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The Role of Internal Financing in Mediating the Influence of Managerial Overconfidence on Investment Decisions; Evidence from Manufacturing of Indonesia

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ABSTRACT

This study aims to examine the influence of managerial overconfidence and internal financing on investment decisions, the effect of managerial overconfidence on internal financing, and the role of internal financing mediating the influence of managerial overconfidence on investment decisions. The research population is manufacturing companies listed on the Indonesia Stock Exchange. The research sample is 44 companies with 264 observable data. The result of this research is that managerial overconfidence and internal financing will increase firm investment, managerial overconfidence prefers to retain earnings as retained earnings rather than distribute to shareholders as dividends, and the high availability of internal funds causes managerial overconfidence to increase firms' investment. The results show that internal financing can fund business opportunities and reduce capital shortages, especially in firms with excessive managerial overconfidence.

Keywords: *Managerial Overconfidence, Internal Financing, and Investment Decisions.*

I. INTRODUCTION

The theory of firm investment can be divided into two major groups, namely the theory which considers that investment is more dependent on the external conditions of firms operating, and the theory which considers that investment is more dependent on the internal conditions of the firms (Mendes et al., 2014). Theories that explain that firm investment depends on internal conditions are the investment theory of Keynes (1937) and Kalecki, (1937), the Liquidity Model (Kuh, 1963), the Investment Managerial Theory (Baumol, 1967), and the Free Cash Flow Theory (S. Fazzari et al., 1988); (S. M. Fazzari & Petersen, 1993). These theories are of particular importance because of their emphasis on the influence of internal and external finance on investment.

Diamond 1984) argues that several factors can influence firm investment decisions: 1) internal factors, which are in the domain of managerial influence, and 2) external factors, which are generally beyond managerial control. The availability of internal funds can also encourage managers to increase the firm's investment (He et al., 2019). Previous research has revealed that free cash flow has a positive and significant effect on firm's investment decisions (Jankensgård & Moursli, 2020); (He et al., 2019); (Yeo, 2018); (Kaplan & Zingales, 1997). This occurs especially in firms that limit external finance. Still, in companies that do not limit the use of external funds, the availability of internal funds does not have a significant effect on investment decisions (Naeem & Li, 2019); (Grundy & Verwijmeren, 2020).

Investment decision-making is an entirely rational process. However, several studies have shown that this is not always the case because investment decisions are made by individuals who have their own interests to fulfill (Atrill, 2017). Managerial factors, such as manager irrationality, are considered important in influencing firm's investment policies (Malmendier et al., 2011). Managerial overconfidence is irrational behavior, and firms tend to apply it when making business decisions (Roll, 1986). Managers have information about the firm's profitability, whereas outside investors cannot access broader knowledge about the firm's investment decisions. This gives managers the flexibility to follow policies that do not maximize profitability in the long run but enhance the manager's immediate reputation (Hirshleifer, 1993).

Previous research has shown that managerial overconfidence makes investment decisions that result in over-investment or under-investment problems (Heaton, 2002); (Xia et al., 2010); (Wang et al., 2016).

Malmendier & Tate (2005) revealed that managerial overconfidence could explain the distortion of firm investment. Excess investment is caused by managerial Overconfidence (Wang et al., 2016). Managerial overconfidence overestimates the results of their investment projects and views external funds as very expensive, so they over-investment when they have ample internal funds but limit investment when they need external financing (He et al., 2019); (Malmendier & Tate, 2005). Firms with managerial overconfidence will fund the business with internal financing, but this can lead to over-investment.

In Indonesia, the firm sector that is most attractive to investors to invest in is manufacturing firms. The manufacturing sector is a major component of national economic development. Based on Quarterly GDP distribution data based on current prices according to business fields, the manufacturing sector's contribution to the National Gross Domestic Product (GDP) during I - III quarter 2019 is around 19 percent. This shows that the manufacturing industry sector is the leading sector that contributes to Gross Domestic Product (GDP) compared to other sectors. This sector also provides a major economic contribution in transforming the nation's economic structure from the agricultural industry to the industrial sector (BPS-Statistics Indonesia, 2019). Thus, researchers are interested in conducting studies with investment decision variables in manufacturing firms listed on the Indonesia Stock Exchange.

