experiences on social media</b>	<b>Culture Attraction</b>	<b>General Attraction</b>	<b>Tourist Engagement</b>	<b>Tourist Satisfaction</b>
Behaviour of Sharing tourism experience on social media	<b>0.819</b>				
Culture Attraction	0.429	<b>0.743</b>			
General Attraction	0.439	0.484	<b>0.726</b>		
Tourist Engagement	0.447	0.592	0.460	<b>0.869</b>	
Tourist Satisfaction	0.483	0.657	0.530	0.682	<b>0.762</b>

Source: processed data using smart pls version 3, 2023

**Table 5. Results of Validity and Reliability Test**

	<b>Composite Reliability</b>	<b>AVE</b>
Behavior of sharing tourism experiences on social media	0.910	0.671
Culture Attraction	0.784	0.552
General Attraction	0.848	0.527
Tourist Engagement	0.925	0.755
Tourist Satisfaction	0.846	0.581

Source: processed data using smart PLS version 3, 2023

The next stage is testing convergent validity and reliability. Convergent validity testing was carried out to test the correlation of indicators on each variable. According to Ghazali (2014) ,the correlation between indicators of each variable should have a high value. Reliability testing reflects the ability of indicators to measure their latent variables. So the more it has high reliability, the better. Convergent validity testing was carried out using AVE criteria, while reliability testing was carried out using composite reliability criteria. The two values are summarized in the Table 5. Based on the Table 5 it can be seen that the composite reliability value of all variables is greater than 0.7, meaning that all variables are reliable (Hair et al., 2011). The AVE value for entire variables are more than 0.5. It means whole variables have met the requirements of construct validity.

After going through several stages for testing the outer model, it can be concluded that all indicators can accurately and representatively measure the research variables. So that it can proceed to the next stage, namely testing the inner model. At this stage the test focuses on whether or not there is influence between variables in accordance with the previous research hypothesis. However, in the early stages, an assessment was made of the goodness of the model. This study uses 3 criteria to assess the goodness of the model, namely R-Square, R-Square Adjusted, and Q-Square. The R-Square value is the coefficient of determination, while the R-Square Adjusted value is the R-Square value that has been corrected for the standard error. Therefore the R-Square Adjusted tends to be more accurate in assessing the goodness of the model. The Q-Square criterion is also used to measure the goodness of the model but is more focused on the goodness of the observed values produced by the model and also the

parameter estimates (Ghozali, 2014). The  $Q^2$  statistic formula is calculated as  $1 - \frac{SSE}{SS\#}$ . SSE is sum of squared prediction errors based on comparison of the original data and predicted data while SSO is taken from prediction with mean. These three values have been summarized in the Table 6.

**Table 6. Results of R-Square, R-Square Adjusted, Q-Square**

	<b>R-Square</b>	<b>R-Square Adjusted</b>	<b>Q-Square</b>
Behavior of sharing tourism experiences on social media	0.259	0.246	0.16
Tourist Engagement	0.390	0.379	0.286
Tourist Satisfaction	0.589	0.577	0.33

Source: processed data using smart PLS version 3, 2023

In the Table 6, it can be shown that the adjusted R-square value is 24.6% for the effect of exogenous variables on behaviour, 37.9% for the effect on tourist engagement while the good value of the model for tourist satisfaction is 57.7%. Based on these two values, it can only be categorized as a model that measures the effect of exogenous variables on behaviour which is included in the low category, while the other two models are included in the moderate category. The Q-Square value generated for all models is greater than 0, so it can be indicated that the model has a predictive relevance value, and the goodness of the resulting observation value is included in the large category for the tourist satisfaction model and included in the medium category for the other 2 models.

**Table 7. Direct Test of Hypothesis**

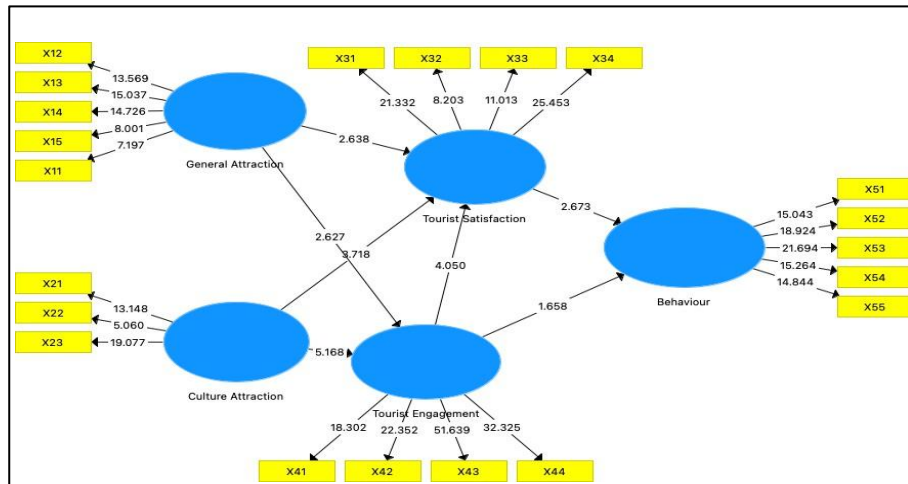
<b>Variable</b>	<b>Standard Deviation</b>	<b>T Statistics</b>	<b>P Values</b>
Culture Attraction > Tourist Engagement	0.093	5.168	0.000*
Culture Attraction > Tourist Satisfaction	0.089	3.718	0.000*
General Attraction > Tourist Engagement	0.086	2.627	0.009*
General Attraction > Tourist Satisfaction	0.070	2.638	0.009*
Tourist Engagement > Behavior of sharing tourism experiences on social media	0.133	1.658	0.098**
Tourist Engagement > Tourist Satisfaction	0.099	4.050	0.000*
Tourist Satisfaction > Behavior of sharing tourism experiences on social media	0.125	2.673	0.008*

Note : \* = significant at a significance level 95%

\*\* = significant at a significance level 90%

Source: processed data using smart PLS version 3, 2023

The next stage is testing the influence according to the initial research hypothesis. The results of the test are shown in the Table 7. In the Table 7 it can be seen that all hypotheses are accepted, because all variable influences have p-values that are smaller than the predetermined alpha values. The path diagram of the modeling is shown in the Figure 2.



**Figure 2. Final Model of PLS Result**

Source : processed data using smart PLS version 3, 2023

In the first hypothesis (1) the effect of general attraction on tourist satisfaction has a standard deviation value of 0.070 with a P-Value of 0.009 which has a significant effect, the results of this influence test have the smallest value compared to other influence tests. Previous research (Liu et al., 2017; Lund et al., 2016) showed that there is a significant relationship between general attraction and tourist satisfaction. This has the meaning that tourism provides what visitors want so that visitors can feel satisfaction. In the second hypothesis (2) states general attraction has an effect on tourist engagement with a standard deviation value of 0.086 with a P-Value of 0.009, which means that the greater the general attraction possessed by visitors, the higher the value of tourist satisfaction. In the third hypothesis (3) states that culture attraction has an effect on tourist satisfaction with a standard deviation value of 0.089 with a P-Value of 0.009 which means that the higher the culture attraction possessed by visitors, the higher the tourist satisfaction felt or owned by visitors.

In the fourth hypothesis (4) which states that culture attraction has an effect on tourist engagement, this can be seen from the standard deviation value of 0.093 with a P-Value of 0.000, this shows that the value of culture attraction felt by visitors will have a major influence on tourist engagement. In the fifth hypothesis (5), there is an influence of tourist satisfaction on the behaviour of sharing tourism experience on social which has a standard deviation value of 0.125 with a P-Value of 0.008, meaning that the satisfaction felt by visitors has meaning, because visitors feel fulfilled desires that are not just values but on the experience gained, so that this makes visitors want to convey deep impressions and messages through a social media they have, this research is in accordance with previous research (Dixit et al., 2019; Ghorbanzadeh et al., 2021; Liu et al., 2018; Zhou et al., 2020). In the sixth hypothesis (6) which states that tourist engagement has an effect on tourist satisfaction, this can be seen from the standard deviation value of 0.099 with a P-Value of 0.000, it can be indicated that there is strong involvement possessed by visitors resulting in a strong satisfaction. Also, this is in accordance with research (Alrawadieh et al., 2019; Han et al., 2021; Teng, 2021; Xu et al., 2018). The seventh hypothesis (7), namely tourist satisfaction has an effect on the behaviour of sharing tourism experience on social with a standard deviation value of 0.133 with a P-Value of 0.098, indicates that there is an involvement of visitors who are felt while in tourism places, visitors feel that there is an appropriate condition with the desired

expectations, visitors feel given the opportunity to be able to provide mutual benefits so that this has an influence on behaviour to share experiences on social media (behaviour of sharing tourism experience on social). The results of this study are in accordance with previous studies (Bilro et al., 2018; García-Milon et al., 2020; Tihamiyu et al., 2020) which states that there is sharing behaviour due to a strong encouragement from visitors because visitors feel given the opportunity by provider of tourism places. It can be concluded that the test of the greatest influence on H1 and H5 has the smallest influence value.

## CONCLUSION

The focus of this study is to analyze predictors of behavior related to sharing experiences on social media which consist of general attraction, culture attraction, tourist satisfaction and tourist engagement where each has an important role in the formation of behavior. Further research identifies similarities and differences in general and culture attraction, both of which are activities that have their own charm for visitors. This is distinguished from the existence of an activity that exists or is presented in a certain concept, making it possible for visitors to enjoy everything that is presented in a different way. These two variables are able to give their own impression and satisfaction for the visitors who enjoy it, the experience that is poured in the form of a satisfaction gives a strong desire to be shared with everyone through several media. The reason why using social media is because social media is one of the media that has speed and ease in sharing information and communicating. On the other hand, the satisfaction possessed by a person is driven by the existence of a strong feeling or strong bond that a person feels involved with an existing condition so that it can also create a certain behavior. The implications of this research for tourism managers are as support for management policies and as a strategy for marketing.

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### **Financial Investment Behavior of Individual Investors in Indonesia After the Revocation of the COVID-19 Policy**

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#### **ABSTRACT**

This study explores the impact of psychological, social, and demographic aspects on individual stock investor decision-making after the revocation of COVID-19 in Indonesia. With the cooperation of local representatives of the Indonesian Stock Exchange, this study uses data collection approaches such as sending questionnaires to participants. The questionnaires were sent out between the three weeks of January 2023 after President Joko Widodo announced the lifting of social restrictions during the pandemic, and then at the end of 2022. In this way, 108 questionnaire responses were thus collected for the study. The results showed that individual stock investor behavior gender, age, and marital status didn't affect individual investor's investment behavior. Work, education, and experience positively and significantly impact an individual investor's investment behavior. However, the revocation of social constraints negatively affects this behavior. A study finds education is the most important variable influencing equity investor behavior.

**Keyword:** Behavior; COVID-19; Investors; Individuals.

#### **INTRODUCTION**

The Indonesian government finally put into practice a strategy for restricting community activities in response to the COVID-19 outbreak after almost three years. On December 30, 2022, the government finally removed the limitations on communal activities. For society, including (potential) investors, the PPKM's revocation is of course a new source of hope. Considering that the COVID-19 outbreak shocked and decimated the economies of many nations, including Indonesia.

The capital market is one of the economic sectors that has been severely impacted by the COVID-19 pandemic, as seen by the drop in the stock price index (Budiarso et al., 2020); Subramaniam & Chakraborty, 2021). According to Rose Nirmala et al. (2022), COVID-19 has made it impossible for people to purchase assets in the best possible way because of constraints

on their activities, income insecurity, and lifestyle choices. Furthermore, this is a trait of individual investors who engage in inefficient trading (De Bondt, 1998).

Investors were concerned about any news that mentioned pandemic situations or information during COVID-19. Smales (2020), Subramaniam & Chakraborty, (2021), and Smales and Chakraborty (2021), investors pay more attention to news concerning COVID-19, which has a detrimental effect on stock price fluctuations. According to Budiarto et al. (2020), the market was successfully stimulated during COVID 19 and efficiency theory, prospect theory, and signaling theory all became phenomena.

According to Allam et al. (2020), news regarding allegations of mortality caused by COVID-19 is sensitive to influencing investor trading behavior. Markoulis and Vasiliou (2022), the stock market has grown inefficient because of the COVID-19 panic. To make wise investments, investors need to be intelligent people with greater self-assurance (Kurniadi et al., 2022). In other words, the outbreak of COVID-19 has impacted investors' psychological components of stock market investing because psychological factors influence the way investors behave when making financial decisions.

Djalilov & Ülkü (2021). COVID-19's presence reduced the number of shares bought, particularly by individual investors. Priem (2021) and Ortmann et al. (2020) described how individual investors particularly conducted more trade transactions during COVID-19. Furthermore, it was claimed by Rose Nirmala et al. (2022) and Fernandez-Perez et al. (2021) that government policies such as lockdowns were a factor in the high and low stock trading during COVID-19. According to Perrotta et al., (2021) during the COVID-19 pandemic, parents continued to worry about themselves and their children, women felt highly threatened, and trust declined.

The behavior-finance theory (BF) is a theoretical framework that explains the role of psychological elements in financial decision-making. In order to explain investor behavior in reaction to the introduction of information, Zhang & Zheng (2015) present the BF theory as a hypothesis that incorporates psychological and sociological variables. BF is a field of study that explains how investors behave while buying and selling stocks by taking irrational decision-making characteristics into account (Bashir et al., 2013)..Expressed this irrationality on the grounds that investors have different personalities than other people and that there is insufficient data to compare their perceptions (Mak et al., 2011). They behave irrationally when it comes to investing because of these natural variances (Fisher & Mandel, 2021).

According to Zaidi & Tahir (2019), the actions of individual investors include purchasing shares in their own accounts in accordance with their budget and for a specific quantity. Financial behavior is the volume of investments that investors select and place in their accounts (Mutswenje, 2009). Additionally, Antony & Joseph (2017) demonstrate that investors are presented with a variety of options that are considered cognitively when making investing decisions. According to some of the criteria given above, purchasing shares of a company using irrational assumptions is considered an investment decision.

The factors that investors consider when making investment decisions is demographics, sociological, and psychological. Demographic, sociological, and psychological aspects were identified by Mak & Ip (2017) as one the elements affecting investors' investment decisions. The demographic information provided by Rizvi & Fatima, (2015) includes gender, age group, total income, profession, marital status, and the number of dependent family members. Bashir et al. (2013) stated that other elements including religion, family, and family opinion had little

influence on investment behavior. Meanwhile, Hamad et al. (2021) found that demographic characteristics benefit financial market investment.

### **Sociological and demographic characteristics on investors' investment decision**

Many empirical research on demographic, and sociological their impact on investors' capital market investment decisions yield contradictory findings. Alquraan et al. (2016), demographic parameters like gender, age, education level, and income had no bearing on investment choices. Meanwhile, investors' investing choices are influenced by their level of education. Dash (2010) said age and gender were characteristics that influenced investors' investment decisions, nonetheless it had no effect on investors' actions. Khawaja and Alharbi (2020) show that an education degree has an impact on investment decisions. According to Ortmann et al. (2020), elderly men dominate the trade population in America. Priem (2021), male investors between the ages of 18 and 35 participated less actively in stock trading during COVID-19 than female investors.

Septyanto & Adhikara's (2014) research conducted in Indonesia indicates that investors place greater trust and preference in their own subjective investing guidelines as opposed to financial information. Tjandrasa & Tjandraningtyas (2018) found that personality type, career history, family status, and income all had an impact on students' investment time during college. Fachrudin et al. (2018) found that decisions about investments were unaffected by the genders of men and women. According to Lutfi (2011), an investor's choice of investments is influenced by demographic factors such gender, age, marital status, income, and number of families. The summary provided above demonstrates how socio-demographic characteristics affect the decision-making of investors. Thus, based on the previous description, the following formulation of the research hypothesis might be made:

H1: Investors' investing decisions are influenced by gender

H2: Investment decisions made by investors are not influenced by age

H3: Investor decision-making is influenced by job level

H4: Investing decisions are influenced by investors' educational attainment

H5: Marital status affects investors' investing decisions

### **Psychological aspects and investors' investment decision**

Besides sociological and demographic characteristics, other factors that influence investment decisions are psychological aspect. Psychological aspect is represented by investor experience and the lifting of community social restrictions. The analysis also takes the repeal of the COVID-19 policy into account as a factor influencing investors' judgments regarding their investment behavior.

Previous studies demonstrate that psychological factors have an impact on investors' investment decisions. Bakar & Yi (2016) and Zhang & Zheng (2015), the psychological aspects of investors influence their decision-making while making investments. Individual personal traits have an impact on investors' investment decisions, according to Sattar et al. (2020). Madaan & Singh, (2019) said the psychology of individual investors is often wrong because of their ignorance. The essay by Naseem et al. (2021) talks about the negative psychological effects on investing decisions they make. According to Görling et al. (2009) and Phan & Zhou (2014), psychological factors influence investors' investment decisions. Investment decision-making is influenced by the perception of the individual investor. Maditinos et al. (2007) state that professional investors depend less on portfolio analysis and more on technical and fundamental analysis. Malmendier & Nagel (2011), however, asserted that although individual

investors are more susceptible to media bias and inaccurate market information, investors who participate in transactions earn smaller historical returns, which appears to reduce risk. As a result, the hypothesis can be expressed as:

H6. Psychological aspects influence investors' investment decisions

## METHOD

In this study, data were gathered via survey methods with investors. By giving out questionnaires to investors who are actively engaging in trade transactions across Indonesia, the survey technique was used. The survey asked on demographics, such as gender and age, sociology, and psychology, such as education level and marital status, as well as demographics, such as gender and age. The topic of the removal of social restrictions during the COVID-19 epidemic era was also added as a factor affecting investor psychology.

After President Joko Widodo declared that social restrictions imposed during the previous pandemic had been lifted, the spread began in the third week of 2023. The distribution of the survey was carried out by providing a link to it to all the representative offices of the Indonesian Stock Exchange in the provinces where there were representatives via email, telegram, and WhatsApp. The factors employed in this study are shown in Table 1 below and can be seen based on the questionnaire content indicators above:

**Table 1. Variables and Measurements**

No	Variables	Representation	Symbol	Scale
1	Investment Decisions	Number of investor's asset portfolios (Mak and Ip, 2017; Jagongo and Mutswenje (2014)	FoP	Nominal
2	Age	Investors' age (Mak and Ip, 2017	Age	Nominal
3	Gender	Investors' gender (Mak and Ip, 2017	G	Nominal
4		Investo" s type of employment	JOB	Nominal
4	Education	Investors' level of education (Mak and Ip, 2017)	EDU	Nominal
5	Marital Status	Investors' marital status (Mak and Ip, 2017)	MS	Nominal
6	Investing's Experiences	The time period over which investors invest (Mak and Ip, 2017	ExI	Nominal
7	Repeal of regulations regarding COVID-19	Investor's attitudes regarding repeal of social distancing Allam et al. (2020)	EPSBB	Nominal

Source: Various research

The SPSS software was used to process the data after it had been collected and tabulated. The study model was estimated using Eviews, and the data from previously gathered questionnaires were described using the SPSS application. A multiple regression research model was used in this investigation. This is the research model:

$$\text{FoP}_t = \alpha + \beta_1 G_t + \beta_2 \text{Age}_t + \beta_3 \text{JOB}_t + \beta_4 \text{EDU}_t + \beta_5 \text{MS}_t + \beta_6 \text{ExI}_t + \beta_7 \text{EPSBB} + \varepsilon;$$

Where:  $\alpha$  is a constant coefficient, FoP is the amount of money contributed by investors; Age is the age of investors; G as the gender of the investor; Investor's income level (LI), investor's educational level (EDU), etc. MS stands for the investor's marital status, ExI for the investor's prior investment experience, and EPSBB as the revocation of the social distancing

policy;  $\varepsilon$  as a confounding variable, and  $\beta_1$ - $\beta_7$  as the coefficient of each variable and  $\alpha$  as a constant coefficient.

This study tests the classic assumptions before testing the model to investigate the elements that affect investors' investing decisions. To make sure the research model is accurate and unbiased, this classic assumption test is run. If the conditions outlined in the classical assumption are met, this research model is said to be fit (Gujarati, 2004) and; Porter & Gujarati, 2009) First, a plot test with the SPSS application is utilized to conduct the normality test in this study. If the data is distributed normally, it will follow the diagonal line. Second, the scatter plot test and the heteroscedasticity test were used to examine the variance dissimilarity of data observations, particularly cross-sectional data. The outcomes of dot distribution patterns with placements between zero values can determine if heteroscedasticity is present or absent. The multicollinearity test was lastly performed to examine the connection between the independent variables. When multicollinearity occurs, it is marked by the Variance inflation factor (VIF) value which is  $< 10$ .

## RESULTS AND DISCUSSION

The indicators employed in this study and the origin of the respondents are described in Table 2 below. Table 2 explains why there are 108 respondents overall, originating from as many as 30 different locations. North Sumatra 16 (14.8%), Lhokseumawe 15 (13.9 %), Banda Aceh 14 (13.0), and Palembang 11 (10.2%) had the highest proportion of responses. Thus, it can be said that the respondents in this study were not dominated in one area. The indicators utilized in the study were described after describing information about the respondents' location.

**Table 2. Respondents' Location**

Location	Frequency	%	Location	Frequency	%
Aceh besar	1	.9	Lampung	1	.9
Aceh Timur	2	1.9	Lhokseumawe	15	13.9
Aceh Utara	7	6.5	Palembang	11	10.2
Banda Aceh	14	13.0	Palu	1	.9
Banjarmasin	1	.9	Pekanbaru	2	1.9
Batam	5	4.6	Simeulu	1	.9
Bengkulu	1	.9	Sulawesi Tengah	1	.9
Bireuen	1	.9	Sulawesi Tenggara	1	.9
Denpasar	1	.9	Sulawesi Utara	1	.9
Jakarta	3	2.8	Sulawesi-Selatan	3	2.8
Jambi	3	2.8	Sumatera Barat	3	2.8
Jawa Barat	1	.9	Sumatera Utara	16	14.8
Jawa Tengah	2	1.9	Tanjungpinang	1	.9
Jawa Timur	5	4.6	Yogyakarta	4	3.7
	47			61	
			<b>108</b>		
Total		43.5			56.4
			<b>100</b>		

Source: Data is processed with SPSS

The research data indicates that there is not a significant disparity, as shown statistically in Table 3 below. The comparison of the standard deviation values, which are all lower than

the mean values for all indicators, demonstrates this. Table 3 further shows that 32 female respondents (29.6%) and 70 male respondents (70.6%) made up the majority of the study's participants.

This indicates that men investors dominate the Indonesian capital market more than female investors. Investors' ages indicate that they are in a productive period of life. Most investors are between the ages of 30 and 39, making up 37 (34.3%) of them. The most age of investors was 37 (34.3%) aged 30-39 years, less 24 years old is 27 (25%), 40-49 years old as many as 26 (24.1%) and the rest are followed by 25-29 years old and 50 years and older.

Most of the investor's occupation is business owners or private companies, which employ up to 29 people (26.9%), followed by students, who employ up to 25 people (23.1%), businesspeople, who employ up to 24 people (22.5%), government employees, who employ up to 20 people (18.5%), and teaching staff, journalists, and even those with no work, who employ up to 5 people each (4.6%). It may be claimed that students are becoming more conscious of the value of investing. While this is happening, many investors have completed their undergraduate degrees 44 people (40.7%), are currently enrolled in classes—26 people (24.1%), have a master's degree (22%), five people have doctorates (4.6%), seven people have diplomas (6.5%), and as few as two people (1.9%) are still in school. This suggests that investors have very high levels of education and awareness. Additionally, the investors who made investments and turned into research respondents are largely married, accounting for 60.2% (65) of them, and not married, accounting for 39.8%.

Furthermore, based on investment experience, most investors have invested in the past one to two years, with 33 people (30.6%) having the greatest experience, followed by 24 people (22.2%) with more than five years, and newcomers with less than six months. As many as 14 people (13%), 21 people (19.4%), and an additional 4 years. In other words, it may be claimed that on average, investors have better experiences.

In the meantime, 67.5% of 73 respondents indicated that social limitations being lifted by the government had little impact on investing. As a result, investors, particularly individual investors during the epidemic, can continue to invest from the comfort of their homes without worrying about being troubled by COVID-19.