II. LITERATURE REVIEW

2.1 Investment Decisions

Various theories explain the factors that influence firm investment. Basically, we can classify them into two broad groups: theories which consider that investment is more dependent on conditions outside the firm, such as sales, demand, growth opportunities, and macroeconomic conditions; and theories that assume that investment is more dependent on the internal conditions of the firms, namely internal finance and liquidity. The most relevant in the theory of the first group, explaining firms investment, is the theory of (Keynes, 1937) and (Kalecki, 1937) on the effect of demand on investment, Theory of Acceleration Principles (Chenery, 1952), Neoclassical Theory (R. E. Hall & Jorgenson, 1967); (Jorgenson, 1971); Tobin's Q theory (Tobin, 1969), and investment theory (Eisner, 1978). Investment Managerial Theory (Baumol, 1967) and Free Cash Flow Theory (S. Fazzari et al., 1988); (S. M. Fazzari & Petersen, 1993) are of particular importance because of their emphasis on the influence of internal and external finance on investment.

Principal-agent theory and information asymmetry have long been used to explain overinvestment and the sensitivity of investment to cash flows. The principal-agent theory argues that, because of the conflict of interest between managers and shareholders, the former is likely to make investment decisions for their benefit, such as building large business empires or avoiding involvement in the camp. In general, high external financing costs are more likely to limit a manager's level of investment, while free cash flow (FCF) allows managers to over-invest or under-invest (Jensen, 1986); (Jensen & Meckling, 1976). Information asymmetry theory believes that it is in the interests of shareholders, managers limit external financing to avoid stock dilution. In such circumstances, the FCF increases investment and decreases the likelihood of the manager's investment distortion. Therefore, both principal-agent and information asymmetry theories assume that managers and investors are rational decision-makers who pursue utility maximization (Myer, 1984).

2.2 Managerial Overconfidence

Overconfidence builds on the social psychology literature, a "better than average" effect. When individuals assess their relative skills, they tend to overestimate their relative acuity to average (Langer, 1975); (Larwood, L., & Whittaker, 1977); (Alicke et al., 1995). The average difference between the level of aspiration in the task and the level of previous performance in that task depends on the relative strengths of the three needs: (1) the need to make the aspiration level as close to future performance levels as possible; (2) the need to keep the aspiration level high regardless of the level of performance; (3) and the need to avoid failure (Frank, 1935). Psychological studies show that most people are too confident about their relative abilities, and too optimistic about their future (Weinstein, 1980); (Taylor, Shelley E., Brown, 1988). This effect extends to economic decision-making in experiments (Camerer & Lovallo, 1999). Because individuals expect their behavior to produce success, they are more likely to attribute good results to their actions (Miller, D. T., & Ross, 1975). Researchers also found that people overestimate their ability to do a good job, and this overestimation increases with the importance of the task (Frank, 1935). People are also very optimistic about future events. They expect good things to happen to them more often than their peers (Weinstein, 1980); (Kunda, 1987). They are even very optimistic about pure coincidence (Irwin, 1953).

According to Ackert & Deaves (2009), overconfidence is the tendency of people to overestimate their knowledge, abilities, and accuracy of the information or be too optimistic about the future and their ability to control it. The literature documents that overconfidence occurs when factors typically associated with improved performance in skilled situations, such as choice, task familiarity, competition, and active involvement, are present in the case or at least partially governed by chance (Thaler, 2005).

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2.3 Internal Financing

Schumpeter (1942) revealed that firms prefer to invest their profits in innovative activities to maintain monopoly power, the importance of internal financing for corporate investment and financing decision making has been studied extensively (S. C. Hall, 2002). In a perfect capital market, there would be no relationship between free cash flow and firm-level investment (Modigliani & Miller, 1958). However, previous research has documented a positive relationship between them (Hubbard, 1998). There are two explanations for this relation: the first is information asymmetry and agency costs. To explain information asymmetry, Myer (1984) shows that, in imperfect capital markets, information asymmetry increases the cost of capital and is expensive for firms to raise external finance. Therefore, external financing constraints force firms to reduce viable investments and invest more in the presence of free cash flow generated internally because of its lower cost of capital (S. Fazzari et al., 1988); (Hubbard, 1998). Another explanation is agency costs, stem from the separation of ownership and control of the firm, suggesting excess investment where managers in firms with free cash flow have a strong incentive to invest in harmful NPV projects (Jensen, 1986); (Stulz, 1990). The agency cost explanation suggests that management tends to invest in beneficial projects from a management perspective but may not suit firms owners, especially when management monitoring is weak. Richardson (2006) examines overinvestment at firm-level free cash flow and finds that overinvestment is concentrated in firms with the highest levels of free cash flow, which is consistent with an explanation of agency costs.