The number of investment portfolios held by respondents to this study is also detailed in Table 3 above. According to the above table, 49 investors with investment portfolios worth more than 10 million rupiah (45.4% of all investors), were followed by 29 investors with portfolios worth less than 2.5 million rupiah (26.9%). In addition, the portfolio group consists of 11 people (10.2%) who have a total of 7.5 million rupiahs to 10 million rupiahs, 14 people (13%), and the remaining 5 people (4.6%). The conclusion can be drawn that stock market investors are better equipped to increase the value of their holdings.

To make sure the model employed in this study conforms with the multiple regression rules, a classical assumption test was performed. Due to the absence of panel data in this model, the classical assumption test is that only tests for data normality, heteroscedasticity, and multicollinearity are run. The three SPSS tests' findings indicate that the regression model is free of these assumption issues.

All the respondent's data points tend to follow a diagonal pattern, according to the findings of the normality test performed using the scatter plot method. The data are therefore presumed to be regularly distributed. Additionally, the heteroscedasticity test findings, which demonstrate that the data in the analysis of all sample points are between zero and one, demonstrate the same thing (Figure 1). Finally, Table 4's multicollinearity test demonstrates

that this model is devoid of this issue. This is evident from the VIF value, which displays a number below 10 (Gujarati, 2004; and Porter & Gujarati, 2009).

**Table 3. Data Descriptions**

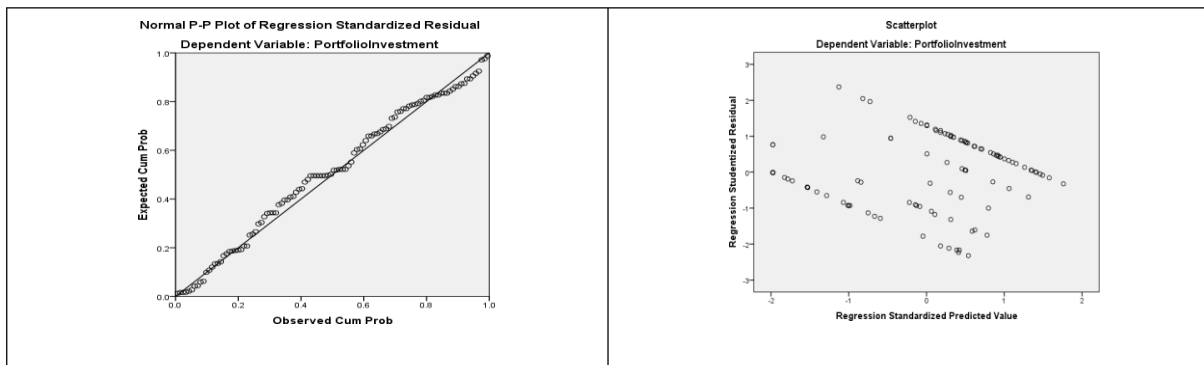
Indicator	Explanation	Frequency	%	Mean	S D
Gender	Male	76	70.4	1.30	0.46
	Female	32	29.6		
Age	<24 years old	27	25.0	2.80	1.27
	25-29 years old	10	9.3		
	30-39 years old	37	34.3		
	40-49 years old	26	24.1		
	>50 years old	8	7.4		
Occupation	Students	25	23.1	3.20	1.63
	Civil servants	20	18.5		
	Lecturers	5	4.6		
	Private	29	26.9		
	Entrepreneur	24	22.2		
	Others	5	4.6		
Education	High schoolers	2	1.9	3.71	1.24
	University Students	26	24.1		
	Three-year college graduate	7	6.5		
	Bachelor	44	40.7		
	Magister	24	22.2		
	Doctorate	5	4.6		
Marital status	Single	43	39.8	1.60	0.49
	Married	65	60.2		
Investment's experiences	6 months	21	19.4	3.21	1.85
	1-2 years	33	30.6		
	2.5-3 years	10	9.3		
	3.5 4 years	14	13.0		
	4.5 -5 years	6	5.6		
	> 5.5years	24	22.2		
PSBB	Yes	35	32.4	1.68	0.47
	No	73	67.5		
Portfolio Fund Amount	<IDR 2.500.000	29	26.9	3.34	1.74
	IDR 2.500-Rp5.000.000	14	13.0		
	IDR 5.000.000-Rp7.500.000	5	4.6		
	IDR7.500.000-Rp10.000.000	11	10.2		
	>IDR10.000.000	49	45.4		

Source: Data is processed with SPSS

Following an explanation of the data description and conventional presumptions, this part discusses the estimation outcomes of the regression model as displayed in Table 3 above. The table above demonstrates how effective this regression model is. The significant F-statistic test score of 1% demonstrates this. The coefficient of determination ( $R^2$ ), which is 0.458 or 45.80, supports this finding. That is, the independent variables included in this study, including sociological and psychological characteristics connected to investment experience and the lifting of the PSBB, as well as demographic parameters (gender and age), can account for up to



45.80% of the behavior of investors. Meanwhile, 54.20% is influenced by other factors not tested in this study. The estimation results listed in Table 4 above indicate that the constant in this study is 0.645 and the probability value is 0.462, both of which are not statistically significant at all levels (1%, 5%, and 10%).



**Figure 1. Classical Assumption Test: Normality & Heteroscedasticity Results**

Source: Data is processed with SPSS

**Table 4. Research Result Estimate**

Variables	Coefficient	t-statistic	Probability	VIF
Constant	0.645	0.738	0.462	na
G	-0.294	-0.959	0.340	1.204
Age	-0.068	-0.441	0.660	2.301
JOB	0.157*	1.721	0.088	1.346
EDU	0.579***	4.482	0.000	1.554
MS	0.576	1.555	0.123	2.023
ExI	0.176**	2.129	0.036	1.429
EPSBB	-0.521*	-1.854	0.067	1.204
F-statistic	12.049***			
R <sup>2</sup>	0.458			
Adj.R <sup>2</sup>	0.420			

Source: Data is processed with SPSS

The gender variable (G) has a negative coefficient value of -0.294 and a probability value that is insignificant. This shows that the behavior of investors is unaffected by gender when it comes to investing. Therefore, the first hypothesis which holds that investors' decisions about what to buy are influenced by their gender is not supported by these findings. This result is consistent with studies by Fachrudin et al. (2018); Khawaja & Alharbi, (2021), and Alquraan et al. (2016), which demonstrate that investor behavior is not influenced by gender. However, this study differs from those by Dash (2010), Lutfi (2011); Mak & Ip (2017); and Ortmann et al. (2020) who discovered that investors' behavior in making investment decisions is influenced by their gender.

Age's coefficient value is -0.068, and its probability value is insignificant. The results of these findings reject the second hypothesis which states that age influences investors' investment decisions. This result is consistent with research by Alquraan et al. (2016) and Khawaja & Alharbi (2021), who found no relationship between age and investor behavior. The research supports the assertions made by Hamad et al. (2021) and Lutfi (2011) that an investor's

age affects their behavior while making investments. This finding indicates that regardless of the investors' age, cautions are still important when it comes to investing.

In contrast, the job level (JOB) has a probability value of 0.088 (significant 10%) and a coefficient value of 0.157. In other words, an investor's behavior when investing is influenced by the amount of work, they put in. This result lends credence to the third hypothesis, which holds that employment levels affect investors' choices of investments. This result is in line with research by Rizvi & Fatima (2015), Mak & Ip (2017), and Lutfi (2011), which found that an investor's level of work influences their behavior. The results of this study imply that risk-averseness may be higher among investors with better-paying jobs. Because it is believed that even if they do not gain from stock investing, they will continue to have a competitive advantage elsewhere. However, this research differs from that of Alquraan et al. (2016), which found that employment level has no impact on investor behavior.

Furthermore, the coefficient for education level (EDU) is 0.579, and the probability is 0.000 (significant 1%). In other words, stock market investors' conduct is influenced by their level of education. Thus, it can be said that the results research not reject the fourth hypothesis which states that the level of education influences investment decisions. The study's findings suggest that an investor becomes more mature, thoughtful, and possibly more confident as their educational level increases. This result is in line with research by Khawaja & Alharbi (2021); Mak & Ip (2017) and Lutfi (2011), which found that investors' investment behavior is influenced by their degree of education. However, Alquraan et al. (2016) claim that an investor's degree of education has no bearing on their conduct, which is where this study differs with it.

Meanwhile, the variable marital status (MS) is estimated using a coefficient value of 0.576 and a probability value of 0.123 (more than 10%). In other words, a representative's status has no impact on how an investor makes investments or rejects hypothesis five which states that investment decisions are affected by marital status. This means that an individual's investment behavior is independent of their marital status. Because everybody who actively seeks out and assimilates knowledge when investing can generate good returns. This conclusion contrasts with those made by Tjandrasa & Tjandraningtyas (2018); Mak & Ip (2017); Rizvi & Fatima (2015), and Lutfi (2011), who found that marital status affects investment behavior.

The investment experience variable (ExI) is significant at the 5% level (0.036) with a coefficient value of 0.176. Stated differently, investment experience affects investment behavior. This research suggests that investors with more expertise make better investments to increase the value of the assets in their portfolios. This result agrees with claims made by Tjandrasa & Tjandraningtyas (2018); Malmendier & Nagel (2011); Gärling et al., (2009); and Phan & Zhou (2014) that psychological aspects affected their investment. Contrary to Alquraan et al. (2016), who claim that experience has no bearing on an investor's investment behavior. Therefore, the sixth hypothesis that experience affects investors' investing decisions is not rejected by these results.

Finally, the social distance removal variable then exhibits a coefficient value of -0.521 with a probability of 0.068 (significant 10%), indicating that the government's repeal of social distance influences stock investors' behavior. Therefore, the final hypothesis of this study is not rejected. Research by Naseem et al., (2021); Maditinos et al. (2007); Allam et al. (2020); Rose Nirmala et al. (2022); Fernandez-Perez et al. (2021); as well as Djalilov & Ülkü (2021). The coefficient's negative sign suggests that investors may be inclined to marginally lessen their investment activity. This is feasible given that it is still early in the year, the January impact still exists, and greater possibilities to arise following the easing of social distance are still expected.

## CONCLUSION

The purpose of this study was to investigate the variables that influence stock market behavior among individual investors. According to the study's findings, age and gender have little bearing on an investor's investment behavior. Additionally, the factors of job level and educational attainment have an impact on investors' investing decisions. However, investors' investment behavior is unaffected by their marital status. The results of this study also revealed that government limitations against social distance had an impact on investors' investment behavior, as had the investors' prior investing experience.

The number of respondents to the questionnaire, which was not a large number due to time restrictions, was a limitation of this study. The study's findings may not be able to be generalized as a result. Another drawback is that this research does not distinguish between novices and investors with extensive financial experience. The variables of economic level, religion, and social media usage are suggested to be included in future studies. Future research will also carry out experiments pertaining to the deviations (anomalies) created by investors.

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### Bank Profitability Analysis: the Role of Liquidity, Company Size, Asset Quality and Leverage

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SINTA 2

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#### ABSTRACT

Banks are one of the most important sectors for a country's economic growth, so banks must be appropriately managed. The success of bank management is reflected in resulting profitability. This research aims to analyse the effect of liquidity, firm size, asset quality, and leverage on bank profitability in 2017-2021. The population in this study is 27, and the sample is 25, which was selected using purposive sampling. This study uses secondary data from Bank financial reports obtained from the bank website. The result shows that liquidity and company size did not affect profitability, while asset quality and leverage affected profitability. This research implies that manager banks must pay attention to asset quality and leverage by considering the 5C principle in assessing creditworthiness.

**Keyword:** Asset Quality; Company Size; Leverage; Liquidity; Profitability.

#### INTRODUCTION

Banks are one of the most important sectors for a country's economic growth. Banks are used to collect funds from the public and promote national development (OJK, 2017). Based on RI Law Number 10 of 1998 concerning Banking, "Banks are business entities that collect funds from the public in the form of savings and distribute them in the form of credit or other forms to improve the standard of living of the common people". Banks are used as liaisons between people with surplus funds and those with deficits. People with excess funds (surplus) can save their money in the bank, and later the bank will distribute the money to people who need funds (deficit) (Siahaan, 2016).