The pecking order theory proposed by Myer (1984) shows that internal financing reduces information asymmetry, avoids the risk of adverse selection from external financing, and reduces conflict among firms stakeholders. When the firm's internal financing is abundant, excess free cash flow is generated to take advantage of the excess internal funds for investment. The firms allocate income among three uses: dividends, current investment, and accumulated internal funds. This decision problem will not be trivial because there are agency costs in finance. In these circumstances, firms can reduce the friction of information on financial markets by using internal funds (retained earnings) to partially finance investment (Smith & van Egteren, 2005).

Hypotheses Development

The effect of managerial overconfidence on investment decisions

Among the main characteristics of CEOs, Overconfidence affects corporate investment and financing. In the financial literature, managerial overconfidence is seen as CEOs who systematically overestimate the future benefits of firms projects or systematically overestimate the likelihood and impact of favorable events on their firm's cash flows and/or underestimate the possible negative impact on flows cash firm (Heaton, 2002); (Malmendier & Tate, 2005). According to Baker & R Nofsinger (2010), the assumptions underlying financial behavior are the information structure and characteristics of market participants systematically affecting investment decisions. These processes result in irrational actions by managers in disregard for risk and make mistakes in predicting investment opportunities. According to Kahneman & Tversky (1979), the prospect theory states that people's actual decision-making methods tend not to follow rational calculations. Therefore, managerial overconfidence will invest more (Camerer & Lovallo, 1999). Thaler (2005) also revealed that optimistic managers want to make more investments. The consequences of managerial optimism show that managers overestimate the probability of their firm's future performance so that managers will make high investments (Heaton, 2002). Previous research by Choi et al., (2018), Yang & Kim (2020) reveal that managerial overconfidence will increase firms investment decisions

H1: managerial overconfidence has a positive and significant effect on investment decisions, which means that managerial overconfidence will increase firm investment.

The effect of managerial overconfidence on internal financing

The benefits and costs of free cash flow offer an exciting laboratory to explore the implications of managerial irrationality in corporate finance. According to Thaler (2005) Managers want to maintain free cash flow and invest it in projects that increase managerial benefits. Managerial optimism leads to a preference for internal funds. Managers who are optimistic and depend on external finance sometimes reject projects with positive NPV because managers believe that external financial costs are too high; therefore, free cash flow can be valuable (Heaton, 2002).

Reflection theory argues that managers' irrational behavior contributes to decision-making, particularly financial decisions (Gervais et al., 2007). With managers who are too optimistic, free cash flow can help the firms. The financial behavior literature emphasizes the importance of examining the psychological and behavioral aspects of managers to understand variations in making financing decisions and capital structures (Ben-David et al., 2007); (Hackbarth, 2009); (Malmendier et al., 2011). Malmendier & Tate (2005) confirm that the financing preferences of managerial overconfidence may choose to choose internal financing, debt financing, and then only equity financing in their study. From a behavioral finance perspective, firm managers prefer internal financing over other sources because managers have more control over internal funds. Research by He et al., (2019), Deshmukh et al., (2013), Ting et al., (2015) reveals that internal financing affects investment decisions.

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H2: managerial overconfidence has a positive and significant effect on internal financing, meaning that managerial overconfidence prefers to keep cash as retained earnings rather than distributing profits to shareholders as dividends.

The effect of internal financing on investment decisions

The theoretical contributions to the information economy have explained the effect of internally generated funds on investment. Myer (1984), Myers & Majiuf (1984) have shown that asymmetric information between firms insiders and capital markets creates a pecking order for financing options where internally generated funds are preferred over external funds, and debt financing is preferred over external equity. According to the Free Cash Flow Theory (S. Fazzari et al., 1988); (S. M. Fazzari & Petersen, 1993), that internal finance, especially cash flow is vital in explaining firm investment. Graham & Harvey (2001) in their research support the pecking order capital structure hypothesis.

Richardson (2006) examines overinvestment in cash flow and finds that excess investment is concentrated in companies with the highest levels of free cash flow; this is consistent with the explanation of agency costs. Chen et al., (2016) Their study investigated how free cash flow affects firm-level investment in China, finding that over-investment is seen in firms with positive free cash flow. He et al., (2019) examined internal financing and investment efficiency in companies in China, finding that internal financing can fund business opportunities and reduce capital shortages and lead to over-investment. Bilicka (2020) examines financing and investment constraints in Canada and finds that the low availability of retained earnings does not affect a firm's investment. Still, the availability of cash flow has a significant influence on investment.

H3: Internal financing has a positive and significant effect on investment decisions, which means that the higher the availability of internal funds can increase the firm's investment.

The role of internal financing in mediating the influence of managerial overconfidence on investment decisions

Heaton (2002) examines managerial optimism and corporate finance and finds that excess investment is concentrated in firms with the highest levels of free cash flow according to the agency cost explanation. Malmendier & Tate (2005) examined CEO overconfidence and firm investment in the United States, finding that managerial overconfidence could explain corporate investment distortions. Overconfident managers overstate the returns on their investment projects and view external funds as too expensive. Thus, they over-invest when they have abundant internal funds but limit investment when they need external financing. Overconfidence CEO investments are significantly more responsive to cash flow, especially in firms that rely on equity. Xia et al., (2010) researching managerial overconfidence and over-investment in companies in China found that managerial overconfidence tends to over-invest. Their over-investing behavior has a higher sensitivity to cash flows generated by financing activities. In other words, when their companies get an abundance of cash flow from financing activities, managerial overconfidence will over-invest. He et al., (2019) researching managerial overconfidence, internal financing, and investment efficiency in companies in China found that internal financing can fund business opportunities and reduce capital shortages and lead to excessive investment, especially in companies with excessive managerial trust. Yang & Kim (2020) in his research found that managers who are overconfident systemically over-invest with a greater preference for internal funds than debt or equity, managers who are too confident are involved in higher OCF policies.

H4: Managerial Overconfidence has a positive and significant effect on investment decisions mediated by internal financing, meaning that the higher the availability of internal funds in firms with CEO overconfidence, the firm's investment will increase. The conceptual research model is presented in Figure 1 below:

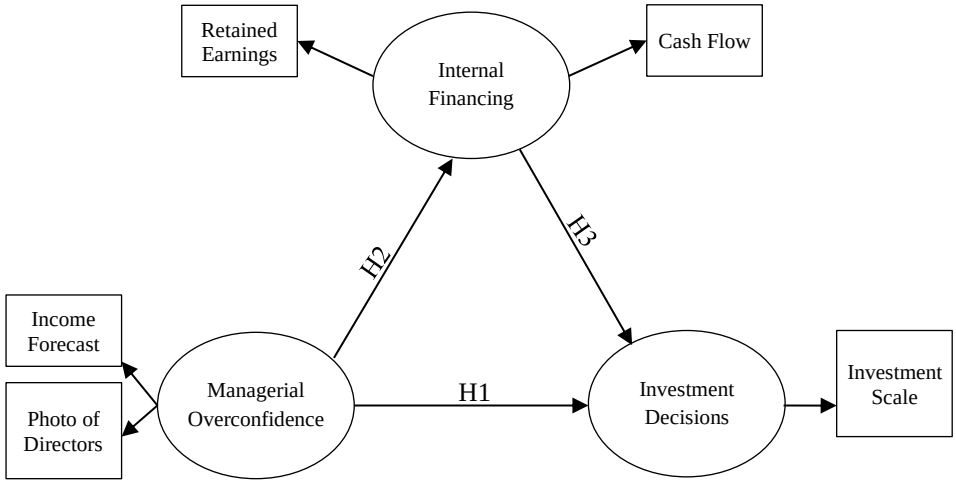

Figure 1. Research Model

III. RESEARCH METHODS

3.1 Sample and Data Sources

The research sample is with the following criteria: a) manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2019, b) presenting annual reports for 2014 - 2019 on the website of each firm or the website of the Indonesia Stock Exchange, c) having a positive hold on profit during 2014 - 2019, d) made investments every year during 2014 - 2019, Based on these criteria, the final sample was 44 companies with a total of 264 observations. As for the distribution of the research sample, namely, 45.45% of manufacturing companies in the basic and chemical industry sector, 20.45% of manufacturing companies in various industrial sectors, and 34.10% of manufacturing companies in the industrial sector goods and consumption. The research data is secondary data, namely the data presented in the firm's annual report obtained from the respective firm's website or the Indonesia Stock Exchange website (www.idx.co.id).