Bank management must be carried out correctly to achieve long-term goals. The effectiveness of bank management can be measured by its level of profitability. Profitability reflects the company's work performance in managing the company (Amelia & Anhar, 2019). Profitability is an essential factor for maintaining the continuity of the company in the long term because profitability will show the company's prospects in the future. The higher profitability show that the company is more guaranteed in the future (Hermuningsih, 2013). According to Siahaan (2016), Return on Assets (ROA) is the most crucial ratio in measuring bank profitability because it can show the effectiveness of bank management in managing its assets to generate profits for the bank. Return on Assets (ROA) is a ratio that shows how a

company generates earnings by utilizing its assets. The greater Return on Assets (ROA) indicates better profitability because the profit level is more outstanding. Other factors, including liquidity, company size, asset quality, and leverage, can influence profitability (Ibrahim, 2017; Puteri, 2021).

According to Puteri (2021), liquidity is defined as the ability to guarantee the availability of sufficient funds so that the bank can fulfil all of its obligations. Loan Deposit Ratio (LDR) is a liquidity ratio that shows the amount of loan disbursement from banks to customers with money received by banks from third parties. Based on Indonesia Bank Regulation Number 15/7/PBI/2013, the minimum limit for LDR value is 78%; meanwhile, the maximum limit for LDR value has been 92% since 2 December 2013. Banks must be able to maintain the value of the Loan Deposit Ratio (LDR) to be manageable (Agustina & Wijaya, 2013). If the LDR is too high, it will make the bank illiquid. While the LDR is too low, it will show a lot of idle funds so that the bank can earn very little profit. Pinasti & Mustikawati (2018) explained that the total amount of credit given to customers would affect the amount of profit bank because the bank will receive payment of debt interest from the debtor. Based OJK No. 14/SEOJK.03/2017, LDR is calculated by comparing total debt and total third-party funds. A high LDR shows that the bank can distribute third-party funds to customers through loans. The distribution of loans to debtors will provide profit to the bank through loan interest income. Aldizar & Agustina (2022), Alphamalana (2021), Pinasti & Mustikawati (2018), Fadillah (2021), Nasrulloh (2018), and Lestari et al. (2021) found that liquidity has no significant effect on profitability. However, Saputri (2021), Ibrahim (2017), and Yusuf (2017) have a significant positive effect on profitability. On the other hand, Awulo et al. (2019) and Budhathoki et al. (2020) stated that liquidity significantly negatively affects profitability.

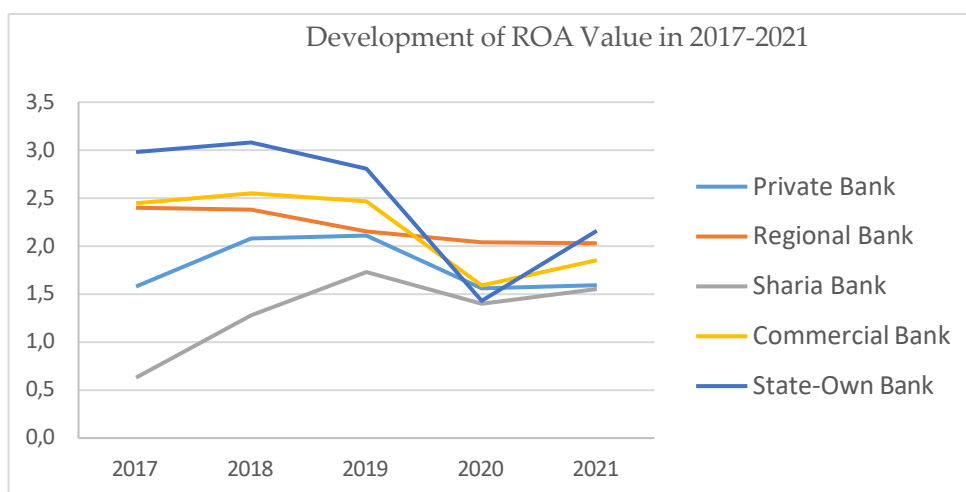
According to Cardilla et al. (2019), company size will reflect how big the company is. In the banking sector, company size can be calculated using total assets, liabilities, and deposits (Samad, 2015). Astivasari & Siswanto (2018) explained that a large company size would make it easier to obtain funds. It can happen because the company gains investors' trust, so that it will increase profitability. Big corporations enjoy a competitive edge over smaller firms because they can diversify into multiple product lines, thus reaping the benefits of scale and size. As a result, they are better positioned to capitalize on technical and financial economies of scale in production, marketing, management, and fundraising (Yadaf et al., 2022). Furthermore, Wardana & Widyarti (2015) stated that significant total assets at banks could be used to channel funds to third parties, such as deposits, investments and financing, so that they can provide benefits for banks. Puteri (2021), Lestari et al. (2021), Budhathoki et al. (2020), and Serly & Jennifer (2021) proved that profitability is significantly positively affected by company size. Meanwhile, Syafi'i & Haryono (2021), Yusuf (2017), Ali & Ghazali (2018), Goso (2022), Mustafa & Sulistyowati (2022), and Mailinda et al. (2018) proved that profitability is not significantly affected by company size. Wardana & Widyarti (2015) and Rahaman & Akhter (2015) found that profitability has a significantly negative effect on company size.

Asset quality indicates a bank's ability to avoid problem loans. Non-Performing Loans (NPL) can determine the quality of bank assets by assessing how well the banking capacity is related to managing loans distributed to debtors. High NPL indicates an increase in bad loans (Puteri, 2021). A rise in non-performing loans (NPLs) can lead to a loss of opportunities for banks to earn revenue from loan interests, which can have a negative impact on profitability and return on assets (ROA). This indicates poor asset quality, as an increase in NPLs indicates

a higher financial risk. Therefore, good credit management is critical for banks to avoid increasing Non-Performing Loans (NPL). Board of Governors Regulation Number 23/6/PDAG/2021 states that a Non-Performing Loan (NPL) limit is  $<5\%$ . Sari & Septiano (2020) stated that NPL would describe the failure of banks in managing credit where, which can cause liquidity problems at the bank. Bad loans prevent banks from obtaining income, affecting company profitability (Pinasti & Mustikawati, 2018). Aldizar & Agustina (2022), Siahaan (2016), Puteri (2021), Silvia (2017), Alphamalana (2021), Nasrulloh (2018), and Sari & Septiano (2020) found that asset quality has a significant negative effect on profitability. However, Sugiarto & Lestari (2017), Fadillah (2021), Uddin (2022), Wardana & Widyarti (2015), and Ningsih et al. (2017) show that asset quality has no significant effect on profitability. Meanwhile, on the other side, Saputri (2021) and Yusuf (2017) stated that asset quality significantly influences profitability.

Tangngisalu & Hemanuhutu (2020) define leverage as the ratio used to measure the ratio between total assets and financing provided by creditors (debt). Using large debt will increase the risk because the company must repay the debt with additional interest payments. The greater the leverage ratio will increase the risk of default and affect the decline in profitability. Ownership of large debt will increase the risk because the company must repay the debt accompanied by additional interest payments. Therefore, it is crucial for companies to manage their debt effectively in order to increase profitability in the future Debt to Equity Ratio (DER) and Debt to Asset Ratio (DAR) can be used to assess leverage. DAR is a leverage ratio that compares the bank's total assets and debt. A high DAR indicates financial risks are more remarkable because the risk of debt default increases. The higher DAR also indicated that total debt is higher than total assets.

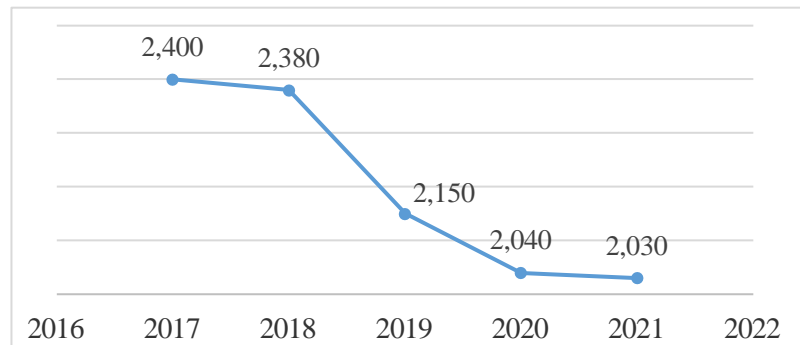
Based on Al-Habashneh (2022), Bunyaminu et al. (2021), Kaur (2022), Okeke & Chinedu (2023), and Dewi & Wisadha (2015), leverage significantly negatively affects profitability. Syafi'i & Haryono (2021), Ibrahim (2017), Budhathoki et al. (2020), and Mailinda et al. (2018) stated that leverage has a significant positive effect on profitability. In contrast, Lestari et al. (2021), Uddin (2022), and Rahaman & Akhter (2015) stated that leverage has no significant effect on profitability.



**Figure 1. Development of Indonesian Banks ROA Value**

Source: OJK





**Figure 2. Development of Indonesian Regional Banks ROA values**

Source: OJK

This study analyses the influence of liquidity, company size, asset quality, and leverage of Regional Banks in the 2017-2021 period. Figure 1 shows the Return on Asset (ROA) of Private Bank, Regional Banks, Sharia Bank, Commercial Bank, and State-Owned Bank in 2017-2021. Based on Figure 1, in 2018 and 2021, ROA values in all banking sectors are increasing except Regional Banks. While Figure 2 shows that in 2017-2021 the ROA value of Regional Banks continued to decline. Based on Figure 2, the ROA value of Regional Banks in 2018 dropped by 0,02% and in 2019 fell by 0,23%. Then the ROA value of Regional Banks in 2020 continued to shrink by 0,11% and in 2021 by 0,01%. Decreased ROA value of Regional Banks shows they cannot use their assets effectively to generate profits.

The anticipated income theory explains the relationship between liquidity and profitability (Mohammad et al., 2021). The theory states that banks must be able to provide long-term credit with the repayment schedule of the principal and interest expected to be paid following a predetermined period. Timely debt payments by a debtor will help the bank maintain its cash reserves to keep its liquidity needs. Liquidity is a bank's ability to pay its short-term debts. This debt financing is done by returning the funds deposited by the customer in the form of a credit to the public. Customers can withdraw these funds anytime, so the bank must have sufficient cash reserves to return customer funds. Cash reserves can be obtained from credit payments made by debtors. With abundant cash reserves, bank liquidity can be fulfilled, and banks can increase lending. Liquidity has a significant effect on profitability. This effect shows that higher liquidity indicates an increase in lending. This increase will help banks to increase profits because banks will benefit from loan interest payments made by debtors. Moreover, most of the banks' profits are from debtor interest payments. Liquidity affects profitability (Ibrahim, 2017; Puteri, 2021; Saputri, 2021; Yusuf, 2017).

H1: Liquidity affects regional banks' profitability for the 2017-2021 period.

Signalling theory explains that positive information about a company's financial performance can interest investors (Fadillah, 2021). Investors will use information about the company's financial performance to evaluate it, which will then be used as material for investment consideration. Larger companies will be relatively stable and able to generate profit (Setiadewi & Purbawangsa, 2015). It shows that companies are wealthy because it can be challenging to generate profit so that investors can invest more safely in the company. Also, it will be easier for a big company to increase their profits through expansion. Expansion is an active action to expand and enlarge the company (Ramadhanti et al., 2021). Company size significantly affects profitability. This condition can occur because the larger company indicates increased bank market confidence. Significant assets can be used to increase bank

profitability through its operational activities, especially by extending credit, which will increase bank profitability. (Budhathoki et al., 2020; Lestari, et al., 2021; Puteri, 2021; Serly & Jennifer, 2021).

H2: Company size affects Regional Bank's profitability for the 2017-2021 period.

Good asset quality can be seen from the low value of non-performing loans. In the anticipated income theory, it is explained that good bank liquidity occurs when loan repayments by debtors are made on time. Timely repayment of loans will increase bank profitability. The bank will return the money distributed to the debtor and benefit from the loan interest paid. Re-acceptance of disbursed loans will create enormous cash reserves to fulfil funding needs. As reflected in NPL, high asset quality would describe a bank's failure to manage credit, which could lead to liquidity problems. High credit defaults will also cause banks to delay obtaining income, affecting company profitability (Sari & Septiano, 2020; Pinasti & Mustikawati, 2018). According to Aldizar & Agustina (2022), asset quality significantly affects profitability. The more outstanding quality of assets indicates that there needs to be better credit management at the bank. It will lead to the emergence of more special financing, which will cause a decrease in profits (Alphamalana, 2021; Nasrulloh, 2018; Puteri, 2021; Sari & Septiano, 2020; Siahaan, 2016; Silvia, 2017).

H3: Asset quality affects regional banks' profitability for the 2017-2021 period.

High leverage will increase the company's obligation to repay its debts accompanied by interest payments. If the leverage doesn't generate a profit greater than the interest expense, losses may occur. It can increase the risk of default on debt. The influence between leverage and profitability is explained using the pecking order theory. This theory illustrates that companies with high profitability have less debt. With a small debt value, the company can reduce the risk of default on debt so that the risk of bankruptcy can also be avoided. A small amount of corporate debt will increase the company's profit because the company's obligation to pay the principal debt and interest is also tiny. It also will reduce company expenses and increase profitability. Leverage significantly influences profitability. These findings indicate that an increase in bank debt will reduce the profit received by the bank. It can happen because the more outstanding the total debt, the greater the interest expense. Also, the more outstanding the total debt will increase the expense so that it can decline generated profit (Al- Habashneh, 2022; Bunyaminu et al., 2021; Dewi & Wisadha, 2015; Kaur, 2022; Okeke & Chinedu, 2023).

H4: Leverage affects regional banks' profitability for the 2017-2021 period.

## **METHOD**

This research uses quantitative research. The population of this study are 27 regional banks in Indonesia. This study censuses all regional banks in Indonesia that published financial reports on their website for the 2017-2021 period, i.e., 25 regional banks. This research uses secondary data, i.e., regional bank financial reports from company websites. The dependent variable in this study is profitability, which is measured by Return on Asset (ROA). In contrast, the independent variables used are liquidity using the Loan to Deposit Ratio (LDR) proxy, company size by assets proxy, asset quality using the Non-Performing Loan (NPL) proxy, and leverage by using the Debt to Assets Ratio (DAR) proxy. The testing phase is by carrying out classical assumption tests (normality test, multicollinearity test, autocorrelation

test, and heteroscedasticity test), multiple linear regression analysis, and hypothesis testing (t-test, F test, and coefficient of determination) using SPSS 2020.

## RESULTS AND DISCUSSION

### Classic Assumption Test

The normality test results using the One-Sample Kolmogorov-Smirnov (KS test) in Table 1 show a sig value of  $0.130 > 0.05$ , so the data used is normally distributed. The multicollinearity test results in Table 2 show a Variance Inflation Factor (VIF) value of  $\geq 10$  and a tolerance value of  $\leq 0.10$ . Based on the multicollinearity test, it can be interpreted that the independent variables used in this study did not experience symptoms of multicollinearity because there was no relationship between the independent variables. Furthermore, the autocorrelation test in this research uses the Durbin-Watson test to identify the occurrence of autocorrelation symptoms. In this study, the number of independent variables ( $k$ ) = 4 and the number of samples ( $N$ ) = 125. From the Durbin-Watson test, the  $du$  value is 1.7745, and the Durbin-Watson value is 2.115, presented in table 3. When this value is entered into the  $du < dw < 4 - du$  equation, the result is  $1.7745 < 2.115 < 2.2255$ , so there is no autocorrelation problem. The scatterplot graph in this study is used to test heteroscedasticity. Figure 3 shows the results of the heteroscedasticity test. The data points do not create regular patterns; their distribution is up and down the Y axis, indicating no heteroscedasticity relationship. Based on the classic assumption test, the regression model is the Best Linear Unbias Estimator (BLUE). It means that the parameter value of the regression model is linear, unbiased, and have the most negligible variance from other estimation.

**Table 1. Normality Test Result (K-S Test)**

		abs_res
N		125
Normal Parameters <sup>a,b</sup>	Mean	0.4663
	Std. Deviation	0.34394
Most Extreme Differences	Absolute	0.105
	Positive	0.105
	Negative	-0.090
Kolmogorov-Smirnov Z		1.170
Asymp. Sig. (2-tailed)		0.130

Source: Output SPSS, 2020

**Table 2. Multicollinearity Test Result**

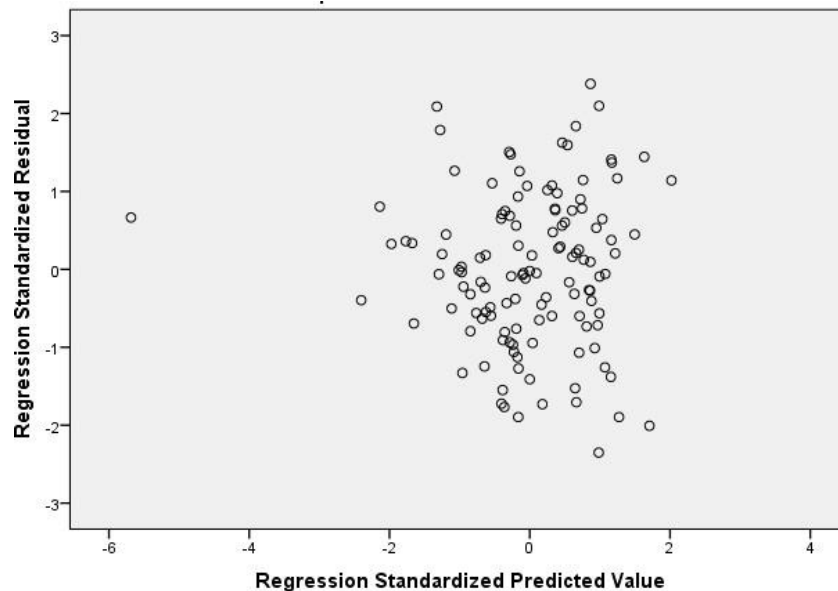
Model		Collinearity Statistics	
		tolerance	VIF
	(Constant)		
	LDR	0.908	1.101
	Ln_Asset	0.861	1.162
	NPL	0.916	1.091
	DAR	0.894	1.119

Source: Output SPSS, 2020

**Table 3. Autocorelation Test Result**

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.550 <sup>a</sup>	0.303	0.279	0.59053	2.115

Source: Output SPSS, 2020



**Figure 3. Heteroscedasticity Test Result**

Source: Output SPSS, 2020

### Multiple Linear Regression Test

A multiple linear regression test is used to predict the condition of the dependent variable, which is influenced by two or more independent variables. The multiple linear regression test in this study is utilized to predict the state of profitability, which is influenced by liquidity, company size, asset quality, and leverage.

**Table 4. Multiple Linear Regression Test Results**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	std. Error	Beta		
(Constant)	7.487	1.711		4.377	0.000
LDR	0.004	0.004	0.068	0.847	0.399
Ln_Asset	-0.136	0.072	-0.155	-1.882	0.062
NPL	-0.171	0.031	-0.443	-5.560	0.000
DAR	-0.032	0.015	-0.165	-2.048	0.043

Source: Output SPSS, 2020

The constant value has a positive value that is 7.487. The positive sign shows a unidirectional influence between the independent and dependent variables. It shows that if the independent variables, including asset quality and leverage, have 0 value or do not change the value, profitability will increase by 7.487. The value of the asset quality coefficient is -0.171, which indicates that if the asset quality increases by 1 unit, the profitability value will decrease

by 0.171 units. The higher the asset quality value, the smaller the profitability value. While leverage coefficient -0.032 indicates that if leverage has increased by 1 unit, the profitability value has decreased by 0.032 units, so the higher the leverage value, the smaller the profitability value.

### Hypothesis Testing

The t-statistical test is a statistical measurement used to prove the effect of each independent variable on the dependent variable. Table 4 shows the results of partial testing of liquidity variables, company size, asset quality, and leverage on profitability. Based on the t-test produced in Table 4, it is known that the sig value of liquidity is 0.399. Its values are more than 0.05, so H1 is rejected, meaning liquidity does not affect profitability. Then table 4 shows the t-test about company size. It shows that the sig value of the company size is 0.062. The sig value is more than 0.05, so H2 is rejected, which means company size does not affect profitability. This T-test in Table 4 also shows the effect of asset quality on profitability. Based on Table 4, the sig value of asset quality is 0.00. This value is smaller than 0.05, so H3 accepted or asset quality significantly affects profitability. Furthermore, based on Table 4, the t-test result shows that the sig value of leverage is 0.043. This value is smaller than 0.05, so H4 accepted or leverage significantly affects profitability.

The results of the F test presented in Table 5 show a sig value of  $0.000 < 0.05$ , so  $H_0$  is accepted with the conclusion that liquidity, firm size, asset quality, and leverage affect profitability. The coefficient of determination is 0,279. This value shows that the independent variable, liquidity, firm size, asset quality, and leverage, can explain information about the dependent variable by 27,9%. In comparison, the remaining 72.1% is described by other independent variables not used in this study.

**Table 5. F Test Result**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	18,156	4	4,539	13,016	0,000 <sup>b</sup>
Residual	41,848	120	0,349		
Total	60,003	124			

Source: Output SPSS, 2020

### Effect of Liquidity on Profitability

This study proves that liquidity does not influence profitability, so H1 is rejected. Liquidity measured by LDR is not the main factor influencing a bank to generate profit. This finding differs from the anticipated income theory, which states that good liquidity will provide regular cash flow for banks so that it can be used to gain profits through lending. Liquidity, as measured using the Loan Deposit Ratio (LDR), will describe the ability of banks to extend credit using third-party funds. Liquidity does not affect profitability because banks cannot channel their credit properly (Wardana & Widyarti, 2015). Credit distribution that is not managed correctly can cause bad credit problems. It will delay the bank from obtaining profit from interest payments by debtors. So liquidity is not the main factor used to determine the success of making a profit, but good credit management will be crucial for banks to increase their profits. With good management, banks will avoid credit defaults and have regular cash flow to meet the bank's liquidity needs adequately. While Aldizar & Agustina (2022) stated that liquidity does not affect profitability because liquidity banks have disturbances such as disruptions to the management of bank financing where banks only focus

on long-term financing than raising funds from third parties. The results of this research follow the findings of Alphamalana (2021), Pinasti & Mustikawati (2018), Fadillah (2021), Nasrulloh (2018), and Lestari et al. (2021).

### **Effect of Company Size on Profitability**

This study proves that company size, as reflected in total assets, does not affect profitability, so H2 is rejected. This result confirms previous research that measuring company profitability by total assets can only be accurate if assets are used for financing, which can impact profitability (Abeyrathna & Priyadarshana, 2019). Companies with large sizes have high operational costs, which will cause an increase in the company's burden (Syafi'i & Haryono, 2021). Even though the company can generate higher income, the financing that the company must issue also increases so that this does not affect the profit generated by the company. Then Mailinda et al. (2018) explain that this situation can occur because banks do not maximize the use of their assets to generate profits. Even though the bank has significant total assets, it must maximize its use to make its assets more stable to generate maximum profits. It shows that company size cannot be used as a benchmark in creating bank profits. The results of this research support the results of research by Yusuf (2017), Ali & Ghazali (2018), Goso (2022), Mustafa & Sulistyowati (2022) and are not in line with signalling theory. Based on signalling theory, the larger the company's size will increase profitability because the company gains the trust of third parties such as investors and customers. It will make it easier for banks to obtain funds that can be used to increase lending in order to increase company profits. This statement differs from the research results, which explain that company size cannot be used to assess a bank's success in generating profits because other factors influence the bank's generating profits, such as optimal and effective asset management.

### **Effect of Asset Quality on Profitability**

This study proves that profitability is affected by asset quality. Thus H3 is accepted. The result indicates the opposite effect between the independent and dependent variables. The greater the asset quality measured with NPL, the higher the credit default, making lower profitability. The higher credit default indicates the asset quality is worsening, so the higher NPL means low asset quality. The results of this study are in line Aldizar & Agustina (2022), Siahaan (2016), Puteri (2021), Silvia (2017), Alphamalana (2021), Nasrulloh (2018), and Sari & Septiano (2020). This finding follows the anticipated income theory, which explains that timely credit payments provided by debtors will provide more significant profits. With timely credit payments, the bank will receive regular debt payments so that the bank will get a profit from the credit interest paid by the debtor. Asset quality, as measured using NPL, will provide information regarding the occurrence of problem loans. High NPL will cause the bank to experience a decrease in profitability. It can happen because a high NPL will cause banks to experience delays in receiving debt and interest payments. With this delay in payment, the bank will lose its profit because most of the profit it generates comes from interest on lending. If the company's profits fall, this will impact bank profitability because the bank's ability to generate profits using its assets, which is reflected in ROA, also decreases.