3.2 Variable and measurements

3.2.1 Dependent Variable

In this study, the dependent variable is investment decisions, by measuring: a) investment scale, as adopted in previous research He et al., (2019), Huang et al., (2011), Richardson (2006). The investment scale model is:

$$Inv_t = a_1\, IE_{t-1} + a2\, Q_{t-1} + a3\, Cash_{t-1} + a4\, Age_{t-1} + a5\, Size_{t-1} + a6\, Leverage_{t-1} + a7\, Return_{t-1}$$

Where IE (investment expenditure) is the total investment expenditure in the current year t, calculated as the total fixed assets, construction in progress, intangible assets, and long-term investment, all divided by total assets, Q_{t-1} is the growth opportunity in the previous year, represented by Tobin's Q; $Cash_{t-1}$ is the balance of cash flows at the beginning of the year divided by total assets; Age_{t-1} is the age of the firms since it was registered (*Initial public offering* / IPO), measured by the natural logarithm of the firm's age; $Size_{t-1}$ is the size of the firms, measured by the natural logarithm of total assets at the beginning of the year; $Leverage_{t-1}$ is the previous year's financial leverage, which is indicated by the debt to equity ratio; $Return_{t-1}$ is the stock's rate of return for the year before the investment year. Meanwhile, the total investment is the total investment expenditure in the current year, calculated as total fixed assets, construction in progress, intangible assets, and long-term investment, all divided by total assets.

3.2.2 Independent Variable

In this study, the independent variable is managerial overconfidence, by measuring: a) income forecast, as adopted in previous research He et al., (2019), Huang et al., (2011), Xia et al., (2010), b) profile photos of directors, as adopting previous research Ting et al., (2015), Schrand & Zechman (2012). Measurement of estimated income is the forecast of income which is calculated in the regression model as a prediction of actual income or actual income minus the residual, then measured by the natural logarithm of the predicted income. Meanwhile, the profile photo of directors is the percentage size of the photo of directors on the annual report page.

3.2.3Intervening Variable

In this study, the intervening variable is internal financing, by measuring: a) retained earnings, as adopted by previous research measurements Bilicka (2020), He et al., (2019), b) cash flow, as adopted by previous research measurements Smith & van Egteren (2005), Guariglia et al., (2011), He et al., (2019). The measurement of retained earnings is the total retained earnings in year t divided by the total assets in year t, while the measurement of cash flow is the balance of cash flows in year t divided by the total assets in year t.

IV. RESULTS AND DISCUSSION

4.1 Descriptive Analysis

Descriptive analysis displays the average value (mean), maximum value, and minimum value of each indicator used in the research variables, indicators used include income estimates and the size of the profile photo of the directors as a measure of managerial overconfidence variable; retained earnings and cash flow as a measurement of internal financing variables; investment scale and total investment as a measurement of investment decision variables. Descriptive statistical values can be displayed in the following table:

Table 4.1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.Deviation
Profit Forecast	264	-12.25	17.01	10.50	5.97
Photos of the directors	264	.20	1.00	.60	.29
Retained earnings	264	-.08	.86	.36	.22
Cash Flow	264	-.29	.80	.09	.11
Investment Scale	264	15.34	49.51	21.86	5.53
Valid N (Listwise)	264				

Source: SPSS 22, 2021.

Table 1 shows that the mean value is 10.50 > 1, then the average firm's managerial overconfidence. The mean value on the profit forecast indicator is greater than the standard deviation value, indicating no large enough gap from the estimated income ratio. The mean value of the photo of the directors was 0.60 > 0.50 or had overconfidence,

and the mean value was also smaller than the standard deviation. The mean value of retained earnings and the investment scale is also greater than the standard deviation, while the mean cash flow is smaller than the standard deviation. This indicates that data deviation on cash flows is categorized as not good.

Path Analysis

Goodness of fit

The goodness of fit consists of an outer model and an inner model. The outer model includes convergent validity, discriminant validity, composite reliability. Meanwhile, the inner model is measured using R square, the latent dependent variable, Q-Square, predictive relevance for structural models.