### **Effect of Leverage on Profitability**

This study proves that leverage influences profitability, so H4 is accepted. High leverage will cause losses for the bank if the leverage used cannot generate more profit than the interest expense it bears. A negative beta ( $\beta$ ) value indicates that the greater the leverage will reduce the profitability value. This research results align with the pecking order theory,

which explains that companies with high profitability tend to have less debt. Using large debt will increase the risk because the company must repay the debt with additional interest payments. If the bank cannot generate a profit more than the interest expense on its debt, it will cause the bank to experience a decrease in the value of its assets. It will affect bank liquidity. If the bank continues to suffer losses and experiences a decrease in the number of assets, this can lead to bankruptcy. In addition, the declining value of assets will also affect the number of cash reserves at the bank and reduce the bank's ability to distribute credit. A decrease in credit capacity will result in a decrease in the profit generated by the company's credit interest receipts. In addition, the larger the loan, the greater the expenditure and the lower the profits. The results of this study support the results of research by Al-Habashneh (2022), Bunyaminu et al. (2021), Kaur (2022), Okeke & Chinedu (2023), and Dewi & Wisadha (2015).

## CONCLUSION

This research concludes that liquidity does not have an impact on profitability. However, banks should ensure proper distribution of credit, which could play a vital role in profitability. Profitability is also not affected by the size of the firm. However, companies with larger sizes and high operational costs may face an increase in the burden on the company. Asset quality, on the other hand, does affect profitability. This study indicates that higher NPLs (non-performing loans) generally result in higher profitability, suggesting that better asset quality may lead to higher profitability. This, in turn, suggests that an increase in non-performing loans may lead to lower profitability. Leverage also has an effect on profitability. This study proves that greater leverage reduces profitability since higher leverage leads to a significant increase in interest expenses, which increases the risk of default.

The study recommends conducting further research on profitability by using other independent variables to identify the various factors that affect it, such as the ratio of BOPO, NIM, and CAR. Third parties, including customers and investors, should consider the quality of assets and leverage owned by the company, as these two variables can negatively impact the company's profit. If companies, especially banks, possess high asset quality and low leverage, it indicates good performance and ensures future prospects. Banking institutions should evaluate the eligibility of debtors applying for credit based on the 5C principle, which includes character, capacity, capital, collateral, and conditions. Along with the 5C principles, banks must also manage their debts to generate profitability by maximizing the use of debt for lending. This strategy will help the bank generate more significant profits by receiving credit interest payments from debtors.

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## **MATRIK: JURNAL MANAJEMEN, STRATEGI BISNIS, DAN KEWIRAUSAHAAN**

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### **How Social Media Reviews and Perceived Value Affects the Purchase Intention of Beauty Products**

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**SINTA 2**

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#### **ABSTRACT**

This research was conducted with the aim of analyzing the green economy transition in tourism, especially tourist villages, whether it is able to provide inspiration or actually prevent an increase in people's income in conditions of the COVID-19 shock. The research was carried out in tourist villages in West Java and Lampung Provinces. This study found that the transition of a tourist village with the concept of green economy has a strong influence in increasing the income of rural tourism communities in conditions of the COVID-19 shock, this is due to the fact that the green economy concept encourages the utilization of natural resources and environmental preservation, this will ensure a sustainable attraction for tourists which in turn can increase revenue.

**Keywords:** COVID-19; green economy; tourism village.

#### **INTRODUCTION**

One of the biggest phenomena that has reached the global market is social media. According to an article in 2023 by Leander von Kameke, as of the second quarter of 2022, the largest social network in the world is Facebook with a total of 2.93 billion monthly active users. Another article by Annur, in the year 2022 stated that other social networking sites or social media also have large populations: WeChat has 1.3 billion active users, Twitter is 544 million, Instagram is 1.45 billion, Tik Tok is 1.46 billion, and Line has 178 million. Many companies invest heavily in the use of social media with the hope of increasing eWOM activity among their users (B2C), by attracting customers to comment on the contents their brands posted, setting up a venue for eWOM exchange for joined consumers, or forwarding posts as a form of brand recommendations. At the end of 2021, Indonesia's Central Bureau of Statistics (BPS) stated that cosmetics, including the pharmaceutical, chemical, and traditional medicine industries, experienced up to 9.61% growth. BPOM noted that there was an increase in the number of cosmetic industries in Indonesia. A total of 819 cosmetic industries have increased to 913 industries from 2021 to July 2022. Since the existence of COVID-19, the increase in the beauty industry has developed rapidly. This is also accompanied by the growing development of social media in society. This research will find out the relationship between online reviews on social media and their influence on the intention to buy beauty products.

Previous studies have been researching the effects of customer-to-customer (C2C) communications in the form of online reviews. The Information Adoption Model, also known as IAM, developed by Sussman & Siegal (2003) formed the basis of the research model conducted by Tien et al., (2019) which had been adapted by this study. The creation of IAM is based on the Technology Acceptance Model (TAM; Davis, 1989), and Elaboration Likelihood Model (Petty & Cacioppo, 1986). Four constituents are presented in the IAM framework: source credibility, argument quality, information adoption, and information usefulness. In the study conducted by Tien et al., (2019), the constituents of IAM were adapted into eWOM usefulness, eWOM credibility, and eWOM adoption as variables. Similarly, this study will also adapt the IAM variables accordingly with Tien et al., (2019) research. In order to differentiate with previous studies relating to this topic, this research will add the variable of perceived values, alongside with its dimensions, including perceived social values, emotional values, and functional values.

Tien et al., (2019) conducted a study about the effect of C2C EWOM on beauty products purchase intention. They discovered that both credibility dan usefulness were able to influence information adoption positively, and in turn, EWOM adoption was able to influence purchase intentions on beauty products. Those results suggest that reviews should focus on developing perceptions of consumers about usefulness and credibility to increase customers' information adoption of the information presented on social media, as well as take advantage of the opportunities created by social media for business. Several previous research has found the mediating effect of Adoption between usefulness credibility, and purchase intention.

A study conducted by Prasetio & Purnamawati (2023) stated that online review is a communication tool to introduce products to prospective customers. The study finds that EWOM has a positive influence on purchase intention. Other findings on this topic have also found similar results. Daowd et al., (2020) did a study in Thailand where EWOM credibility was found to be able to influence EWOM adoption and eventually, purchase intention. The results show that Thais consumers tend to prefer highly informative online reviews and have additional information in the form of pictures and videos. Gunawan & Huarng (2015) found that people will adopt information they gained in the form of online reviews if they regard the information to be credible and trustable, which will affect their eventual purchase intention, also supported these findings. Handoko & Melinda (2021) studies the link between brand image, EWOM, and purchase intention. In addition, Mariasih & Setiyaningrum (2021) scrutinized the relationship between EWOM quality, EWOM quantity, EWOM credibility, and how they will shape corporate image and eventually, purchase intention. With the new digital era characterized by the fast spread of information, consumers will choose quality information as a deciding factor that influences their purchasing decisions (Munadie & Widodo, 2019). A study done by Widodo & Krisma Maylina (2022) stated that social media WOM is one of the most significant factors in purchase intention.

Chan et al., (2021) stated that companies could just take advantage of an interactive community of customers to start a dialogue with its customers. They can build a network for creating electronic word of mouth (eWOM) about their market offerings. Companies can also initiate dialogue with their customers in the community. They got to build a network to create eWOM. Hence C2C communication can also benefit companies. Similarly, research conducted by Alghiffari & Listyorini (2022) claims that companies may use influencers to generate communications between customers, where such communications will have effects on purchase intentions. Alghiffari & Listyorini, (2022) stated that consumer review serves as an artificial

influencer whose power of influence offset the influence of influencers. Based on these studies, it is clear that online reviews can be used as a tool for marketing by companies.

However, not all studies have found positive links between EWOM, Information Adoption, and Purchase Intention. In a study done by Haider et al., (2018), differing results on the influence of online reviews towards Adoption were found based on gender. In the study, usefulness was found to be able to influence adoption in males, but not in female respondents, while credibility was found to be able to influence adoption in females, but not in male respondents. Another study was done by Arifin et al., (2023) where EWOM was found to have no effects on purchase intention.

Based on these findings, this study proposes that both EWOM credibility and EWOM usefulness will be able to affect purchase intention through EWOM adoption. Therefore, this study aims to examine the effectiveness of online reviews found in social media on the purchase intention of beauty products. This study will capitalize on the capability of Information adoption as the key mediation between usefulness, credibility, and purchase intention.

A theory called the stimulus-organism-response (S-O-R) paradigm, states that an individual's internal state will be affected by external stimulation, and then it will influence their eventual behavior (Changa et al., 2011). For consumers, EWOM on social media are external stimulus, and perceived value is an internal condition (Chong et al., 2018). Based on this theory, this study will examine other factors that can influence purchase intention, namely perceived value, along with its dimensions. Previous studies have debated on the various dimensions of perceived value. Sweeney & Soutar (2001) argue that the dimensions of value differ depending on the type of service product. They created a scale called PERVAL based on social, emotional, and functional values in order to explain the dimensions of perceived value. Meanwhile, conditional values and epistemic values are erased from the scale because they are believed to be a different set of values and are not as important for measuring values in general. This study will use the dimensions of social, emotional, and functional value as the dimensions of perceived value.

Studies on perceived value and how it impacted purchase intention have been done before. Research conducted by Lee et al., (2019) aims to explore authenticity and its effect on the perceived value dimensions, purchase intention, and attitude of South Korean beauty products. In this study, the dimensions of quality, social, and emotional value were examined and found to be able to influence purchase intention positively. Another study done by Vidyanata (2022) also found that perceived value is capable to influence purchase intention. Similarly, a study done by Subagio & Rachmawati (2020) also yields similar results. These findings show that other factors besides EWOM are capable to influence consumer purchase intention. However, a study conducted by Suphasomboon & Vassanadumrongdee (2022), finds that the dimensions of emotional and social value are incapable to influence purchase intention, while functional value has a positive influence on purchase intention.

Perceive Value is the consumer's general assessment of the usefulness of the service or product according to the perceived benefit–cost ratio of what has been given by the customers and what they received in return, including the components and benefits that customers received from the service and products (Aksoy & Basaran, 2017; Sweeney & Soutar, 2001; Lee et al., 2019). So perceived value can be defined by what the consumers feel regarding the sacrifices they have given in comparison to the benefits they received from the products or services. A previous study done by Jiang et al., (2022) has argued that customer reviews are capable to

influence perceived value, and in turn, perceived value is going to be able to influence purchase intention.

Each of the three perceived value dimensions, namely functional value, emotional value, and social value has been defined by Sweeney & Soutar, (2001), the founder of the PERVAL scale. Social value explains the image of a product and service gained from various associations with social classes, groups, and even reference groups. Hence, social value can be defined as value shaped by a person's social life. Emotional Value refers to circumstances emotions, affections, reactions, and feelings to products. Hence, emotional value can be defined as value shaped by the feelings that a person felt towards a product. Functional value oversees the balance between the quality of the product and the monetary amount spent.

This research will adopt the studies of Daowd et al., (2020); Haider et al., (2018); Jiang et al., (2022); Lee et al., (2019); Suphasomboon & Vassanadumrongdee, (2022); Tien et al., (2019) to create a research model. This research will study the impacts of EWOM usefulness and credibility on EWOM adoption and purchase intention, alongside the influence of EWOM usefulness and credibility on perceived value dimensions. Similarly, while many studies regarding the effect of perceived value dimensions on purchase intention have been done, the mediation effect of EWOM adoption has never been added. Hence, this study will contribute by explaining the positive relations between EWOM, perceived value, and purchase intention of beauty products. With the IAM framework and PERVAL scale used in previous studies, this study will combine these frameworks and expand on their relationships.

According to IAM and Sussman & Siegal, (2003), adoption intention can be predicted by the usefulness of information. According to Cheung et al., (2008), usefulness is a factor that explains customers' willingness to adopt online information. With the advancement of information and social media alongside the growth of technologies, it is very easy for consumers to access a vast amount of online reviews or C2C EWOM, and if they found the information to be useful, will eventually adopt the pieces of information for their purchasing decisions (Erkan, 2016). The idea of Information adoption stems from the concept that users intentionally assign themselves and engage in the use of information (Cheung et al., 2008). Chong et al., (2018) reported that the usefulness of eWOM positively and effectively influences information adoption. Research conducted by Tien et al., (2019) found that eWOM usefulness has a significant influence on eWOM adoption in the purchase of cosmetic products. A study conducted by Google Insight in 2020 on users of beauty products in Indonesia and India, found that 50% of the interviewees used Instagram and Facebook to search for reviews about beauty products, 40% used online searches to actively seek beauty product reviews, and 27% would make a buying decision if you have read at least two reviews. The proposed Hypothesis is as follows:

H1: EWOM usefulness positively affects EWOM adoption of beauty products.