Table 4.2. Outer Loadings

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)	P-Value
Investment Scale <- Investment Decision	1	1	0	0	0	
Income Forecast <- Managerial Overconfidence	0.8638	0.865	0.0802	0.0802	10.7684	0.000
Photos of the Directors <- Managerial Overconfidence	0.5838	0.554	0.1692	0.1692	3.45	0.001
Retained Earnings <- Internal Financing	0.6318	0.622	0.1946	0.1946	3.2468	0.001
Cash Flow <- Internal Financing	0.9091	0.8831	0.1484	0.1484	6.1248	0.000

Source: data processing smart PLS 2, 2021.

Convergent validity can be found through the value of the outer loading. Table 2 shows that the loading factor value of all indicators is greater than 0.5 and/or the p-value is significant at the 1 percent level, so all indicators are considered to have sufficiently strong validation to explain latent constructs.

Table 4.3 Overview

	AVE	Composite Reliability	R Square	Cranach's Alpha	Communality	Redundancy
Managerial Overconfidence	0.543	0.696	0	0.173	0.543	0
Internal financing	0.612	0.754	0.108	0.401	0.612	0.071
Investment Decision	1	1	0.276	1	1	0.216
Q-Square			0.355			

Sources: output smart PLS 2, 2021.

Table 3 shows that the discriminant validity measured by AVE has a greater value of 0.5, so it is said to have discriminant validity. The composite reliability value is greater than 0.6, so it is stated to have good composite reliability. Furthermore, the Q-Square value of 0.355 can be noted that the contribution of managerial overconfidence and internal financing is 35.5 percent.

Bootstrap

Bootstrapping is carried out to determine the magnitude of the influence of the independent variable on the dependent variable and to determine its significance by comparing the t-statistical value with the t-table value or comparing the p-value with the significance level. The path coefficient and p-value can be presented in the following table:

Table 4.4 Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)	P-Value
Managerial Overconfidence -> Internal Financing	0.3298	0.3689	0.13	0.13	2.5377	0.012**
Managerial Overconfidence -> Investment Decision	0.2454	0.2401	0.1064	0.1064	2.3074	0.022**
Internal Financing -> Investment Decision	0.3912	0.4064	0.1205	0.1205	3.2465	0.001***

Sources: output smart PLS 2, 2021.

Remarks: *** significant level 1%, ** significant level 5%, * significant level 10%.

Table 4 shows that managerial overconfidence in internal financing with a path coefficient of 0.3298 and a p-value of 0.012 has a positive and significant effect at the five percent level. The effect of managerial overconfidence on investment decisions with a path coefficient of 0.2454 and p-value of 0.022 or a positive and significant effect at the five percent level. The effect of internal financing on investment decisions with a path coefficient of 0.3912 and a p-value of 0.001 or a positive and significant impact at the one percent level.

Table 5. Testing the Indirect Effect

Independent variables	Intervening variable	Dependent variable	Path coefficients	T statistic	P-value
Managerial overconfidence	Internal financing	Investment Decision	0.129	1.99	0.045**

Source: analysis with the Sobel test, 2021.

Table 5 shows that the p-value testing the indirect effect of managerial overconfidence on investment decisions is mediated by internal financing with a p-value of 0.045 or significant at the five percent level.

Discussion

Based on the conceptual framework, four hypotheses were formulated to analyze direct effects and one hypothesis to analyze indirect effects (mediation). Based on the analysis results, it shows that the overall results of the path analysis support the hypothesis because the path coefficient is a statistically positive and significant effect.

The results of the study, first, managerial overconfidence has a positive and significant effect on internal financing. This shows that overconfidence managers will always set aside a part of the profits earned as retained earnings to increase their equity. And part of the profit earned is distributed to the owner in the form of dividends. Empirical studies show that managers who are overconfident pay lower dividends than manager's overconfidence. The results of this study support the research of He et al., (2019), Deshmukh et al., (2013). Shima, Keiichi, and Nakamura (2018) that managers who are too confident are less likely to pay dividends and hold income as retained earnings for firm finance. Managers who are too confident prefer to use retained earnings in the firm's capital structure because managers have more control over retained earnings. The results of this study support the attribution theory put forward by Heider (1958) that the results of behavior are caused by several possibilities: ability, task difficulty, and effort. Ability and effort as internal reasons for managers, while task difficulties as external reasons for managers. This shows that managers prepare their ability to be able to manage the firms and strive to earn a profit, while the task difficulties experienced by managers when using external financing have an impact on high financial costs and require time to obtain it, thus managers who are too confident prefer retain earnings as retained earnings for use in corporate financing.

Second, managerial overconfidence has a positive and significant effect on investment decisions. This shows that managers who are too confident see that they have good knowledge and have more accurate predictions to make higher investments.

The results of this study support the opinion of Longjie & Anfeng (2017) that overconfidence is someone who is excessive about their abilities, knowledge, and future predictions. They believe that their knowledge is more accurate than facts. That is, their weight of information is greater than that of facts. Likewise, with research Yang & Kim (2020) the overconfidence behavior of top managers has a positive and significant relationship with the scale of their firm's investment. This is because overconfidence is often expressed as the decision makers' likelihood of overestimating expected returns or likelihoods of success, thus underestimating costs and failures. The positive and significant influence of managerial overconfidence on investment decisions implies that managers who are too confident feel they have control over the firms and desire to expand power in the firms. This supports the opinion of March & Shapira (1987) that managerial overconfidence has the illusion of control and constantly expands their business empire, underestimating investment risks and overestimating earnings. Likewise, previous research has revealed that firms with managerial overconfidence have more investment spending (E. G. Moez & Amina, 2018); (Wang et al., 2016); (Ting et al., 2015); (Deshmukh et al., 2013).

Third, internal financing has a positive and significant effect on investment decisions. This shows that the firms prioritize internal financing sources in investing because internal financing is considered cheap while external funds are considered expensive. The results of this study support E. L. Moez & Zgarni (2018) research that internal financing from cash flow has a positive and significant effect on firm investment because cash flow is the primary measure of a firm's financial strength. Internal funds are the most crucial source of financing, especially in countries where external funds are more expensive. Research by S. Fazzari et al., (1988) also shows a significant relationship between cash flow and investment. The results of this study support Yeo (2018), Chen et al., (2016), Mendes et al., (2014) that internal financing from greater free cash flow directs firms to increase investment.

Fourth, managerial overconfidence has a positive and significant effect on investment decisions mediated by internal financing. This shows that managers who are too confident prioritize retaining profits as retained earnings rather than distributing profits to shareholders as dividends because somebody will use retained earnings for firms' investment.

Manager's overconfidence views external financing as more expensive than internal financing, thereby reducing dividend payments; this is done to increase the availability of internal financing to finance the firm's investment needs. The study results support the research of He et al., (2019) that managerial overconfidence is more likely to influence the efficiency of investment projects with internal financing because they have more control over internal funds. Therefore, managerial overconfidence has more influence on the efficiency of investment projects with internal financing. Likewise, Malmendier et al., (2011a) found that managers who are too confident overestimate the benefits of their investment projects and perceive external funds to be too expensive. So, they over-invest when they have abundant internal financing. The results also imply that managerial overconfidence appreciates the value of potential projects and tends to over-invest when their firms have sufficient internal financing. This finding supports the research of Xia et al., (2010) that when the power of a firm's decision-making is in the hands of an overconfident manager appointed by the controlling shareholder, he is usually reluctant to fund externally because the market underestimates the value of the firm's shares. In such circumstances, the firm's investment efficiency has a higher sensitivity to internal financing.

V. CONCLUSION

This study examines the direct effect of managerial overconfidence on internal financing, managerial overconfidence on investment decisions, internal financing on investment decisions, and the indirect effect of managerial overconfidence on investment decisions mediated by internal financing. The research sample was 44 manufacturing companies with a total of 264 firms' data that were observed. We find that managerial overconfidence prefers to hold firm-earned earnings as retained earnings rather than distribute them to shareholders as dividends. Managerial overconfidence predicts the firm's future by overestimating its capabilities and underestimating random events that increase the firm's investment. We also find that firms with positive cash flow and internal financing are considered cheaper so that investment increases. Furthermore, our findings show that internal financing can fund business opportunities and reduce capital shortages, especially in firms with excessive managerial overconfidence.

Limitation

This study examines the effect of investment decisions only on internal factors of the firm, but does not examine external factors; on the other hand, that according to the opinion of experts, firm investment decisions are influenced by internal factors in the firms and are also influenced by external aspects of the firms or macroeconomic factors such as economic growth, inflation, and interest rates. Therefore, it is hoped that the subsequent researchers can add macroeconomic variables so that the research contribution will be greater.

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