Information credibility is a form of persuasion (Wathen & Burkell, 2002). In context, eWOM, recipients of the information get and learns from the information, which will happen if the information giver is deemed as credible. Therefore, if the recipient decided to establish that the information can be trusted, their acceptance of what was suggested by the reviewer increased (Sussman & Siegal, 2003). In a research conducted in 2002 by Petty, Priest, and Bristol where information sources are believed by many as credible, the people who receive the information do not doubt the information provided by the source and accept most of the information provided. Conversely, if the review is deemed not trustable, recipients of the information likely will ignore the recommendations given, out of concern for the risks involved

in fraud (Filieri et al., 2015). Various research on eWOM have come to the conclusion that information credibility is an important element that is capable of influencing information adoption (Fang, (2014); Hajli, 2018; Lis, 2013). Research conducted by Tien et al., (2019) found that eWOM credibility has a significant influence on eWOM adoption. Specifically, when looking for reviews on social media, eWOM searchers prefer to find a source of assistance that is deemed credible Tien et al., (2019). For self-review, quality content reviews for beauty products should be encouraged for consumers to provide more complete information about the product being sold in their reviews, such as detailed functionality, features, look and feel, usage, aesthetics, performance, and effectiveness of the beauty products reviewed (Tien et al., 2019). The proposed Hypothesis is as follows:

H2: EWOM credibility positively affects EWOM's adoption of beauty products.

Online reviews made by customers allow them to connect and share tips and information on social media. Social media makes it possible for an abundance of reviews that attracts potential or current customers to access apps and post comments, experiences, and reviews and share information with each other. Various comments provided will help customers to make their purchasing decisions based on the information provided, which can influence perceptions about the product's beauty and highlight various values such as social understanding (Filieri et al., 2015). Based on this explanation, this study hyphotize that the usefulness on an information found online through online reviews in social media would be able to influence a person's perceived social value. In the app store, the depth and scope of online reviews provide users with an opportunity to gain insight into app-related information (Jiang et al., 2022), where in - depth reviews of products will add new insight towards the products, which helped with forming emotional attachment towards the product. Previous research suggests that social media users can gain more in-depth information about a product through frequent and continuous online interactions and important consumer review elements include review quality, review quantity and app ranking (Filieri et al., 2015), hence the functional value of a products would be explored. Consumer reviews give other customers the benefit of being informative and intelligent. The informativeness and depth of the online reviews will help customers to understand more about the various beauty products. The proposed Hypothesis is as follows:

H3a: eWOM usefulness has a positive impact on perceived social value

H3b: eWOM usefulness has a positive impact on perceived emotional value

H3c: eWOM usefulness has a positive impact on perceived emotional value

It is believed that potential customers did not have previous experience with beauty products, which causes them to look for online reviews from other customers, which allows them to consider the products' value through information gained from other customers. In this process, only information valued by social media users can trigger responses (Greif, 2017). When faced with the need to decide on the purchase of a product, consumers will tend to look for information about beauty products considering the value of the product. With the continuous advancement of Information Technology (IT), potential consumers can access eWOM messages in abundance. They have to differentiate which can be trusted and which has actual value because of the constant fraud and false information spread online (Han et al., 2017). This trustworthy message helps consumers to evaluate the economics, quality, and practicality of a product, all of which contribute to the general idea of perceived value (Sweeney & Soutar, 2001; Lu & Hsiao, 2010). When credible eWOM praises a product, there is a high possibility that consumers will think highly of it and the perceived value of the beauty product. The proposed Hypothesis is as follows:

H4a: eWOM credibility has a positive impact on perceived social value

H4b: eWOM credibility has a positive impact on perceived emotional value

H4c: eWOM credibility has a positive impact on perceived functional value

The maximum value of the product that the customers are assessing is important for the decision-making process. Both behavioral intention and the actual outcomes of consumer behavior can be affected positively by perceived value. A previous study by Hsiao, (2021) stated that customer's decision to purchase a product may be influenced by their social value. Perceived social value is seen as how using and buying cosmetic products can provide social approval to their users (Lee et al., 2019). In a study conducted by Suphasomboon & Vassanadumrongdee, (2022), the perceived social value was found not to affect purchase intention directly. This study argues that the mediation of information adoption can strengthen purchase intention. Therefore, this study hypothesizes that perceived social value can influence eWOM adoption of beauty products, which can later affect purchase intention. Perceived emotional value is a utility that comes from feelings or effectively states that a product produces a certain feeling (Sweeney & Soutar, 2001). Research conducted by Lee et al., (2019) stated that perceived emotional value has a significant effect on purchase intention directly. This is different from research by Suphasomboon & Vassanadumrongdee, (2022) which found that perceived emotional value does not affect the purchase intention of cosmetic products. These different results support the formation of the hypothesis for this study, where perceived emotional value can influence eWOM adoption, and later can influence purchase intention. Perceived functional value discusses price comparisons and quality obtained for beauty products, in other words, the value of money from these products (Sweeney & Soutar, 2001). Research conducted by Suphasomboon & Vassanadumrongdee, (2022) found that perceived functional value has a significant influence on purchase intention in a direct way. In the context of various types of beauty products, several studies also suggest a relationship between purchase intention and perceived functional value. From these results, this study hypothesizes that perceived functional value can affect eWOM adoption, and thereafter affect purchase intention. The proposed Hypothesis is as follows:

H5a: Perceived social value has a positive impact on eWOM adoption

H5b: Perceived emotional value has a positive impact on eWOM adoption

H5c: Perceived functional value has a positive impact on eWOM adoption

Functional and affective value has been taken into account as the two fundamental underlying dimensions for the multidimensional approach to perceived value. Affective dimensions show the emotions and feelings that customers feel towards products and services, while functional dimensions explain the quality of services and products received by customers. Previous studies done by Lee et al.,(2019) and Suphasomboon & Vassanadumrongdee (2022) have researched the effects of perceived value dimensions directly on purchase intention with differing results. While the research done by Lee et al.,(2019) found that all dimensions have a positive and significant impact on purchase intention, the study done by Suphasomboon & Vassanadumrongdee (2022) found that social value and emotional value have no impact on purchase intention. This study will explore this hypothesis further, the proposed hypothesis is as follows:

H6a: Perceived social value has a positive impact on purchase intention

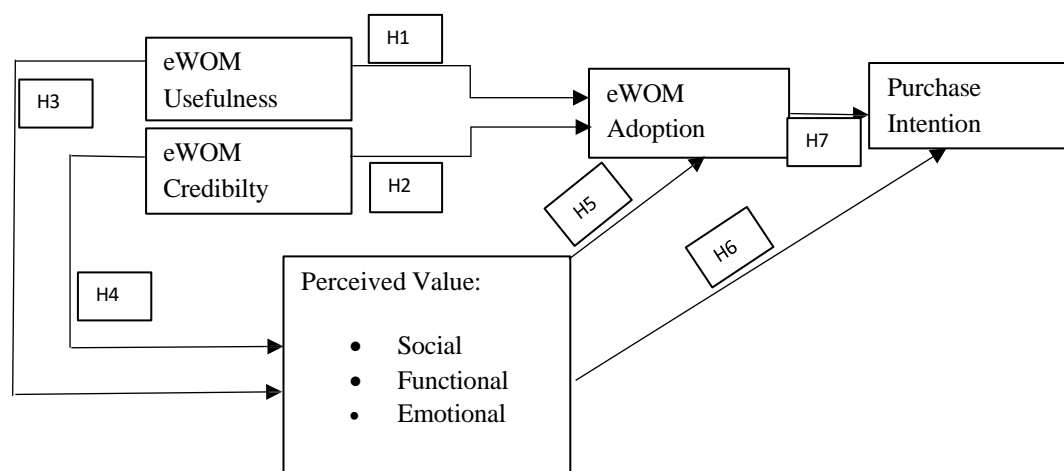
H6b: Perceived emotional value has a positive impact on purchase intention

H6c: Perceived functional value has a positive impact on purchase intention



As previous studies have stated, eWOM adoption is an important factor influencing customers' purchase intention, this research proposes that eWOM adoption is capable to mediate the impact of eWOM credibility and usefulness on purchase intentions. Recommendations on social media can be transformed into purchases thanks to the benefits of eWOM adoption (Erkan, 2016). Gunawan and Huarng (2015) also stated that the intention to purchase for products that are marketed on social media can be generated from vigorous messages with a great width of usefulness. eWOM adoption is also influenced by higher eWOM credibility; this matter influences consumer consumption decisions. The proposed hypothesis is as follows:

H7: eWOM adoption has a positive impact on purchase intention



**Figure 1. Research Conceptual Framework**

## METHOD

The type of this research was basic research, where this research would test, modify, and develop the theory of previous research. Based on the research objectives, this research was causal research that aimed to research causal relationships between independent variables, mediation, and dependents. The Independent Variable represents eWOM Usefulness, eWOM credibility, Perceived value with perceived social value, perceived emotional value, and perceived quality value. The mediating variable used is eWOM adoption, which was suspected to be able to mediate eWOM usefulness and credibility against purchase intention. This study was a quantitative research.

In this study, the data used were primary data, where the respondents would be asked to fill out an online questionnaire about this research. Questionnaires would be distributed online and were filled by respondents who meet the requirements, namely users of beauty products that also use social media, and is an Indonesian citizens domiciled in Indonesia. The respondents were gathered by sharing the questionnaires on specific groups of people from different ages and genders in order to get varied results. The usage of the interval scale would be utilized on this study, namely the scale used to determine the distance or gap on each factor, and has a certain distance, so that it can be used to measure or give a statement regarding rankings that are not absolute (Sekaran: 2006). Example: Strongly disagree 1 2 3 4 5 Strongly agree. The smaller

number chosen by sources showed that the sources are increasingly disagreeing with the source's statement presented. On the other hand, the larger the number chosen by the informant showed the more agreement the informant was with the statements presented.

The population that was the target of this research were social media users who have purchased beauty products, and who are also Indonesian citizens domiciled in Indonesia. The sample used in this study would be taken through the technique of non-probability sampling, where the respondent's identity would be kept anonymous. The technique of sampling used was purposive sampling, namely the technique of getting a sample according to specified criteria. Before data analysis was carried out, this research would perform a Confirmatory Factor Analysis (CFA) which would be carried out using the Statistical Package for Social Sciences (SPSS). Data analysis from this study would be carried out by using Structured Equation Modeling (SEM). Tools used to carry out the analysis of this research was a statistical software called Analysis of Moment Structures (AMOS 22). One of the research stages to be carried out was validity testing. Test Validity is done so that a variable would be believed to be a variable that will be investigated (Cooper and Schindler, 2006). Test validity was implemented through the SPSS program. If the total results from the validity test showed significant results with a significance level  $<0.05$  and correlation value  $>0.4$ , then the statement could be called as valid. Ghozali, 2018 stated that variable indicators or constructs can be done by using the tool of reliability. Measurement Model was part of SEM which contained multiple manifest variables and one latent variable. The technique Maximum Likelihood measurement was used for this research, this technique was the default from AMOS. If the goodness of fit of the model research is within the recommended range, then the model acceptable. In the structural model, the first value considered is the Chi-Square ( $\chi^2$ ), followed by the values of TLI, CFI, GFI, and RMSEA.

**Table 1. Respondent's Gender**

Gender	Number	Percent(%)
Male	134	44.6
Female	166	55.4
TOTAL	300	100

Source: data that has been processed by the author, 2023

Based on the data gathered, it was found that 166 of the respondents were women, and 134 of the respondents were men. This shows that both men and women use social media and buy beauty products.

**Table 2. Respondent's Age**

Age	Amount	Percent(%)
17-22	25	8.3
23-27	79	26.3
28-32	61	20.4
33-37	39	13
38-42	30	10
43-57	56	18.6
Above 57	10	3.4
TOTAL	300	100

Source: data that has been processed by the author, 2023

Based on the data gathered it can be concluded that the majority of respondents using social media and ever buying beauty products are the ones aged 23-27 years. While the least respondents who use social media and have purchased beauty products are those over the age of 57 years.

**Table 3. Respondent's Social Media**

No.	Social Media	Amount
1.	Instagram	300
2.	TikTok	144
3.	Twitter	179
4.	Youtube	272
5.	Facebook	229
6.	WhatsApp	300
7.	Linkedin	18
8.	Telegram	12
9.	Snapchat	8
10.	Pinterest	1
11.	Line	3
12.	Snack	1

Source: data that has been processed by the author, 2023

Based on the data above, out of 300 respondents, all use Instagram and WhatsApp as their social media. A total of 300 respondents have filled out the questionnaire forms. Both validity and reliability tests were done and the results showed that all items are indeed valid and reliable. Furthermore, a CFA analysis was carried out, where one of the question items, PI2, was found to be invalid and deleted. Then CFA retesting was performed again and all items were found to be valid. Furthermore, the Average Variance Extracted (AVE) and Composite Reliability were calculated from the CFA results using the help of Microsoft Excel. The results showed that AVE had scored above 0.5 which shows an acceptable value, and CR was found to scored above 0.8, above the acceptable 0.7. These results were acceptable and allowed the study to be continued to the next level. Then, proceed with structural tests and hypotheses, where out of 15 hypotheses 11 of them were found to be supported and 4 unsupported.

## RESULTS AND DISCUSSION

**Table 4. AVE and CR Calculation Results**

No.	Variables	Average Variance Extracted	Composite Reliability
1.	EWOM Usefulness	0.511	0.838
2.	EWOM Credibility	0.545	0.856
3.	Perceived Social Value	0.544	0.855
4.	Perceived Emotional Value	0.537	0.852
5.	Perceived Functional Value	0.501	0.832
6.	EWOM Adoption	0.511	0.839
7.	Purchase Intention	0.531	0.818

Source: data that has been processed by the author, 2023

Table 5 shows the RMSEA results, namely  $0.058 < 0.08$ , showing that the model tested is according to the criteria (good fit). GFI (Goodness Fit Index) is an index that describes the level of overall model fit, which is calculated as the square of the model predicted compared to

actual data. According to (Wijanto, 2008), The marginal fit limit is 0.8 to 0.9 the results show that the GFI of this research is 0.832, indicating that the GFI of this study is included in the Marginal Fit category because the GFI value is below the required value, but is considered as supported as it is near to the required value (Wijayanto, 2008). CFI (Comparative Fit Index). CFI is a model-independent fit test with a Cut of index  $< 0 > 0.90$  (Hair et al., 2010: 668). According to Hair et al., (2010: 669) the value of CFI ranges between 0 and 1. The higher the value, the increasingly showing a better fit. In Table 5, the CFI results from the model are shown this research is equal to  $0.904 > 0.90$ . This shows that the design of this study meets the criteria (good fit). TLI (Tucker Lewis Index) is used to compare the models tested with a baseline model and a cut of index  $> 0.9$  (Hair et al., 2010:746-750). TLI value ranges from 0 to 1, meaning that a value close to 1 indicates a match good fit, while a higher value indicates a match better (better fit) (Hair et al., 2010: 668). Table 5 shows the results TLI is  $0.894 > 0.90$ . This shows that the research model complied with the criteria (marginal fit).

**Table 5. CFA results**

		Estimate
EWOMU5	EWOMU	,729
EWOMU4	EWOMU	,684
EWOMU3	EWOMU	,691
EWOMU2	EWOMU	,692
EWOMU1	EWOMU	,771
EWOMC5	EWOMC	,796
EWOMC4	EWOMC	,598
EWOMC3	EWOMC	,780
EWOMC2	EWOMC	,715
EWOMC1	EWOMC	,808
PSV5	PSV	,659
PSV4	PSV	,852
PSV3	PSC	,664
PSV2	PSV	,667
PSV1	PSV	,823
PEV5	PEV	,685
PEV4	PEV	,702
PEV3	PEV	,818
PEV2	PEV	,738
PEV1	PEV	,716
PFV5	PFV	,595
PFV4	PFV	,615
PFV3	PFV	,814
PFV2	PFV	,726
PFV1	PFV	,765
PI5	PI	,642
PI4	PI	,801
PI3	PI	,692
PI1	PI	,771
EWOMA5	EWOMA	,698
EWOMA4	EWOMA	,766
EWOMA3	EWOMA	,764
EWOMA2	EWOMA	,652
EWOMA1	EWOMA	,689

Source: data that has been processed by the author, 2023

A total of 300 respondents have filled out the questionnaire forms. Validity and reliability tests were conducted using the statistic tool of SPSS. Furthermore, a CFA analysis was carried out, where one of the question items, PI2, was found to be invalid and deleted. Then CFA retesting was performed again and all items were found to be valid. Then proceed with structural tests and hypotheses, where out of 15 hypotheses 11 of them were found to be supported and 4 unsupported.

**Table 6. Goodness-Of-Fit**

Goodness of Fit	Requirements	Result	Description
CMIN/DF	$\leq 3.00$	2.071	Good Fit
RMSEA	$\leq 0.08$	0.058	Good Fit
GFI	$\geq 0.90$	0.832	Marginal Fit
CFI	$\geq 0.90$	0.904	Good Fit
TAG	$\geq 0.90$	0.894	Marginal Fit

Source: data that has been processed by the author, 2023

Hypothesis 1 is supported. This finding is supported by the findings of Tien et al., (2018), who also found that eWOM usefulness has a positive effect on eWOM adoption of cosmetic products. In the context of this study, the variety of information obtained by consumers through online reviews from other consumers regarding beauty products is considered very useful. Hypothesis 2 is supported. This finding is supported by the findings of Tien et al., (2018), who also found that eWOM credibility has a positive effect on eWOM adoption of cosmetic products. This is because respondents feel that various online reviews help respondents to sort out which information is credible, which will later be adopted by respondents.

Hypothesis 3a is not supported. The results of this study are different from the previous study by Jiang et al., (2021), However, these results are in line with the research of Shah et al., (2021) and Nofal et al., (2022) who found a negative and insignificant effect of eWOM on perceived value. This can happen because consumers already have their social views regarding the usefulness of beauty products so online reviews cannot change these views. Hypothesis 3b is also not supported. In this study, a positive effect of eWOM usefulness was found on perceived emotional value, although it was not significant. This can happen because online reviews from other consumers can give certain emotional feelings to review readers, but cannot generate strong feelings. Hypothesis 3c is supported, these results are in cohort with research conducted by Jiang et al., (2021), where eWOM influences perceived value positively and significantly. This can happen because by reading various online reviews, consumers get various kinds of information about beauty products, including the cost and quality of these products. These differences with various literatures shows that this variables might benefits from future testing.

Hypotheses 4a, 4b, and 4c are supported. This shows that eWOM credibility has a positive and significant influence on perceived value. This is because trusted or credible sources can form consumer judgments about who read online reviews from these sources. Hypothesis 5a is not supported. Research conducted by Khoi et al., (2018) has the same results as this study, namely perceived social value has a negative and insignificant effect on adoption. However, another previous study by Jiang et al., (2021) yields different result. This can happen because, in the context of beauty products, consumers prefer to trust online reviews that they find and

obtain rather than the social influence of their environment. In the end, it is the consumers themselves who will buy and use these beauty products. Hypothesis 5b is supported. In this study, it was found that a consumer's feelings toward a product can influence his intention to adopt the information received. Hypothesis 5c is not supported. In this study, consumers' evaluation of price and quality has a positive influence on the adoption of information from online reviews of beauty products, but not significant. This can happen because consumers already understand the price and quality of a beauty product, do not need online reviews about it, and are looking for reviews for other things such as personal experience using these beauty products.

**Table 7. Hypothesis Results**

Hypothesis	Variables Correlation	Estimate	C.R.	P value	Description
H1	EWOM Usefulness->EWOM Adoption	0.293	3.784	***	Supported
H2	EWOM Credibility->EWOM Adoption	0.290	3.278	0.001	Supported
H3A	EWOM Usefulness->Social Value	-0.161	-1.172	0.241	Not Supported
H3B	EWOM Usefulness->Emotional Value	0.138	1.289	0.197	Not Supported
H3C	EWOM Usefulness->Functional Value	0.215	3.004	0.003	Supported
H4A	EWOM Credibility->Social Value	0.863	7.675	***	Supported
H4B	EWOM Credibility->Emotional Value	0.595	7.275	***	Supported
H4C	EWOM Credibility->Functional Value	0.171	4.140	***	Supported
H5A	Social Value->EWOM Adoption	-0.106	-1.727	0.084	Not Supported
H5B	Emotional Value->EWOM Adoption	0.305	3.762	***	Supported
H5C	Functional Value->EWOM Adoption	0.157	1.687	0.092	Not Supported
H6A	Social Value->Purchase Intention	0.188	2.865	0.004	Supported
H6B	Emotional Value->Purchase Intention	0.309	2.124	0.034	Supported
H6C	Functional Value->Purchase Intention	0.407	2.808	0.005	Supported
H7	EWOM Adoption->Purchase Intention	0.517	3.006	0.003	Supported

Source: data that has been processed by the author, 2023

Hypotheses 6a,6b, and 6c are supported. This shows that perceived value has a direct influence on purchase intention. This result is supported by the previous findings (Lee et al.,2019) Hypothesis 7 is supported. This shows that eWOM adoption can affect purchase intention, especially in the context of c2c (customer to customer), as shown by previous findings (Tien et al., 2018).

In the theoretical fields, this study had contributed by confirming that the Information Adoption Model (IAM) was indeed capable of explaining the relationships between EWOM and purchase intention. This study also adds the variable of perceived values, where the three dimensions of perceived values were researched for their capability to be influenced by EWOM and in turn, their capability to influenced adoption and purchase intention. The findings of this study shown that EWOM credibility have a higher capability than EWOM usefulness to influence the dimensions of perceived values. This study also found that amongst the tree dimensions of perceived values, social values were influenced negatively by EWOM usefulness and would give a negative impact towards adoption as well. Several conflicting results from previous studies shows the novelty of this model and that further studies would be needed in order to confirm the influence of the perceived value dimensions.

In the practice fields, this study has shown that online reviews may influence purchase intention and perceived value significantly. While online reviews were mainly done as costumer-to-costumer communication, beauty products companies can use this as a marketing

tool. Companies may use this as an opportunity to create networks for customers to communicate with each other, while companies formed positive relationships with customers. Perceived value dimensions were also found to be able to impact purchase intention. Hence, companies need to nurture the values that customers or prospective customers have on their beauty products, as it is capable to help customers develop their purchase intentions. Different value dimensions may be explored in further research as well, on account that two out of three dimensions used in this research are unable to influence information adoption.

## CONCLUSION

Several conclusions can be drawn from the results of this research. First, EWOM credibility was found to be able to affect all three of the perceived value dimensions, whilst EWOM usefulness was found to be able to affect only one out of three dimensions. These findings are proved by Gunawan & Huarng (2015), who states that consumers seem to prefer the credibility of online reviews compared to the quality of the information found in social media. Second, the results of this study confirm the results of a previous study by Tien et al., (2018), where both EWOM credibility and usefulness are shown to be capable of influencing EWOM adoption, and EWOM adoption influencing purchase intention. Third, this study proposes that perceived value dimensions will be able to influence purchase intention through EWOM adoption. However, only one dimension, perceived emotional value, can influence EWOM adoption. Lastly, all three dimensions of perceived value were found to be able to directly influence purchase intention, confirming a previous study by Lee et al., (2019). In addition, several previous studies prior to these research have shown conflicting results regarding the influence of perceived value dimensions towards EWOM adoption, and the influence of EWOM on perceived value. These might contribute to the fact that no other research have study the effect of perceived value dimensions towards purchase intention through EWOM adoption. These conflicting results shows an interesting point where social value both negatively influenced EWOM Adoption, and were negatively influenced by EWOM usefulness.

Several limitations should be addressed on this study. First, this study does not differentiate the respondents genders. It is important to note that for further studies regarding the object of beauty products through online reviews, genders may play an important factor that may cause a different results. Second, the ages of the respondents of this study were varied. Making a similar study with a more concentrated age may yields different results. Third, the mediation effect of EWOM adoption were not tested specifically on this study. Further testing which specified the mediation effect of EWOM adoption may contribute further to this topic.

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